

2001-2002 Overall Training Plan

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### Step #1 *2nd half of October*

Time sharing: **50%** shooting and **50%** for other developments.  
Total volume: Low, about **8 hours** per week  
# of sessions: **3** of shooting & **3** of **stretching** per week of **1: 20** hour each  
# of arrows: **80** arrows each(\*)  
**Stretching (start):** We suggest an isometric contraction followed with a 2 second rest then a stretching period having the same duration as the contraction.

#### (\*) # of arrows:

- This is the number of arrows per HEAVY session. One week includes between 3 to 6 shooting session, pending the period of the year and the closeness to a tournament. All these sessions do not have the same number of arrows.. For instance, a week of May 2001: 159 arrows on Monday – 195 arrows on Tuesday – 218 arrows on Wednesday – No shooting on Thursday – 218 arrows on Friday – no shooting on Saturday – 180 arrows during a tournament on Sunday (warm-up and practice arrows inclusive). According to this example, Wednesday and Friday sessions are the “heavy” ones.
- Every week, 7 arrows will be added to the heaviest shooting sessions (those having the highest number of arrows – about 2 heavy sessions per week). So, we will start the training season with a low number of arrows per “heavy” session (80 arrows), et we’ll reach a high number of arrows during the heavy sessions of the competitive season (300 arrows).

#### *Why 7 additional arrows per week?*

The proposed plan is covering 44 weeks, allowing a weekly increase of the number of arrows per session during 43 weeks

3 weeks are spent for the transition period: We anticipate 4 weeks without training for exams, unavailability, sickness, ...

After each of these 7 weeks of absence, no arrow will be added to the sessions. Hence there will be no progression in the number of arrow during 14 weeks: hence (43 minus 14) 29 weeks remain, during which the number of arrows will be increased..

$29 \times 7 = 203$  arrows of progression over the period cover by the training plan; added to the 80 arrows of the first week, we reach a total of 303 arrows during the heavy sessions of the final competitive period.

#### *Why striving to reach 300 arrows per heavy session?*

Due to the extra energy spent during a tournament (especially for behaviour control), it seems good to handle an heavier workload during practice sessions that the prepared tournament.

Practice shows that an appropriate practice workload has a number of arrows that is more or less the double than a standard FITA event (144 arrows).

### Step #2 *1<sup>st</sup> half of November*

Time sharing: **47 à 48%** Shooting and **53 à 52%** for other developments (6 hours).  
Total volume: **11 :20 hours** per week  
Shooting: **4** sessions per week – **1 :20** hour each 5 :20 hours  
Stretching: **4** sessions per week of **1 :15** each 5 hours  
**Cardio (start):** **2** sessions per week of **30 min.** each 1 hour  
Running on rough field is recommended for body balance, but the archer can choose any activity that he/she enjoys. Priority is given to the development of the **Aerobic capacity**

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Step #3 2nd half of November

Time sharing: 45% Shooting and 55% other Developments (7:45 hours).

Total volume: 14 :45 hours per week

Shooting: 4 sessions per week of 1 :40 hour each

= 6:40 hours

Cardio : 2 sessions per week of 45 min. each

= 1 :30 hours

Strengthening : 3 sessions per week of 1 :15 hour each

= 4 hours

Endurance Strength development is recommended to start this long strengthening period (Endurance strength = light weights / high number of repetitions). Emphasis on low limbs and belt

Decrease of the stretching work, which will stop with the start of the 4th step.

Step #4 1st half of December

Time sharing: 47 to 48% Shooting and 53 to 52% for other developments (8:45 hours).

Total volume: 16:45 hours per week

Shooting: 4 sessions per week of 2 hour each

8 hours

Cardio: 2 sessions per week of 1 hour each

= 2 hours

Strengthening : 3 sessions per week of 1 :15 hour each

= 3:45 hours

Pending your experience in strengthening, either you will continue the Endurance strength, or you will start the use of other strengthening methods.

Yoga (start) : 2 sessions per week of 1:30 min. each

= 3:00 hours

Unless that you already have an excellent background in Yoga, classes conducted by a teacher are mandatory. If you cannot find any Yoga classes, look for another discipline that also develop: General perceptions – Body, breathing and mind control – Relaxation ... For instance: Corporal expression, Tai-chi, Sophrology, Classical dance.

Step #5 Mid-December until mid-February

Programme: Same as step #4.

For strengthening: **Various General Types of Strength** – mainly with maximal contractions, including isometric strength.

Step #6 2nd half of February and March

Time sharing: 2/3 Shooting and 1/3 for other developments (5 hours).

Total volume: 15 hours per week

Shooting: 5 sessions per week of 2 hours each

including 3 sessions of SHOOTING STRENGTH

10 hours

Cardio: 2 sessions per week of 1 hour each

= 2 hours

Yoga : 2 sessions per week of 1:30 min. each

= 3 hours

Specific Strength: Means strengthening exercises while shooting.

During Yoga sessions, emphasise flexibility of the lower body, to recover the flexibility level as before strengthening, and Cardio (running).

Step #7 1st half of April

Time sharing: 52-53% Shooting and 48-47% for other developments (9 hours).

Total volume: 19 hours per week

Shooting: 5 sessions per week of 2 hours each

10 hours

Cardio: 2 sessions per week of 1 hour each

= 2 hours

Yoga : 1 session per week of 1:20 hour each

= 1:20 hours

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Strength: 1 maintenance session per week of **1:30** hour = 1:30 hours  
**General Body balance:** 5 sessions per week of **50 min.** = 4:10 hours  
**General Body Balance:** Exercises aiming the improvement of the upright position.  
 During Yoga sessions, emphasise flexibility of the top body, to recover the flexibility level as before strengthening.

**Step #8** **Mid April – mid May**  
 Time sharing: Shooting **60%** and **40%** for other developments (8 hours).  
 Total volume: **20 hours** per week  
 Shooting: 5 sessions per week of **2 hour** each (including 3 SHOOTING BODY BALANCE sessions), and **one** test or tournament = 12 hours  
 Cardio: 2 sessions per week of **1 hour** each = 2 hours  
 Yoga : 1 session per week of **1:30 hour** each = 1:30 hour  
 Strength: 1 maintenance session per week of **1:30** hour = 1:30 hour  
 General Body balance: 3 sessions per week of **1 hour** (out of shooting) = 3 hours  
**Shooting Body Balance:** Mainly made of shots from an unstable platforms.

**Step #9** **2<sup>nd</sup> half of May**  
 Time sharing: Shooting 2/3 and 1/3 for other developments (6:45 hours).  
 Total volume: **20:15 hours** per week  
 Shooting: 5 sessions per week of **2:15 hour** each (including 3 SHOOTING PERCEPTION sessions), and **1** test or tournament = 13:30 hours  
**Cardio:** 3 sessions per week of **1:15 hour** each = 3:45 hours  
 Yoga : 1 session per week of **1:30 hour** each = 1:30 hour  
 Strength: 1 maintenance session per week of **1:30** hour = 1:30 hour  
**Shooting Perceptions:** made of blind shot: eyes closed or masked, hidden target, ....  
**Cardio:** Running on rough field is recommended. It is suggested to develop the various energy sources: *Capacity and Power, Aerobe and Anaerobe, lactic and Alactic.*  
 As per this beginning of the competition season, it is interest to allow the archer to drag his/her energy from any of these sources.

**Step #10** **1<sup>st</sup> half of June**  
 Program: **Similar** as step #9.  
 Shooting: 5 sessions per week of **2:15 hour** each (including 3 AIMING OFF sessions), and **1** test or tournament = 13:30 hours  
**Aiming off:** Skill to aim off the target centre to hit this centre in case of disturbed environment, particularly win and rain.

**Step #11** **From mid-June to early August (even further pending your competition period)**  
 Time sharing: **78%** Shooting and **22%** for other developments.  
 Total volume : **19:15 hours** per week  
 Shooting: 5 sessions per week of **2:30 hour** each, and **1** test or tournament = 15 hours  
 Cardio: 1 session per week of **1:15 hour** each = 1:15 hours  
 Yoga : 1 session per week of **1:30 hour** each = 1:30 hour  
 Strength: 1 maintenance session per week of **1:30** hour = 1:30 hour

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Step #12 **Month of September until mid-October 2002**

Transition period: Rest or different sport activities.

FITA Training SUGGESTIONS starting on October 22, 2001.

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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\***

Welcome to the 2001-2002 FITA weekly Training Tips!

Thank you for your interest in the 2000-2001 tips and your nice words of encouragement to pursue them.

Reminders and information:

The FITA training tips were born in October 2000, from an initiative of the FITA Coaches Committee, based on the experience of a Canadian experience.

The FITA weekly training tips have been developed for;

- the coaches who have no access to any coaching development opportunities;
- archers who have no access to any coaching assistance.

Last week we have published 2 important documents from which the 2001-2002 Training Tips have been developed:

- “2001-2002 Overall Training Plan” in French and English;
- “2002 English and French Training plans”.

These 2 documents are posted on the FITA Web site: [www.archery.com](http://www.archery.com)

Please read them before using these tips.

The 2001-2002 FITA Training Tips will follow the above training plan.

By consequence these tips are NOT individualized to your own needs, experience, development, availability and goals. Hence you have to adapt these suggestions to you – a local coach could help you.

FITA declines any responsibility for any unfortunate consequences (injuries, accident,...) that could occur to any person who will use these training tips.

Nevertheless FITA hopes that these suggestions will give to you some additional ideas for your training.

The FITA Training Tips will be issued every week from now until August 10, 2002.

After a break in October and late September, it is time to restart our training.

This week we will work on the Body Pre-positioning. Next week will be similar.

At the end of this first set of tips there is an example of record of your practice. FITA will not publish this example of record each week, it is up to you to record your training – whatever the document you will use - but a record is **STRONGLY** recommended.

Have a good week of practice

On behalf of the **FITA Coaches Committee:**

**Pascal COLMAIRE**

*FITA Development Manager*

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The week at a glance:

Days	#	Session Type	Subject / Skill	Volume
Monday	1	Stretching Visualisation	As per “Stretching Tips”	1:20 hour 3 times a day
Tuesday	1	Shooting	Body Pre-setting	68 arrows – 1:15 hour
Wednesday	1	Stretching Visualisation	As per “Stretching Tips”	1:20 hour 3 times a day
Thursday		Coach	Agreement on collaboration	Negligible
Friday	1	Shooting	Body Pre-setting	74 arrows – 1:20 hours
Saturday	1	Stretching Visualisation	As per “Stretching Tips”	1:20 hour 3 times a day
Sunday	1	Shooting	Shooting Adjustment Centre	80 arrows – 1:25 hours

Note #1:

Since this is your restart, the shooting rhythm is slow, allowing:

- rest between ends (you certainly have a lot to discuss with your friends ...);
- rest between arrows;
- to feel the shooting perceptions.

Note #2:

As you can notice Visualisation is scheduled the non-shooting days.

Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.

MONDAY

Session: Stretching.

of sessions: 1

Description: See “[Stretching Tips](#)”.

Plan and follow a progression; for instance:

- first week you stretch 10 seconds the “small” muscles and 20 seconds the “big” ones,
- second week you can stretch 15 seconds the “small” muscles and 25 seconds the “big” ones,
- third week stretch 20 seconds the “small” muscles and 30 seconds the “big” ones
- ...

Of course such a progression requires more and more time, this is why we will propose one more stretching session in 2 weeks. So you will be able to split your exercises over 4 sessions instead of 3.

See pictures "[Nape contraction](#)" and "[Nape Stretching](#)"

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

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Due to the current Technical development, it is recommended to keep a powerful belly during your visualization or mimics

- \* External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on. Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...

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## TUESDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – at least **8 arrows**.

### Body Presetting (1)

1. Close your eyes as soon as you grip your string, at this moment you are little bent down. Pursuit your sequence with eyes closed until your are straight up and at full draw, then continue your sequence with your eye(s) opened - **12 arrows**. While you have your eyes closed, be concentrated on:
  - a) when and how you preset your body (main pyramid = the geometrical form between your aiming eye and your feet base). It could be before raising your bow, or after a pre-draw in direction of the floor or the target. For Compound archers who deform their posture for getting the peak, it could even be after the peak.
  - b) the following points and feelings
    - Straight Body* (vertical spine + body weight equally spread over the 2 feet)
    - Fixation of your body on your hips* (especially in your low back)
    - Low center of gravity* (heavy & powerful belly, low shoulders & blades, flat chest, and stretch feeling in your trapezius)
    - Erected spine* (flat nape)
    - Entire body in the shooting plan* (shoulders above your hips & feet)
    - Head orientation* (chin & nose pointed toward the target).
  - c) maintenance of this preset posture while raising and drawing your bow.
2. Same as above, with a stick (or arrow) pressing on your belly; the other end of the stick can be pressed against a wall or a partner – see picture “**Powerful Belly**”, or even the ground (you need a one meter long stick) – see picture “**Center of gravity with a stick**” – **12 arrows**
3. Same as 1) but with eyes opened, shooting at a blank butt, with a Haki ball (slightly flattened) on the top of your head- see picture “**Motionless Head control**” – **12 arrows**
4. Same as 1) but watching yourself in a mirror, instead of having your eyes closed – see picture “**Working with a mirror**” – **12 arrows**
5. Same as 1) but with eyes opened, shooting at a blank butt – **6 arrows**
6. Same as above, but shooting at a target face – **6 arrows**.

Note: for all the exercises with a mirror, the mirror should be at a place such that the archer has not to move his/her head to watch herself. Therefore the mirror should be at the archer's face level, and very close from the aiming plan – about 10” space between the arrow axis and the edge of the mirror. A mirror on a tripod (or any type of stand) is perfect, otherwise you need an assistant.

Volume: **68 arrows** over the session.

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## WEDNESDAY

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Session: Stretching.

of sessions: 1

Description: See “Stretching Tips”.

Plan and follow a progression; for instance:

- first week you stretch 10 seconds the “small” muscles and 20 seconds the “big” ones,
- second week you can stretch 15 seconds the “small” muscles and 25 seconds the “big” ones,
- third week stretch 20 seconds the “small” muscles and 30 seconds the “big” ones
- ...

Of course such a progression requires more and more time, this is why we will propose one more stretching session in 2 weeks. So you will be able to split your exercises over 4 sessions instead of 3.

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

Due to the current Technical development, it is recommended to keep a powerful belly during your visualization or mimics

- * External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on. Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...

THURSDAY

Session: Coaching collaboration

Meet with your coach (if any) to discuss and come to an agreement regarding your collaboration.

FRIDAY

Session: Shooting

of sessions: 1 shooting session.

General warm-up and shooting warm-up – at least **8 arrows**.

Body Presetting (2)

1. Close your eyes as soon as you grip your string, at this moment you are little bent down. Pursuit your sequence with eyes closed until you are straight up and at full draw, then continue your sequence with your eye(s) opened - **22 arrows**. While you have your eyes closed, be concentrated on:
 - a) when and how you preset your body (main pyramid = the geometrical form between your aiming eye and your feet base). It could be before raising your bow, or after a pre-draw in direction of the floor or the target. For Compound archers who deform their posture for getting the peak, it could even be after the peak.
 - c) the following points and feelings
 - Straight Body* (vertical spine + body weight equally spread over the 2 feet)
 - Fixation of your body on your hips* (especially in your low back)
 - Low center of gravity* (heavy & powerful belly, low shoulders & blades, flat chest, and stretch feeling in your trapezius)
 - Erected spine* (flat nape)
 - Entire body in the shooting plan* (shoulders above your hips & feet)


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*Head orientation* (chin & nose pointed toward the target).

c) maintenance of this preset posture while raising and drawing your bow.

2. Repeat at a blank butt, again during another **22 arrows**.

3. Alternate during **22 arrows** one arrow in the first situation (eyes closed), one arrow in the second situation (blank butt) and one arrow at a target

Note: *for all the exercises with a mirror, the mirror should be at a place such that the archer has not to move his/her head to watch herself. Therefore the mirror should be at the archer's face level, and very close from the aiming plan – about 10" space between the arrow axis and the edge of the mirror. A mirror on a tripod (or any type of stand) is perfect, otherwise you need an assistant.*

Volume: 66 arrows total over the exercise + 8 warm-up arrows = **74 arrows** over the session.

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## SATURDAY

### Session: Stretching.

# of sessions: 1

Description: See "Stretching Tips".

Plan and follow a progression; for instance:

- first week you stretch 10 seconds the "small" muscles and 20 seconds the "big" ones,
- second week you can stretch 15 seconds the "small" muscles and 25 seconds the "big" ones,
- third week stretch 20 seconds the "small" muscles and 30 seconds the "big" ones
- ...

Of course such a progression requires more and more time, this is why we will propose one more stretching session in 2 weeks. So you will be able to split your exercises over 4 sessions instead of 3.

### Session: Mimics / Visualization.

# of sessions: at least 6 reps at each "session". Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

Due to the current Technical development, it is recommended to keep a powerful belly during your visualization or mimics

- \* External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on. Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...

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## SUNDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – at least **8 arrows**.

*Objective:* Better adjust your aiming with your body.

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Body Aiming Adjustment #1.

The following exercise is an adaptation for archery of a pistol shooting exercise.

1. Display an horizontal line across the butt (1" wide masking tape is OK).
 - a) Draw your bow back toward the left end on the line. At full draw move to get your sight moving SLOWLY along the horizontal line toward the right while getting your clicker/trigger & releasing - **6 arrows.**
Special attention: Identify which part of your body allows your sight to follow the line
 - b) Same as 1) but from right to left - **6 arrows.**
Special attention: Identify which part of your body allows your sight to follow the line
You should have realized that it is not your top body that allows this displacement.

2. Same with a vertical strip
 - a) from up to down - **6 arrows**
 - b) reverse - **6 arrows**
Special attention: Identify which part of your body allows your sight to follow the line
You should have identified that it comes from your waist or belly. Keep this in mind, especially for Field archers, also when it is windy (how to re-centre your sight after a gust of wind). If you think that your hips are involved in the body orientation adjustment, repeat the previous exercises sitting on a chair.

3. Same with the 2 diagonals
 - a) from high left to low right - **6 arrows**
 - b) reverse on one diagonal - **6 arrows**
 - c) from high right to low left - **6 arrows**
 - d) reverse on the other diagonal - **6 arrows**Let your relaxed top body "floating" on your powerful belly.

4. Same on a circle, you can use a target face and follow a line between 2 colors;
 - a) Clockwise - **6 arrows**
 - b) reverse - **6 arrows**Let your relaxed top body "floating" on your powerful belly.

2. Same on a sinuous/doodled line; the length of each segment of the sinuous line should make you changing of direction at least once while at full draw
 - a) from one way - **6 arrows**
 - b) reverse - **6 arrows**Let your relaxed top body "floating" on your powerful belly. Now you should have understood the meaning of the aiming method described as "*Let your sight floating over the aiming zone*".

Volume: 72 arrows over the exercises + 8 warm-up arrows = **80 arrows** over the session.

FITA Training SUGGESTIONS starting on October 22, 2001.

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**Session: (type, for instance: Strengthening) - Quantity: in % - Quality: in %  
on (day): identify the day**

Session: \_\_\_\_\_ Quantity: \_\_\_\_\_ %Quality: \_\_\_\_\_  
% on (day): \_\_\_\_\_

Session: \_\_\_\_\_ Quantity: \_\_\_\_\_ %Quality: \_\_\_\_\_  
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% on (day): \_\_\_\_\_

**Legend:**

*Quantity: Rate in % the amount of worked you did compare to the suggestions.*

*Quality: Rate in % the intensity of your attention to implement properly the suggestions.*

**EVALUATION (quote in the corresponding order as above):**

Session: \_\_\_\_\_ Duration: S A L Workload: W A H

Session: \_\_\_\_\_ Duration: S A L Workload: W A H

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**Legend:**

*Duration: S means too short - A means appropriate - L means too long*

*Workload: W means too weak - A means appropriate - H means too heavy*

**COMMENTS**

**Legend:** NC = No comment - NA = Non available - NP = Non possible - NR = Not realized



Nape contraction



Nape stretching



Powerfull belly



Center of gravity with a stick



Motionless Head control



Working with a mirror

**FITA Training SUGGESTIONS starting on **October 22**, 2001.**

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** - ** COMMENTS and NEWS ****

Few comment this week since it is suggested to strengthen the developments from last week.

As scheduled and explained in the “2001-2002 Overall Training Plan” the number of arrows per session will increase (+ 7 arrows for the heavier session).

Several of you would like to access to the FITA training tips in French. FITA, as a bilingual Governing Body supports this request, but due to the workload at the office, its staff cannot face this task.

If one of you is interested in translating the FITA training tips, or if you know someone who can do it, please contact me at: pcolmaire@archery.org
FITA is considering to pay for the translation.

Have a good week of practice

On behalf of the **FITA Coaches Committee:**

Pascal COLMAIRE

FITA Development Manager

FITA Training SUGGESTIONS starting on **October 22, 2001.**

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***The week at a glance:***

| Days      | # | Session Type                | Subject / Skill               | Volume                     |
|-----------|---|-----------------------------|-------------------------------|----------------------------|
| Monday    | 1 | Stretching<br>Visualisation | As per “Stretching Tips”      | 1:20 hour<br>3 times a day |
| Tuesday   | 1 | Shooting                    | Body Pre-setting              | 69 arrows – 1:15 hour      |
| Wednesday | 1 | Stretching<br>Visualisation | As per “Stretching Tips”      | 1:20 hour<br>3 times a day |
| Thursday  |   | Club & Provincial<br>Teams  | Agreement on collaboration    | Negligible                 |
| Friday    | 1 | Shooting                    | Shooting adjustment Center    | 78 arrows – 1:20 hours     |
| Saturday  | 1 | Stretching<br>Visualisation | As per “Stretching Tips”      | 1:20 hour<br>3 times a day |
| Sunday    | 1 | Shooting                    | Equipment selection and tests | 87 arrows – 1:25 hours     |

**Note #1:**

Since this is your restart, the shooting rhythm is slow (+/- 60 arrows per hour), allowing:

- rest between ends (you certainly have a lot to discuss with your friends ...);
- rest between arrows;
- to feel the shooting perceptions.

**Note #2:**

As you can notice Visualisation is scheduled the non-shooting days.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

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**MONDAY**

**Session: Stretching.**

# of sessions: 1

Description: See “[Stretching Tips](#)”.

Plan and follow a progression; for instance:

- first week you stretched 10 seconds the “small” muscles and 20 seconds the “big” ones,
- second week you can stretch 15 seconds the “small” muscles and 25 seconds the “big” ones,
- third week you will stretch 20 seconds the “small” muscles and 30 seconds the “big” ones
- ...

Of course such a progression requires more and more time, this is why we will propose one more stretching session in 2 weeks. So you will be able to split your exercises over 4 sessions instead of 3.

See pictures "[Posterior Deltoid Contracted](#) " and "[Posterior Deltoid Stretched](#) "

**Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.



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Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

Due to the current Technical development, it is recommended to keep a powerful belly during your visualization or mimics

- * External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on. Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...

TUESDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – at least **8 arrows**.

Body Presetting (1)

1. Close your eyes as soon as you grip your string, at this moment you are little bent down. Pursuit your sequence with eyes closed until your are straight up and at full draw, then continue your sequence with your eye(s) opened - **12 arrows**. While you have your eyes closed, be concentrated on:
 - a) when and how you preset your body (main pyramid = the geometrical form between your aiming eye and your feet base). It could be before raising your bow, or after a pre-draw in direction of the floor or the target. For Compound archers who deform their posture for getting the peak, it could even be after the peak.
 - b) the following points and feelings
 - Straight Body* (vertical spine + body weight equally spread over the 2 feet)
 - Fixation of your body on your hips* (especially in your low back)
 - Low center of gravity* (heavy & powerful belly, low shoulders & blades, flat chest, and stretch feeling in your trapezius)
 - Erected spine* (flat nape)
 - Entire body in the shooting plan* (shoulders above your hips & feet)
 - Head orientation* (chin & nose pointed toward the target).
 - c) maintenance of this preset posture while raising and drawing your bow.
2. Same as above, with a stick (or arrow) pressing on your belly; the other end of the stick can be pressed against a wall or a partner – see picture “**Powerful Belly***”, or even the ground (you need a one meter long stick) – see picture “**Center of gravity with a stick***” – **12 arrows**
3. Same as 1) but with eyes opened, shooting at a blank butt, with a Haki ball (slightly flattened) on the top of your head- see picture “**Motionless Top Body control with a Haki Ball***” – **12 arrows**
4. Same as 1) but watching yourself in a mirror, instead of having your eyes closed – see picture “**Deformationless Body Control with a Mirror***” – **12 arrows**
5. Same as 1) but with eyes opened, shooting at a blank butt – **6 arrows**
6. Same as above, but shooting at a target face – **6 arrows**.

Note: for all the exercises with a mirror, the mirror should be at a place such that the archer has not to move his/her head to watch herself. Therefore the mirror should be at the archer's face


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*level, and very close from the aiming plan – about 10” space between the arrow axis and the edge of the mirror. A mirror on a tripod (or any type of stand) is perfect, otherwise you need an assistant.*

\* Pictures published last week (Week #1).

*Volume: 69 arrows over the session.*

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## WEDNESDAY

### Session: Stretching.

# of sessions: 1

Description: See “Stretching Tips”.

Plan and follow a progression; for instance:

- first week you stretch 10 seconds the “small” muscles and 20 seconds the “big” ones,
- second week you can stretch 15 seconds the “small” muscles and 25 seconds the “big” ones,
- third week stretch 20 seconds the “small” muscles and 30 seconds the “big” ones
- ...

Of course such a progression requires more and more time, this is why we will propose one more stretching session in 2 weeks. So you will be able to split your exercises over 4 sessions instead of 3.

### Session: Mimics / Visualization.

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

Due to the current Technical development, it is recommended to keep a powerful belly during your visualization or mimics

- \* External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on. Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...

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## THURSDAY

### Session: Club and Provincial Teams collaboration

Meet with the Coordinator of your Club Team, and Provincial Team if appropriate, to discuss and come to an agreement regarding your collaboration and the tournaments that you will be able to shoot with them and those that will not be available.

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## FRIDAY

### Session: Shooting

# of sessions: 1 shooting session.

General warm-up and shooting warm-up – at least **8 arrows**.

## FITA Training SUGGESTIONS starting on **October 22, 2001.**

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Moving Center for aiming #3.

For the following exercise you need an assistant. This assistant could be a coach, or another archer with whom you agree to shoot alternatively.

At 2 or 3 meters from a blank butt draw your bow back toward 20 cm from the left edge of the butt. At full draw, close your eyes and move SLIGHTLY and SLOWLY your top body to get your sight (that you cannot see since your eyes are closed) along:

1. an imaginary horizontal line toward:
 - a) the **right** while getting your clicker/trigger & releasing (5 arrows). The assistant is in charge to check if you do not deviate too much to ensure that the arrow will hit the butt.
Special attention: Feel that your hips and legs do not move. Only your waist should allow this slight drifting of your body.
If you feel that your hips moving, implement this exercise sitting on a chair.
 - b) Same as 1) but from right to **left** (5 arrows).
Special attention: Same. Feel your top body “floating” on your belly.
2. an imaginary vertical line:
 - a) from up to down (5 arrows)
 - b) reverse (5 arrows)
Special attention: Same . Relax your top body as much as you can
3. Two imaginary diagonals in “X” shape:
 - a) from high left to low right (5 arrows)
 - b) reverse on one diagonal (5 arrows)
 - c) from high right to low left (5 arrows)
 - d) reverse on the other diagonal (5 arrows)
4. around an imaginary circle:
 - a) Clockwise (5 arrows)
 - b) reverse (5 arrows)
2. in any direction, like along a sinuous:
 - a) from one way (5 arrows)
 - b) reverse (5 arrows)
3. Finish your session by shooting 10 arrows at a blank butt.

Volume: 5 arrows per situation + 8 warm-up arrows = about 80 arrows over the session

Volume: 70 arrows total over the exercises + 8 warm-up arrows = **78 arrows** over the session.

SATURDAY

Session: Stretching.

of sessions: 1

Description: See “Stretching Tips”.

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Plan and follow a progression; for instance:

- first week you stretch 10 seconds the “small” muscles and 20 seconds the “big” ones,
- second week you can stretch 15 seconds the “small” muscles and 25 seconds the “big” ones,
- third week stretch 20 seconds the “small” muscles and 30 seconds the “big” ones
- ...

Of course such a progression requires more and more time, this is why we will propose one more stretching session in 2 weeks. So you will be able to split your exercises over 4 sessions instead of 3.

### **Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

Due to the current Technical development, it is recommended to keep a powerful belly during your visualization or mimics

- \* External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on. Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...

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## **SUNDAY**

### **Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – at least **8 arrows**.

*Objective:* Better adjust your aiming with your body.

### **Body Aiming Adjustment #1.**

The following exercise is an adaptation for archery of a pistol shooting exercise.

1. Display an horizontal line across the butt (1” wide masking tape is OK).
  - a) Draw your bow back toward the left end on the line. At full draw move to get your sight moving SLOWLY along the horizontal line toward the right while getting your clicker/trigger & releasing - **6 arrows**.  
*Special attention:* Identify which part of your body allows your sight to follow the line
  - c) Same as 1) but from right to left - **6 arrows**.  
*Special attention:* Identify which part of your body allows your sight to follow the line  
You should have realized that it is not your top body that allows this displacement.
5. Same with a vertical strip
  - c) from up to down - **6 arrows**
  - d) reverse - **6 arrows**  
*Special attention:* Identify which part of your body allows your sight to follow the line  
You should have identified that it comes from your waist or belly. Keep this in mind, especially for Field archers, also when it is windy (how to re-centre your sight after a gust of wind). If you think

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that your hips are involved in the body orientation adjustment, repeat the previous exercises sitting on a chair.

6. Same with the 2 diagonals
 - e) from high left to low right - **6 arrows**
 - f) reverse on one diagonal - **6 arrows**
 - g) from high right to low left - **6 arrows**
 - h) reverse on the other diagonal - **6 arrows**Let your relaxed top body “floating” on your powerful belly.
7. Same on a circle, you can use a target face and follow a line between 2 colors;
 - c) Clockwise - **6 arrows**
 - d) reverse - **6 arrows**Let your relaxed top body “floating” on your powerful belly.
4. Same on a sinuous/doodled line; the length of each segment of the sinuous line should make you changing of direction at least once while at full draw
 - c) from one way - **6 arrows**
 - d) reverse - **6 arrows**Let your relaxed top body “floating” on your powerful belly. Now you should have understood the meaning of the aiming method described as “*Let your sight floating over the aiming zone*”.

Volume: 72 arrows over the exercises + 8warm-up arrows = **80 arrows** over the session.

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**Session: (type, for instance: Strengthening) - Quantity: in % - Quality: in %  
on (day): identify the day**

Session: \_\_\_\_\_ Quantity: \_\_\_\_\_ %Quality: \_\_\_\_\_  
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**Legend:**

*Quantity: Rate in % the amount of worked you did compare to the suggestions.*

*Quality: Rate in % the intensity of your attention to implement properly the suggestions.*

**EVALUATION (quote in the corresponding order as above):**

Session: \_\_\_\_\_ Duration: S A L Workload: W A H

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**Legend:**  
*Duration: S means too short - A means appropriate - L means too long*  
*Workload: W means too weak - A means appropriate - H means too heavy*

**COMMENTS**

Legend: NC = No comment - NA = Non available - NP = Non possible - NR = Not realized

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Posterior Deltoid Contracted



Posterior Deltoid Stretch

FITA Training SUGGESTIONS starting on **November 5**, 2001.

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\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\*

### Reminders and information:

1. The FITA training tips were born in October 2000, from an initiative of the FITA Coaches Committee, based on a Canadian experience.
2. The FITA weekly training tips have been developed for:
  - the coaches who have no access to any coaching development opportunities;
  - archers who have no access to any coaching assistance.
3. We have already published 2 important documents from which the 2001-2002 Training Tips have been developed:
  - “2001-2002 Overall Training Plan” in French and English;
  - “2002 English and French Training Plans”.These 2 documents are posted on the FITA Web site: [www.archery.com](http://www.archery.com)  
Please read them before using these tips.  
The 2001-2002 FITA Training Tips will follow the above training plans.  
By consequence these tips are NOT individualized to your own needs, experience, development, availability and goals. Hence you have to adapt these suggestions to you – a local coach could help you.  
FITA declines any responsibility for any unfortunate consequences (injuries, accident...) that could occur to any person who will use these training tips.  
Nevertheless FITA hopes that these suggestions will give to you some additional ideas for your training.
4. The FITA Training Tips are issued every week from mid October until August 10, 2002.
5. At the end of the first set of tips there was an example of record of your practice. FITA will not publish this example of record every week, it is up to you to record your training – whatever the document you will use - but a record is **STRONGLY** recommended.

This is our third week of practice. As you can see we have moved to 4 shooting and stretching sessions, and we have introduced some cardio development.

Hence we have increased the weekly practice time from 8:00 hours to 11:20 hours.

Time-sharing: **47 à 48%** shooting and **53 à 52%** for other developments (6 hours).

Total volume: **11 :20 hours** per week

Shooting: **4 sessions** per week – **1 :20** hour each

5 :20 hours

Stretching: **4 sessions** per week of **1: 15** each

5 hours

**Cardio (start): 2 sessions** per week of **30 min.** each

1 hour

*Running on rough field is recommended for body balance, but the archer can choose any activity that he/she enjoys. Priority is given to the development of the **aerobic capacity***

Next week we will propose to you some exercises on the draw and the synchronization of the archer's hands within the same practice time of 11:20 hours.

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

**Pascal COLMAIRE**

*FITA Development Manager*

FITA Training SUGGESTIONS starting on **November 5, 2001.**

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The week at a glance:

Days	#	Session Type	Subject / Skill	Volume
Monday	1	Stretching Visualisation	As per "Stretching Tips"	1:15 hour 3 times a day
Tuesday	1 1	Shooting Stretching	Raising the bow As per "Stretching Tips"	70 arrows – 1:10 hour 1:15 hour
Wednesday	1 1	Shooting Cardio	Tuning	94 arrows – 1:25 hour 0:30 hour
Thursday		Partners Visualisation	Agreement on collaboration	Negligible 3 times a day
Friday	1 1	Shooting Stretching	Draw Start As per "Stretching Tips"	94 arrows – 1:25 hours 3 times a day
Saturday	1	Stretching Visualisation	As per "Stretching Tips"	1:15 hour 3 times a day
Sunday	1 1	Shooting Cardio	Raising and Draw Start	87 arrows – 1:20 hours 0:30 hour

Note #1:

Since this is your restart, the shooting rhythm is slow, allowing:

- rest between ends (you certainly have a lot to discuss with your friends ...);
- rest between arrows;
- to feel the shooting perceptions.

Note #2:

As you can notice Visualisation is scheduled the non-shooting days.

Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.

MONDAY

Session: Stretching.

of sessions: 1

Description: See "[Stretching Tips](#)" – a document included in the 2002-1 Training tips

Plan and follow a progression; for instance:

- first week you stretched 10 seconds the "small" muscles and 20 seconds the "big" ones,
- second week you stretched 15 seconds the "small" muscles and 25 seconds the "big" ones,
- third week (now) you can stretch 20 seconds the "small" muscles and 30 seconds the "big" ones
- ...

Of course such a progression requires more and more time, this is why we propose one more stretching session from now on. So you can split your exercises over 4 sessions instead of 3.

See pictures "[Contracting the top of shoulder](#)" and "[Stretching top shoulder by elbow](#)" or "[Stretching top shoulder - Cow Head](#)"


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**Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

Due to the current Technical development, it is recommended to keep a powerful belly during your visualization or mimics

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

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**TUESDAY**

**Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – at least **10 arrows**.

RAISING # 1.

1. Simulations:

- 1.1. Have your hand/fingers interlaced: palms up, arms against the front of your thighs, your arms are slightly curved at the elbow level. Lower your shoulders by using your pectorals, feel your trapezius stretched. Rise your arm up in front of you as high as you can maintain your shoulders DOWN. You should finish your arms (the arm part, not the forearm) raised at an angle of about 45 degrees with your body (vertical). Which means that we can raise our arms up to 45 degrees, without raising our shoulders up. See picture entitled “[High interlaced fingers](#)”
- 1.2. Simulate the bow raising, while maintaining your shoulders as low as possible. Once raised up, notice that your string-arm (just the arm, not the forearm) makes an angle of about 45 degrees with your body. At this step, your forearm is at about your eyes level, as well as your 2 hands and the imaginary arrow. . See picture entitled “[High raising mimic](#)”. You can implement this simulation watching yourself in a mirror – See illustration entitled “[Raising Simulation with mirror](#)”
- 1.3. Repeat the previous simulation with an elastic band passing around your string elbow, and in your bow hand. Focus on maintenance of a flat chest, low shoulders and blades, heavy belly. See picture entitled “[High line of forces](#)”. You can implement this simulation watching yourself in a mirror – See illustration entitled “[Raising mimic with band and a mirror](#)”

All this session long, continue to take care to the previous work, i.e. your attention should follow the following path:

*Straight Body* (vertical spine + body weight equally spread over the 2 feet)

*Fixation of your body on your hips* (especially in your low back)

*Low center of gravity* (heavy & powerful belly, low shoulders & blades, flat chest, and stretch feeling in your trapezius)

*Erected spine* (flat nape)

*Entire body in the shooting plan* (shoulders above your hips & feet)

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Head orientation (chin & nose pointed toward the target).

At this step your top triangle (triangle between your aiming eye and your 2 shoulders) is PRE-SET

2. Shooting

- 2.1. While shooting, watch the top part of your bow-arm while raising your bow; watch your bow shoulder if you can, feel your bow shoulder and blade maintained as low as possible. See picture entitled "[Watch Bow shoulder direct](#)". Once raised watch at the butt and draw – **10** arrows
- 2.2. Same, but watch yourself raising your bow shoulder in a mirror. See illustration entitled "[Bow raising with mirror](#)" – **10** arrows.
- 2.3. Same as #1, but close your eyes instead of watching your bow shoulder. Focus on the feeling of a low bow shoulder and blade – **10** arrows.
- 2.4. Same, but now with eyes up - blurred watching – **10** arrows.
- 2.5. Same, but watching at a blank butt – **10** arrows
- 2.6. Same, but shooting at a target face – **10** arrows.

Volume: 60 arrows over the exercise, with the 10 warm-up arrows, that make about **70** arrows over the session.

WEDNESDAY

Session: Shooting.

of sessions: 1

TUNING

Description: There are so many written and Audio-visual publications on this subject that we will not detail any tuning process here; it would be too long and repeat the information that you can easily find somewhere else. For instance you can use the tuning process described in the Easton catalog. If you have not yet this catalog, you can order it from the following website:

<http://www.eastonarchery.com/>

Several bow makers also provides good advises, like the PSE Compound BowUser's guide:

www.pse-archery.com

1 tuning document is attached: "[French Test](#)"

Volume: 8 warm-up arrows + up to 86 arrows for tuning = **94** arrows.

Note: The above number of arrows can vary a lot pending your need of tuning and adjustment. Strive to complete the session up to **94** arrows.

Session: Cardio Maintenance.

of session: 1

Duration: 0:30 hour (see the important note below)

Description: **Medium Duration – Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

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Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   | X   |        |      |           |
| Long     |     |        |      |           |
| Duration |     |        |      |           |

Today we propose a Cardio session made of “**Medium Duration – Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

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### THURSDAY

#### Session: Partners collaboration

Note: By “Partners” we want to mean Sponsors, Private or Public partners...

Meet with your partners (if any) to discuss and come to an agreement regarding your collaboration.

Advise: Don't commit to do a lot, **but** strive to implement more than agreed. A common mistake regarding partnership with Archery Equipment Makers is to just shoot with the donated equipment. Some archers give a feedback to the Archery Equipment Makers on their performance achieved with this equipment (especially the good ones and during the few weeks following the donation). Be proactive and do more than expected from you by (for instance):

- Distributing promotional pamphlet;
- Distributing the business card of your partner;
- Organizing information sessions;
- ...

By doing more than expected you will please your partners, and by consequence you will strengthen their support to yourself, even in case of poor performances.

#### Session: Mimics / Visualization.

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

Due to the current Technical development, it is recommended to keep a powerful belly during your visualization or mimics

- \* External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on. Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...

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FRIDAY

Session: Shooting

of sessions: 1 shooting session.

General warm-up and shooting warm-up – at least **8 arrows**.

DRAW START # 1.

Simulations:

1. Simulations:

- 1.1. Have your hand/fingers interlaced: palms up, arms against the front of your body, your arms are slightly curved at the elbow level. Lower your shoulders by using your pectorals, feel a stretching feeling in your trapezius. Rise your arm up in front of you as high as you can maintain your shoulders DOWN. You should finish your arms raising with an angle of about 45 degrees between your body (vertical) and your arms. Which means that we can raise our arms up to 45 degrees, without raising our shoulders up.

Now separate your hands, and move your arms down and laterally, WITHOUT changing the curve of your arms. Feel that you open your arms as a fan. Feel that the opening notion comes from your shoulders, which move down and apart, also feel the “opening” of your rib cage, a kind of thorax expansion.

- 1.2. Simulate the bow raising, with this feeling of maintaining your shoulders as low as possible, once raised notice that your arm string (just the arm, not the forearm) makes an angle of about 45 degrees with your body (verticality) once again. At this step, your forearm is at about your eyes level, as well as your 2 hands and the imaginary arrow.

Continue by simulating a draw, changing as less as possible the shape of your arms to avoid using them for the draw action. Feel that the START of the opening notion comes from your shoulders, which move down and apart. Also feel some sort of “opening” of your rib cage, a kind of thorax expansion especially at the BEGINNING of the draw.

Focus mainly on the BEGINNING of the draw.

- 1.3. Repeat the previous simulation with an elastic band passing around your string elbow, and in your bow hand.

All this session long, continue to take care to the previous work, i.e. your attention should follow the following path:

Straight Body (vertical spine + body weight equally spread over the 2 feet)

Fixation of your body on your hips (especially in your low back)

Low center of gravity (heavy & powerful belly, low shoulders & blades, flat chest, and stretch feeling in your trapezius)

Erected spine (flat nape)

Entire body in the shooting plan (shoulders above your hips & feet)

Head orientation (chin & nose pointed toward the target).

At this step your *top triangle* (triangle between your aiming eye and 2 shoulders) is PRE-SET

2. From now, the exercises are while shooting. Implement your raising & BEGINING of your draw with eyes closed. Open your eyes toward the middle of the draw, or even at full draw (**10 arrows**).
3. Implement your raising & draw start while watching yourself in a mirror. Watch at the butt toward the middle of the draw, or even at full draw (**10 arrows**).
4. Implement your raising & draw start with eyes up and blurred. . Watch at the butt toward the middle of the draw, or even at full draw (**10 arrows**).
5. Implement your raising & draw start while watching at a blank butt. Do not focus on one area of the butt, be like a spectator of the motions of your sight on the butt (**10 arrows**).

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6. Implement your raising & draw start while shooting at a face (**3 arrows**).
7. Start over from steps #2.

Note: *for all the exercises with a mirror, the mirror should be at a place such that the archer has not to move his/her head to watch herself. Therefore the mirror should be at the archer's face level, and very close from the aiming plan – about 10" space between the arrow axis and the edge of the mirror. A mirror on a tripod (or any type of stand) is perfect, otherwise you need an assistant.*

*See picture entitled "[Deformationless Body Control with a Mirror](#)" – published in "[2002-2 Body Presetting & Adjustment Center](#)"*

**Volume:** 86 arrows total over the exercise + 8 warm-up arrows = **94 arrows** over the session.

### **Session: Stretching.**

# of sessions: 1

Description: See "Stretching Tips".

Plan and follow a progression; for instance:

- first week you stretch 10 seconds the "small" muscles and 20 seconds the "big" ones,
- second week you can stretch 15 seconds the "small" muscles and 25 seconds the "big" ones,
- third week stretch 20 seconds the "small" muscles and 30 seconds the "big" ones
- ...

Of course such a progression requires more and more time, this is why we propose one more stretching session in 2 weeks. So you can split your exercises over 4 sessions instead of 3.

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## **SATURDAY**

### **Session: Stretching.**

# of sessions: 1

Description: See "Stretching Tips".

Plan and follow a progression; for instance:

- first week you stretch 10 seconds the "small" muscles and 20 seconds the "big" ones,
- second week you can stretch 15 seconds the "small" muscles and 25 seconds the "big" ones,
- third week stretch 20 seconds the "small" muscles and 30 seconds the "big" ones
- ...

Of course such a progression requires more and more time, this is why we propose one more stretching session in 2 weeks. So you can split your exercises over 4 sessions instead of 3.

### **Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each "session". Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization,

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Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

Due to the current Technical development, it is recommended to keep a powerful belly during your visualization or mimics

- * External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on. Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...

SUNDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – at least **8 arrows**.

RAISE AND DRAW #2

Affix to each of your wrists a weight-band, as below.

Weights to be used:

- Youth and Women – Recurve : 1#
- Men Recurve and Women Compound: 1.5 #
- Men Compound: 2#

1. Repeat the simulations of DRAW START from Friday. Focus on implementing a SMOOTH SEQUENCE including your raising and drawing. Put the weights on your wrists now.

Reminder of these simulations.

- 1.1. Have your hand/fingers interlaced: palms up, arms against the front of your body, your arms are slightly curved at the elbow level. Lower your shoulders by using your pectorals, feel a stretching feeling in your trapezius. Raise your arm up in front of you as high as you can maintaining your shoulders DOWN. You should finish your arms raising with an angle of about 45 degrees between your body (vertical) and your arms. Which means that we can raise our arms up to 45 degrees, without raising our shoulders up.

Now separate your hands, and move your arms down and laterally, WITHOUT changing the curve of your arms. Feel that you open your arms as a fan. Feel that the opening notion comes from your shoulders, which move down and apart, also feel the “opening” of your rib cage, a kind of thorax expansion.

- 1.2. Simulate the bow raising, with this feeling of maintaining your shoulders as low as possible, once raised notice that your arm string (just the arm, not the forearm) makes an angle of about 45 degrees with your body (verticality) once again. At this step, your forearm is at about your eyes level, as well as your 2 hands and the imaginary arrow.

Continue by simulating a draw, changing as less as possible the shape of your arms to avoid to use them for the draw action. Feel that the START of the opening notion comes from your shoulders, which move down and apart. Also feel some sort of “opening” of your rib cage, a kind of thorax expansion especially at the BEGINNING of the draw.

Focus mainly on the BEGINNING of the draw.

- 1.3. Repeat the previous simulation with an elastic band passing around your string elbow, and in your bow hand.

FITA Training SUGGESTIONS starting on **November 5, 2001.**

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2. From now on, the exercises are while shooting. Keep the weights on your wrist. Implement your raising & drawing sequence with eyes closed. Open your eyes toward the end of the draw, or even at full draw – **16 arrows**. Reminder : the objective is to stay focussed the implementation of a SMOOTH raising and drawing start SEQUENCE.
3. Implement your raising & drawing start sequence while watching yourself in a mirror. Watch at the butt toward the end of the draw, or even at full draw – **16 arrows**.
4. Implement your raising & drawing start sequence with eyes up and blurred. . Watch at the butt toward the end of the draw, or even at full draw – **16 arrows**.
5. Implement your raising & drawing start sequence while watching at a blank butt. Do not focus on one area of the butt, be like a spectator just observe the motions of your sight on the butt – **16 arrows**.
- 6a. Implement your raising & drawing start sequence while shooting at a face – **8 arrows**.
- 6b. Take the weights of your wrists and shoot **7** more **arrows**.

*Volume:* about 79 arrows over the exercise + 8 warm-up arrows = about **87 arrows** over the session.

**Session: Cardio Maintenance.**

*# of session:* 1

*Duration:* 0:30 hour (see the important note below)

*Description:* **Medium Duration – Low Intensity**

*Note:* It is difficult to provide accurate suggestions in this matter, because pending:

- \* your current cardio development,
  - \* the activity you have chosen,
  - \* your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   | X   |        |      |           |
| Long     |     |        |      |           |
| Duration |     |        |      |           |

Today we propose a Cardio session made of “**Medium Duration – Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

## FITA Training SUGGESTIONS starting on **November 5**, 2001.

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FRENCH TEST (slightly adapted by Pascal COLMAIRE):

Ideally you need a butt, with a high pile of Tentest, Stramit, Foam, cupboard or whatsoever. On which you can affix an aiming spot as high as possible (10 inches from the top of the butt), and with Tentest down to the floor.

Set your sight at 20 meters and shoot one arrow at each of the following distances **WITHOUT** changing your sight, and always aiming at the spot:
15m, 20m, 25m, 29m, 33m, 36m, 39m, 41m, 43m, ... move back per 2m increment until you hit the lowest part of the Tentest.

If you are not pleased with the quality of any of these shots, re-shoot the arrow. If you have not enough arrows, replace some that you have already shot with nails or anything else, where they impacted the butt.

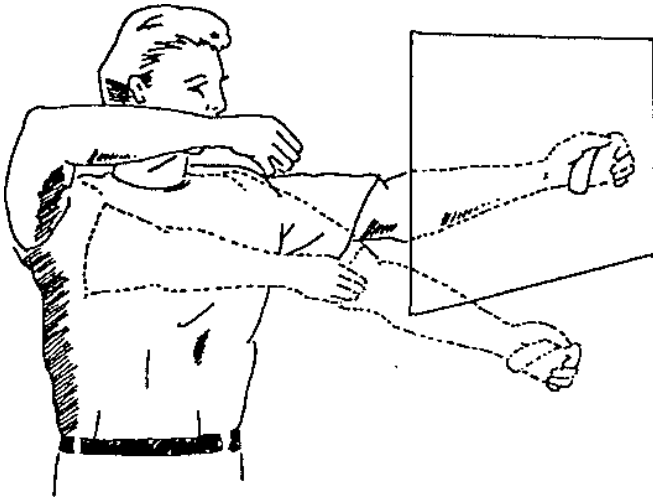
Now you have on the butt the representation of your arrow flight:

- If your arrows are on a perfect vertical from the spot, all is fine, your arrow flight is straight
- If you see a curve you have to move your rest as follow:
 - * belly on the right, while the top and bottom ends are on the left, move your rest in
 - * belly on the left, while the top and bottom ends are on the right, move your rest out
- If you see a diagonal:
 - * top on left, and bottom on the right, your arrow is too weak; I suppose that you know how to play with the point mass, bow weight, string and cable mass (size), shaft length.
 - * top on the right, and bottom on the left, your shaft is too stiff

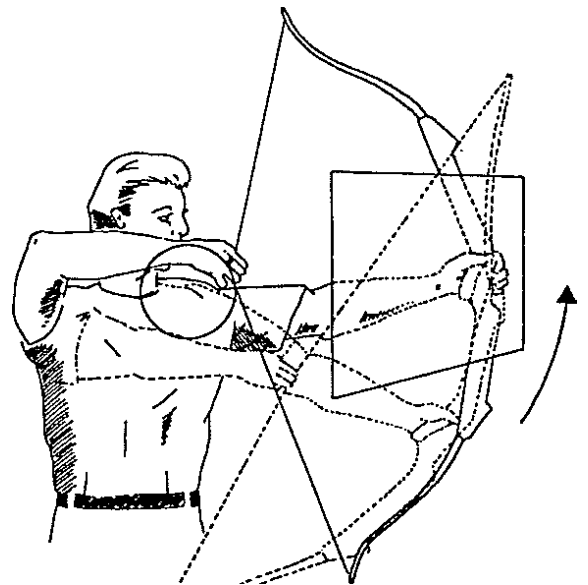
The goal is to get all your arrows on a same vertical, prove of a straight arrow flight.

Good luck!

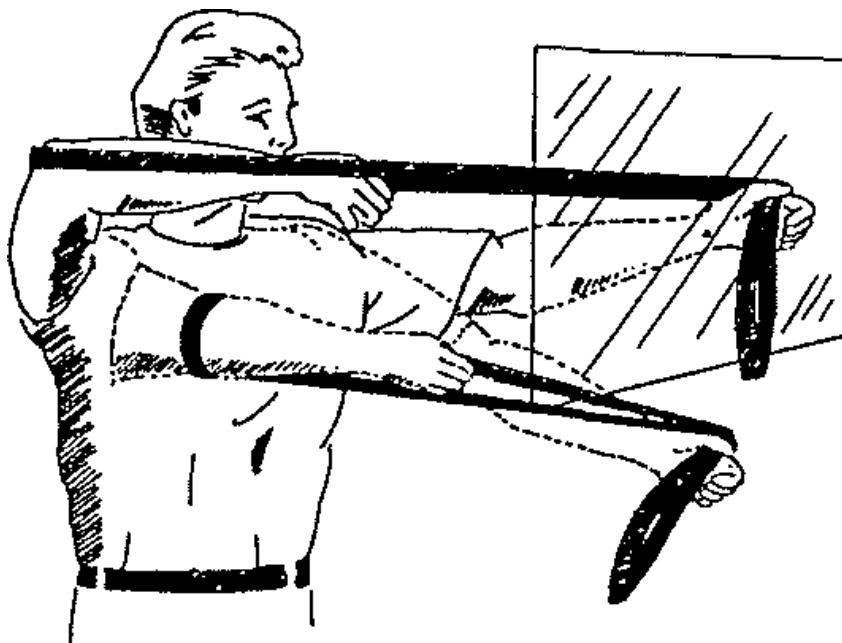

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Raising Simulation with mirror



Bow raising with mirror



Raise mimic with band and a mirror

**FITA Training SUGGESTIONS starting on November 5, 2001.**

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High line of forces



High Raising mimic



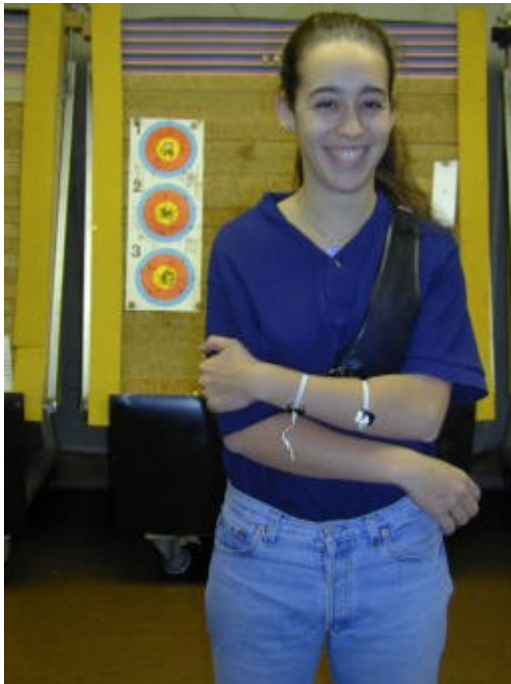
High interlaced fingers



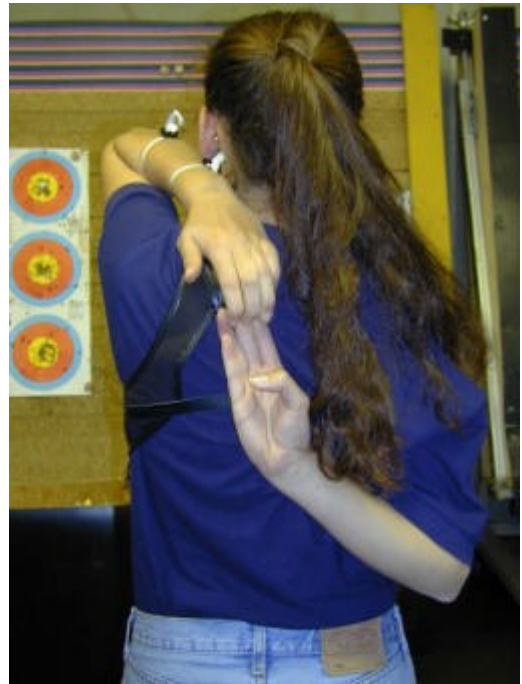
Watch Bow shoulder direct

FITA Training SUGGESTIONS starting on November 5, 2001.

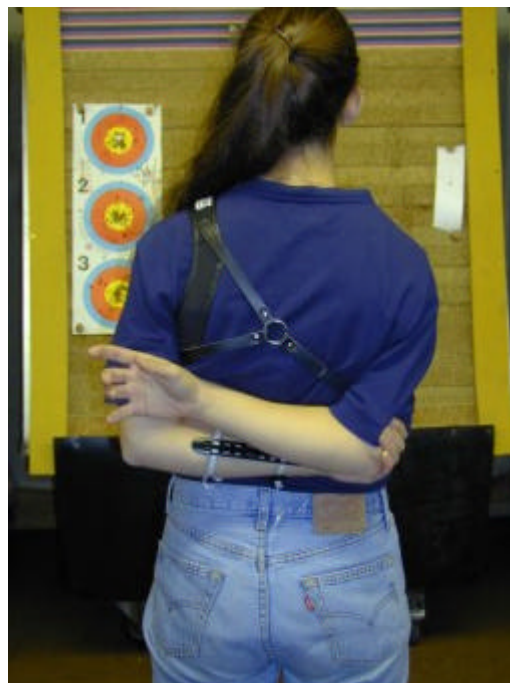
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Contratcing the top of shoulder



Stetching top shoulder - Cow Head



Stretching top shoulder by elbow

**FITA Training SUGGESTIONS starting on November 5, 2001.**

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** -** COMMENTS and NEWS ****

We have already published 2 important documents from which the 2001-2002 Training Tips have been developed:

- “2001-2002 Overall Training Plan” in French and English;
- “2002 English and French Training Plans”.

These 2 documents are posted on the FITA Web site: www.archery.com

Please read them before using these tips.

The 2001-2002 FITA Training Tips will follow the above training plans.

By consequence these tips are NOT individualized to your own needs, experience, development, availability and goals. Hence you have to adapt these suggestions to you – a local coach could help you.

FITA declines any responsibility for any unfortunate consequences (injuries, accident...) that could occur to any person who will use these training tips.

Nevertheless FITA hopes that these suggestions will give to you some additional ideas for your training.

This is our fourth week of practice with similar training routine as last week. Technically we will work our draw and the synchronization of our hands.

Time-sharing: **47 à 48%** shooting and **53 à 52%** for other developments (6 hours).

Total volume: **11 :20 hours** per week

Shooting: **4 sessions** per week – **1 :20 hour** each

5 :20 hours

Stretching: **4 sessions** per week of **1: 15** each

5 hours

Cardio (start): **2 sessions** per week of **30 min.** each

1 hour

Running on rough field is recommended for body balance, but the archer can choose any activity that he/she enjoys. Priority is given to the development of the **aerobic capacity**

Next week you will be proposed some exercises regarding Face Marks (formerly badly named “Anchor Point”).

We will also move from 6 hours to 7:45 hours of total practice. Cardio sessions will be longer (45 minutes instead of 30), we'll start strengthening, while we'll reduce Stretching.

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

Pascal COLMAIRE

FITA Development Manager

FITA Training SUGGESTIONS starting on November 5, 2001.

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***The week at a glance:***

| Days      | #      | Session Type                | Subject / Skill                                          | Volume                                   |
|-----------|--------|-----------------------------|----------------------------------------------------------|------------------------------------------|
| Monday    | 1      | Stretching<br>Visualisation | As per “Stretching Tips”                                 | 1:15 hour<br>3 times a day               |
| Tuesday   | 1<br>1 | Shooting<br>Stretching      | Drawing in the shooting plan<br>As per “Stretching Tips” | 71 arrows – 1:10 hour<br>1:15 hour       |
| Wednesday | 1<br>1 | Shooting<br>Cardio          | Draw Path                                                | 101 arrows – 1:25 hour<br>0:30 hour      |
| Thursday  |        | Visualisation               |                                                          | 3 times a day                            |
| Friday    | 1<br>1 | Shooting<br>Stretching      | Drawing with weights<br>As per “Stretching Tips”         | 101 arrows – 1:25 hours<br>3 times a day |
| Saturday  | 1      | Stretching<br>Visualisation | As per “Stretching Tips”                                 | 1:15 hour<br>3 times a day               |
| Sunday    | 1<br>1 | Shooting<br>Cardio          |                                                          | 90 arrows – 1:20 hours<br>0:30 hour      |

**Note #1:**

Since we have recently restarted to practice, the shooting rhythm is still slow, allowing:

- rest between ends (you certainly have a lot to discuss with your friends ...);
- rest between arrows;
- to feel the shooting perceptions.

**Note #2:**

As you can notice Visualisation is scheduled the non-shooting days.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

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**MONDAY**

**Session: Stretching.**

# of sessions: 1

Description: See “[Stretching Tips](#)” – a document included in the 2002-1 Training tips

Plan and follow a progression; for instance:

- first week you stretched 10 seconds the “small” muscles and 20 seconds the “big” ones,
- second week you stretched 15 seconds the “small” muscles and 25 seconds the “big” ones,
- from the third week (the latest one) you can stretch 20 seconds the “small” muscles and 30 seconds the “big” ones.

Of course such a progression requires more and more time, this is why we propose one more stretching session from the third week allowing to split your exercises over 4 sessions instead of 3.

See illustrated examples published with the tips of the first 3 weeks.

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Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- * *External visualization* = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.
- * *Internal visualization* = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...

TUESDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – at least **7 arrows**.

DRAWING IN THE SHOOTING PLAN

1. In front of a mirror without an arrow on the bow. The mirror is affixed on the butt, or a wall. Stand very close from the butt, the distance is such that the tip of the long stabilizer is at 1/2 meter from the mirror. Raise the bow, watch your :
 - for Recurve archer: string aligned where you are used to align your string (on the bow window, or sight aperture)
 - for Compound archer: string roughly in the scopeIn any case strive to see, in the mirror, your string in front of your aiming eye (for this exercise anyway). Draw back the string while controlling that the string remains all its travel long:
 - in front of your eye
 - where you have aligned it.**Important:** Never move your head during the draw.
8 repetitions, and have 3 minutes of rest. See pictures entitled “*Draw simulation toward a mirror 1 and 2*”
 2. Start over but close your eyes just while starting your draw. At full draw open your aiming eye, and check if the string is still in front of your eye, and where you have aligned it. If not you probably have either moved your head during the draw, or pull the string out of the shooting plan, or twist your top body during the draw, or lean body (probably forward = toward your toes) - **8 repetitions**
 3. Similar as #1 but while shooting arrows at a blank butt at a short distance 10 to 18 meters (you’d better remove the mirror from the butt!) - **12 arrows**
 4. Similar as #1 but while shooting arrows at a vertical band on the target, from a regular shooting distance - **12 arrows**
 5. Similar as #2, while shooting at a vertical band on the target, from a regular shooting distance - **12 arrows**
 5. Similar as #1 but while shooting arrows from a regular shooting distance at the appropriate target face - **12 arrows**
- Volume:** 64 arrows & simulations / exercise + 7 arrows of warm-up = **71 arrows** total.

Session: Stretching.

of sessions: 1

Description: See “[Stretching Tips](#)” – a document included in the 2002-1 Training tips

Plan and follow a progression; for instance:

- first week you stretched 10 seconds the “small” muscles and 20 seconds the “big” ones,
- second week you stretched 15 seconds the “small” muscles and 25 seconds the “big” ones,


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- from the third week (the latest one) you can stretch 20 seconds the “small” muscles and 30 seconds the “big” ones.

Of course such a progression requires more and more time, this is why we propose one more stretching session from the third week allowing to split your exercises over 4 sessions instead of 3.

See illustrated examples published with the tips of the first 3 weeks.

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## WEDNESDAY

### Session: Shooting.

# of sessions: 1

DRAW PATH / TRAJECTORY.

Description:

1. Warm-up, including **9** practice **arrows**.
2. Simulations:
  - 2.1. Simulate your body presetting and raising, continue by simulating your draw, ensure that your hands - especially your string hand - describe a nice and smooth curved trajectory until the end of the draw, i.e. until “landing” under your jaw (or against for some compound/barebow archers). Lower your string hand PROGRESSIVELY, avoid stepping down. Both hands should remain at the same decreasing level and parallel to the floor – **5 repetitions**.
  - 2.2. Same in front of a mirror – **5 repetitions**.
  - 2.3. Same as 2.1. but with an elastic band passing around your string elbow, and in your bow hand - See picture entitled “*Line of forces always horizontal*” – **5 repetitions**.
  - 2.4. Same in front of a mirror – **5 repetitions**.

All this simulation session long, continue to take care to the previous work, i.e. your attention should follow the following path:

*Straight Body* (vertical spine + body weight equally spread over the 2 feet)

*Fixation of your body on your hips* (especially in your low back)

*Low center of gravity* (heavy & powerful belly, low shoulders & blades, flat chest, and stretch feeling in your trapezius)

*Erected spine* (flat nape)

*Entire body in the shooting plan* (shoulders above your hips & feet)

*Head orientation* (chin & nose pointed toward the target).

At this step your top triangle (aiming eye, shoulders) is PRE-SET, hence you can start your draw with your chest muscles.

3. Now while shooting (real shooting). From the beginning of your bow raising, watch your string hand while drawing your bow; watch the trajectory of your string hand as long/far as you can. Be sure that it remains at the same decreasing level as your bow hand and your arrow parallel to the floor (valid for short distance). Once at full draw watch at the target and continue your shooting sequence – See picture entitled “*Visual check of Hands Synchronization*” – **12 arrows**.
4. Same, but watch yourself drawing your bow in a mirror – **12 arrows**.
5. Same as #2, but close your eyes instead of watching your string hand – **12 arrows**.. Focus on the feelings of:
  - a nice and progressive trajectory of your string-hand
  - an action coming from the muscles of your chest, back and posterior part of your shoulders (not from upper limbs!).
6. Same, but now with eyes up & blurred watching – **12 arrows**.

## FITA Training SUGGESTIONS starting on **November 5**, 2001.

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7. Same, but watching at a blank butt – **12 arrows** .

8. Same, but shooting at a target face. – **12 arrows** .

Volume: 20 simulations + 72 arrows over the exercises + 9 warm-up arrows = about **98 arrows** over the entire session.

Session: **Cardio Maintenance.**

of session: 1

Duration: 0:30 hour (see the important note below)

Description: **Medium Duration – Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium	X			
Long				
Duration				

Today we propose a Cardio session made of “**Medium Duration – Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

THURSDAY

Session: **Mimics / Visualization.**

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- * *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- * *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

FRIDAY

Session: **Shooting**

of sessions: 1 shooting session.


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DRAW PATH / TRAJECTORY with WEIGHTS.

Same as yesterday, BUT with one weight on each of your wrists, i.e.:

See Picture entitled "[Drawing with weights on wrists](#)".

Description:

1. Warm-up, including **9** practice **arrows**.
2. Simulations:
  - 2.1. Simulate your body presetting and raising, continue by simulating your draw, ensure that your hands - especially your string hand - describe a nice and smooth curved trajectory until the end of the draw, i.e. until "landing" under your jaw (or against for some compound/barebow archers). Lower your string hand PROGRESSIVELY, avoid stepping down. Both hands should remain at the same decreasing level and parallel to the floor – **5 repetitions**.
  - 2.2. Same in front of a mirror – **5 repetitions**.
  - 2.3. Same as 2.1. but with an elastic band passing around your string elbow, and in your bow hand - See picture entitled "[Line of forces always horizontal](#)" – **5 repetitions**.
  - 2.4. Same in front of a mirror – **5 repetitions**.

All this simulation session long, continue to take care to the previous work, i.e. your attention should follow the following path:

*Straight Body* (vertical spine + body weight equally spread over the 2 feet)

*Fixation of your body on your hips* (especially in your low back)

*Low center of gravity* (heavy & powerful belly, low shoulders & blades, flat chest, and stretch feeling in your trapezius)

*Erected spine* (flat nape)

*Entire body in the shooting plan* (shoulders above your hips & feet)

*Head orientation* (chin & nose pointed toward the target).

At this step your top triangle (aiming eye, shoulders) is PRE-SET, hence you can start your draw with your chest muscles.

3. Now while shooting (real shooting). From the beginning of your bow raising, watch your string hand while drawing your bow; watch the trajectory of your string hand as long/far as you can. Be sure that it remains at the same decreasing level as your bow hand and your arrow parallel to the floor (valid for short distance). Once at full draw watch at the target and continue your shooting sequence – See picture entitled "[Visual check of Hands Synchronization](#)" – **12 arrows**.
4. Same, but watch yourself drawing your bow in a mirror – **12 arrows**.
5. Same as #2, but close your eyes instead of watching your string hand – **12 arrows**.. Focus on the feelings of:
  - a nice and progressive trajectory of your string-hand
  - an action coming from the muscles of your chest, back and posterior part of your shoulders (not from upper limbs!).
6. Same, but now with eyes up & blurred watching – **12 arrows**.
7. Same, but watching at a blank butt – **12 arrows**.
8. Same, but shooting at a target face. – **12 arrows**.

*Volume*: 20 simulations + 72 arrows over the exercises + 9 warm-up arrows = about **98 arrows** over the entire session.

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Session: Stretching.

of sessions: 1

Description: See “[Stretching Tips](#)” – a document included in the 2002-1 Training tips

Plan and follow a progression; for instance:

- first week you stretched 10 seconds the “small” muscles and 20 seconds the “big” ones,
- second week you stretched 15 seconds the “small” muscles and 25 seconds the “big” ones,
- from the third week (the latest one) you can stretch 20 seconds the “small” muscles and 30 seconds the “big” ones.

Of course such a progression requires more and more time, this is why we propose one more stretching session from the third week allowing to split your exercises over 4 sessions instead of 3.

See illustrated examples published with the tips of the first 3 weeks.

SATURDAY

Session: Stretching.

of sessions: 1

Description: See “[Stretching Tips](#)”.

Plan and follow a progression; for instance:

- first week you stretch 10 seconds the “small” muscles and 20 seconds the “big” ones,
- second week you can stretch 15 seconds the “small” muscles and 25 seconds the “big” ones,
- third week stretch 20 seconds the “small” muscles and 30 seconds the “big” ones
- ...

Of course such a progression requires more and more time, this is why we propose one more stretching session in 2 weeks. So you can split your exercises over 4 sessions instead of 3.

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*

* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

SUNDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – at least **10 arrows** .

DRAW SEQUENCE.

FITA Training SUGGESTIONS starting on **November 5**, 2001.

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This session is a synthesis and strengthening of 2 previous sessions on “Draw and Hand Synchronization”, and the beginning of the draw.

### 1. Simulations:

- 1.1. Have your hand/fingers interlaced: palms up, arms against the front of your body, your arms are slightly curved at the elbow level. Lower your shoulders by using your pectorals, feel a stretching feeling in your trapezius. Rise your arm up in front of you as high as you can maintain your shoulders DOWN. You should finish your arms raising with an angle of about 45 degrees between your body (vertical) and your arms. Which means that we can raise our arms up to 45 degrees, without raising our shoulders up.

Now separate your hands, and move your arms down and laterally, WITHOUT changing the curve of your arms. Feel that you open your arms as a fan. Feel that the opening notion comes from your shoulders, which move down and apart, also feel the “opening” of your rib cage, a kind of thorax expansion – **5 repetitions.**

- 1.2. Simulate the bow raising, with this feeling of maintaining your shoulders as low as possible, once raised notice that your arm string (just the arm, not the forearm) makes an angle of about 45 degrees with your body (verticality) once again. At this step, your forearm is at about your eyes level, as well as your 2 hands and the imaginary arrow.

Continue by simulating a draw, avoiding the use of your upper limbs for the draw action. Feel that the opening motion comes from your shoulders, which move down and apart, also feel the “opening” of your rib cage, a kind of thorax expansion.; continue your simulated draw, ensure that your hands- especially your string hand - describe smooth curved trajectory until the end of the draw, i.e. until “landing” under your jaw (or against for some compound/barebow archers). Lower your string hand PROGRESSIVELY, avoid stepping down. Hands should remain at the same height and parallel to the floor (valid from short shooting distance) – **5 repetitions.**

- 1.3. Same in front of a mirror – **5 repetitions.**

- 1.4. Same as 1.1. but with an elastic band passing around your string elbow, and in your bow hand – **5 repetitions.**

- 1.5. Same in front of a mirror – **5 repetitions.**

From now, the exercises are while shooting.

2. Preset your body and START your sequence toward the target. Move your eyes, WITHOUT turning your head, toward the mirror; observe your top body (top pyramid- in other words your head and shoulders) and your face, they should remain IDENTICAL and IMPASSIVE. For the moment do not pay attention to the consistency of the facial marks. At full draw, move your eyes back toward the target and continue your shooting sequence – **5 arrows.**

3. Repeat the previous situation, but close your eyes instead of watching yourself in the mirror – **5 arrows.**

4. Repeat the first situation, but watching blurred and up (as when you are in the clouds) instead of watching yourself in the mirror – **5 arrows.**

5. Repeat the first situation, but shooting at a blank butt – **5 arrows.**

6. Repeat the first situation, but shooting at a cut-out target face, only showing scoring zones 1 to 5 – **5 arrows.**

7. Repeat the first situation, but shooting at a cut-out target face, only showing scoring zones 1 to 6 – **5 arrows.**

8. Repeat the first situation, but shooting at a cut-out target face, only showing scoring zones 1 to 7 – **5 arrows.**

9. Repeat the first situation, but shooting at a cut-out target face, only showing scoring zones 1 to 8 – **5 arrows.**

10. Repeat the first situation, but shooting at a cut-out target face, only showing scoring zones 1 to middle of the 9 – **5 arrows.**

11. Repeat the first situation, but shooting at a cut-out target face, only showing scoring zones 1 to 9 – **5 arrows.**

12. Repeat the first situation, but shooting at a complete target face – **5 arrows.**

**FITA Training SUGGESTIONS starting on November 5, 2001.**

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Volume: 10 warm-up arrows + 25 simulations + 55 arrows – **90 “arrows”** over the session.

Session: Cardio Maintenance.

of session: 1

Duration: 0:30 hour (see the important note below)

Description: **Medium Duration – Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

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Duration				

Today we propose a Cardio session made of “**Medium Duration – Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.



Draw simulation toward a mirror 1



Drawing with weights on wrists

FITA Training SUGGESTIONS starting on **November 5**, 2001.

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Draw simulation toward a mirror 2



Visual check of Hands Synchronization



Line of forces always horizontal

FITA Training SUGGESTIONS starting on **November 19, 2001.**

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** - ** COMMENTS and NEWS ****

This is our fifth week of practice with a slight workload change with to last week since we move from 6 hours to 7:45 hours of total practice. Cardio sessions will be longer (45 minutes instead of 30). We will start strengthening, while we'll reduce Stretching.

Technically we will work on our face marks (formerly badly named "Anchor Point") and physical alignment.

Time sharing: **45%** Shooting and **55%** other Developments (7:45 hours).

Total volume: **14 :45 hours** per week

Shooting: **4** sessions per week of **1 :40 hour** each = 6:40 hours

Cardio : **2** sessions per week of **45 min.** each = 1 :30 hours

Strengthening : **3** sessions per week of **1 :15 hour** each = 4 hours

Endurance Strength development is recommended to start this long strengthening period (Endurance strength = light weights / high number of repetitions). Emphasis on low limbs and belt

Decrease of the stretching work, which will stop with the start of the 4th step.

Next week you will be proposed some exercises regarding String clearance and physical alignment.

We will also

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

Pascal COLMAIRE

FITA Development Manager

FITA Training SUGGESTIONS starting on **November 19**, 2001.

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### *The week at a glance:*

| Days      | #      | Session Type                   | Subject / Skill                                    | Volume                               |
|-----------|--------|--------------------------------|----------------------------------------------------|--------------------------------------|
| Monday    | 1      | Strengthening<br>Visualisation | Restart session                                    | 1:20 hour<br>3 times a day           |
| Tuesday   | 1<br>1 | Shooting<br>Stretching         | Face Marks & Alignment<br>As per "Stretching Tips" | 72 arrows – 1:10 hour<br>1:20 hour   |
| Wednesday | 1<br>1 | Shooting<br>Strengthening      | Face Marks & Alignment<br>Restart session          | 108 arrows – 1:45 hour<br>1:20 hour  |
| Thursday  | 1      | Cardio Visualisation           |                                                    | 0:45 hour<br>3 times a day           |
| Friday    | 1<br>1 | Shooting<br>Strengthening      | Face Marks & Alignment<br>Restart session          | 108 arrows – 1:45 hours<br>1:20 hour |
| Saturday  | 1      | Stretching<br>Visualisation    | As per "Stretching Tips"                           | 1:20 hour<br>3 times a day           |
| Sunday    | 1<br>1 | Shooting<br>Cardio             | Test                                               | 93 arrows – 1:30 hours<br>0:45 hour  |

#### **Note #1:**

Since we have recently restarted to practice, the shooting rhythm is still slow, allowing:

- rest between ends (you certainly have a lot to discuss with your friends ...);
- rest between arrows;
- to feel the shooting perceptions.

#### **Note #2:**

As you can notice Visualisation is scheduled the non-shooting days.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

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## **MONDAY**

### **Session: Strengthening.**

# of sessions: 1

#### **RE-START SESSIONS**

Description: Since it is your restart, use light or no weights. Implement only 2 sets of about 10 repetitions, excepted abdominal and some small muscles (forearms, wrists, calves, ...) for which you can work until the BEGINING of a "burning" feeling.

We have not attached is a list of strengthening exercises since this is a period of general/overall strength development. Hence you can implement any of the common exercises for strengthening.

Since you have 3 strengthening sessions per week, you can target 3 groups of muscles, for instance :

Group # 1 : back, pectorals and neck

Group # 2 : Arms and shoulders

## FITA Training SUGGESTIONS starting on **November 19, 2001.**

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Group # 3 : Belt and legs

Do not hesitate in modifying these groups, nevertheless it is suggested to alternate one exercise for the agonists and one for the antagonists, for instance one for the pectorals and one for the back.

Variations are proposed for each exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your session more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power).

Recommendations:

* **To prioritize:**

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (excepted some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;

* **To avoid:**

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying, .. – in archery all the body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance,...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- * *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*


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- \* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

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## TUESDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – **12 arrows.**

As per attached document entitled “[Face Marks](#)”

Volume: 12 warm-up arrows + 60 arrows over the exercises = about **72 arrows** over the session.

### Session: Stretching.

# of sessions: 1

Description: See “[Stretching Tips](#)” – a document included in the 2002-1 Training tips

See illustrated examples published with the tips of the first 3 weeks.

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## WEDNESDAY

### Session: Shooting.

# of sessions: 1

General warm-up and shooting warm-up – **9 arrows.**

HEAD IMPASSIVITY AND STABILITY.

- \* Simulations with an elastic band.

- a) Prepare a mirror as per picture entitled “[Observing your facial marks in a mirror](#)”.

Preset your body and START your sequence toward the target. As soon as you have started your draw action, move your eyes WITHOUT turning your head toward the mirror and observe your top body (top pyramid - in other words your head and shoulders) as well as your face, they should remain identical and impassive. At the moment do not pay attention to the consistency of the facial marks.

At full draw, move your eyes back toward the target and continue your shooting sequence - **6 times.**

- b) Repeat eyes closed - **6 times.**

- c) Alternate one simulation in the mirror, and one eyes closed - **6 times** (3 in each situation).

- \* While shooting:

1. As soon as you have started to raise your bow (or just at the START of your draw), have someone putting a soft ball on the top of your head (or something else) – See picture entitled “[Facial marks with a ball on head](#)”. At the same time, move your eyes WITHOUT moving your head toward a very close mirror from your face; observe the string approaching and landing on your face, while your face remains IMPASSIVE, especially your lips and chin.  
At full draw have a look at the facial marks that you have got, then move your eyes back to the target and achieve your shooting sequence. The soft ball should have remained on your head – **8 arrows.**
2. Same but close your eyes instead of watching yourself in the mirror – **8 arrows.**
3. Same but watching blurred and up (as when you are in the clouds) instead of watching yourself in the mirror – **8 arrows.**
4. Same but shooting at a blank butt – **8 arrows.**

## FITA Training SUGGESTIONS starting on **November 19**, 2001.

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5. Same but shooting at a cut-out target face, only showing scoring zones 1 to 5 – **8 arrows** – See picture entitled “[A cut-out target face](#)”
6. Same but shooting at a cut-out target face, only showing scoring zones 1 to 6 – **8 arrows**.
7. Same but shooting at a cut-out target face, only showing scoring zones 1 to 7 – **8 arrows**.
8. Same but shooting at a cut-out target face, only showing scoring zones 1 to 8 – **8 arrows**.
9. Same but shooting at a cut-out target face, only showing scoring zones 1 to middle of the 9 – **8 arrows**.
10. Same but shooting at a cut-out target face, only showing scoring zones 1 to 9 – **8 arrows**.
11. Same but shooting at a complete target face – **8 arrows**.

Volume: 9 warm-up arrows + 18 simulations + 88 arrows over the exercises = about **108 arrows** over the entire session.

Session: Strengthening.

of sessions: 1

RE-START SESSIONS

Description: Since it is your restart, use light or no weights. Implement only 2 sets of about 10 repetitions, excepted abdominal and some small muscles (forearms, wrists, calves, ...) for which you can work until the BEGINING of a “burning” feeling.

We have not attached is a list of strengthening exercises since this is a period of general/overall strength development. Hence you can implement any of the common exercises for strengthening.

Since you have 3 strengthening sessions per week, you can target 3 groups of muscles, for instance :

Group # 1 : back, pectorals and neck

Group # 2 : Arms and shoulders

Group # 3 : Belt and legs

Do not hesitate in modifying these groups, nevertheless it is suggested to alternate one exercise for the agonists and one for the antagonists, for instance one for the pectorals and one for the back.

Variations are proposed for each exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your session more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power).

Recommendations:

*** To prioritize:**

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (excepted some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;

FITA Training SUGGESTIONS starting on **November 19**, 2001.

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- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;

### \* **To avoid:**

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying, .. – in archery all the body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance,...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

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## THURSDAY

### Session: **Cardio Maintenance.**

# of session: 1

Duration: 0:45 hour (see the important note below)

Description: **Long Duration – Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- \* your current cardio development,
  - \* the activity you have chosen,
  - \* your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   |     |        |      |           |
| Long     | X   |        |      |           |
| Duration |     |        |      |           |

Today we propose a Cardio session made of “**Long Duration – Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

### Session: **Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

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Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- * *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- * *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

FRIDAY

Session: Shooting

of sessions: 1 shooting session.

General warm-up and shooting warm-up – **9 arrows.**

ALIGNMENT through STRING LANDING & FACIAL MARKS

1.1. Affixed a mirror at a butt. The top edge of the mirror should be around your mouth level – See picture entitled “[Preparation to shoot at a mirror](#)”. Draw a line on the butt where is the top edge (you can use some masking tape). Take the mirror away and draw another line on the butt at about 3” below the first one.

Now grab your bow and take stance at a distance such that the end of your long stabilizer is at about one foot from the mirror. Move your sight down to 90 meters for men and 70 - 75 meters for women, aim at the bottom line, and shoot. Adjust your sight to be sure that your arrow hits ABOVE the top line, let say 2” above it – See picture entitled “[Sighting to shoot at a mirror](#)” – **8 arrows.**

When your sight is adjusted, re-affix the mirror at the butt.

1.2. Draw and shoot while watching yourself in the mirror, pay a special attention to the end of the draw; keep your face impassive when the string lands on your face – **18 arrows**

It is recommended to shoot one arrow, then retrieve it, to avoid any arrow breakage, if you shoot more than one arrow at a time, move a little your body on the left or right at each arrow.

2. Remove the mirror from the target butt . Repeat #1.2. but close your eyes instead of watching yourself in the mirror - **7 arrows.**

3. Same but watching blurred and up (as when you are in the clouds) instead of watching yourself in the mirror - **7 arrows.**

4. Same but shooting at a blank butt. Now you can move back to a further distance of your choice - **7 arrows.**

5. Same but shooting at a cut-out target face, only showing scoring zones 1 to 5 - **7 arrows.**

6. Same but shooting at a cut-out target face, only showing scoring zones 1 to 6 - **7 arrows.**

7. Same but shooting at a cut-out target face, only showing scoring zones 1 to 7 - **7 arrows.**

8. Same but shooting at a cut-out target face, only showing scoring zones 1 to 8 - **7 arrows.**

9. Same but shooting at a cut-out target face, only showing scoring zones 1 to middle of the 9 - **7 arrows.**

10. Same but shooting at a cut-out target face, only showing scoring zones 1 to 9 - **7 arrows.**

11. Same but shooting at a complete target face - **7 arrows.**

Volume: 12 arrows of warm-up + 96 arrows over the exercise = about **108 arrows** over the entire session.

Session: Strengthening.

FITA Training SUGGESTIONS starting on **November 19**, 2001.

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# of sessions: 1

### RE-START SESSIONS

Description: Since it is your restart, use light or no weights. Implement only 2 sets of about 10 repetitions, excepted abdominal and some small muscles (forearms, wrists, calves, ...) for which you can work until the BEGINING of a "burning" feeling.

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Group # 3 : Belt and legs

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Variations are proposed for each exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your session more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power).

### Recommendations:

#### \* **To prioritize:**

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (excepted some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
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#### \* **To avoid:**

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Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance,...

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Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

SATURDAY

Session: Stretching.

of sessions: 1

Description: See "Stretching Tips".

Plan and follow a progression; for instance:

- first week you stretch 10 seconds the "small" muscles and 20 seconds the "big" ones,
- second week you can stretch 15 seconds the "small" muscles and 25 seconds the "big" ones,
- third week stretch 20 seconds the "small" muscles and 30 seconds the "big" ones
- ...

Of course such a progression requires more and more time, this is why we propose one more stretching session in 2 weeks. So you can split your exercises over 4 sessions instead of 3.

Session: Mimics / Visualization.

of sessions: at least 6 reps at each "session". Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- * *External visualization* = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.
- * *Internal visualization* = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...

SUNDAY

Session: Shooting

of sessions: 1

TEST (or TOURNAMENT)

- *if test*: 15 warm-up arrows + 78 arrows over the test (2 rounds = 60 arrows + 1x 18 arrow match) = about 93 arrows over the session.
- *if tournament* - pending the format.

Session: Cardio Maintenance.

of session: 1

Duration: 0:45 hour (see the important note below)

Description: **Long Duration – Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current cardio development,

FITA Training SUGGESTIONS starting on **November 19, 2001.**

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- \* the activity you have chosen,
  - \* your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
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| Duration |     |        |      |           |

Today we propose a Cardio session made of “**Long Duration – Low Intensity**” exercises.  
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Choose an activity that you enjoy. You can change the activity as often as you want.



**FITA Training SUGGESTIONS starting on November 19, 2001.**

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Facialmarkswithaballonhead.jpg



Observingfacialmarksinamirror.jpg



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Preparation to shoot at a mirror.jpg

Sighting to shoot at a mirror.jpg



A cutout target face.jpg

## Face Marks versus Arrow / String Forearm Alignment

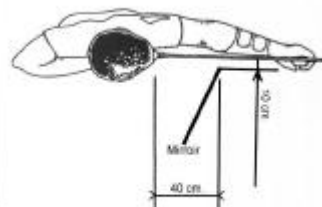
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A. Archers using their fingers

1. Step the shooting line. Have an assistant holding a mirror at your face level at one meter from you and at almost 90° from your body.
2. With your string fingers, grip a thin stiff stick or thin arrow, or pencil... as exactly as possible you are used to grip your string.
3. With the forefinger of the other hand, grip the stick where usually you nock your arrow (for distance between you forefinger and middle-finger). Grip the stick in your extreme joint, or a little deeper.
4. Bring your fingers gripping the stick against your mouth while watching ahead of you in the mirror. The stick should be vertical and right in the middle of your face touching your nose. Have the tip of your string forefinger touching your mouth between your lips.

At this step:

- Your forearms should be on the same horizontal line, at your mouth or chin level. Observe that your forearms are aligned in any plan; you have achieved a perfect force alignment system. We will try to approach this ideal form with your bow at full draw.
- Keep your arms, forearms and wrists relaxed.
- Lower your shoulders.



5. Turn your head gently toward the target. Now you should feel the tip of your forefinger around the corner of your mouth whatever the spot you are touching with the tip of your forefinger, remember it for the next step; try to see it (without moving your head) in the mirror. Your assistant holding the mirror can move a bit to make your observation easier, but touch feeling is more important.

6. Now take your bow (with or without arrow), come at full draw - without tab it would be more accurate and easy (sorry for the small pain !) - have the tip of your forefinger at the same spot as previously.

Important : do not lean your head toward the target / string at any time, but maintain your preliminaries (low shoulders and straight head) all along the process.

7. Your assistant check your draw length (where is your arrow point) when you are at full draw as previously described. You can adjust your clicker position (Recurve division), and / or the valley (draw length) of your compound bow (Limited division) if required.

8. Start over the process from step # 4 but bringing your fingers gripping the stick against your the middle of your chin, while watching ahead of you in the mirror. The stick should be vertical and right in the middle of your face touching your nose. Have your string fingers at their usual height, for instance your string forefinger touching just under your chin.

At this step:

- Your forearms should be on the same horizontal line, at your neck level.
- Observe that your forearms are aligned in any plan; you have achieved a perfect force alignment system. We will try to approach this ideal form with your bow at full draw.
- Keep your arms, forearms and wrists relaxed
- Lower your shoulders.

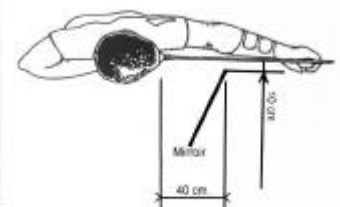
Face Marks versus Arrow / String Forearm Alignment

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9. Turn your head gently toward the target. Now you should feel the contact of your forefinger under your jaw, as well as the string contact with your chin. Your assistant holding the mirror can move a bit to make your observation easier, but touching feeling is more important. Ask to your assistant to mark on your chin, where the string should be. Due to the bow weight, and the collapsing / stretching of some parts of your body while at full draw, the string location is ABOUT half an inch ahead of the stick (target side). A good way to mark this location is to affix a piece of tape on your chin with the rear edge at about ½" ahead of the stick. Whatever your choice, the mark should be done on your chin just above your forefinger, to minimise the difference between your vertical stick and the angle of your string try to see it (without moving your head) in the mirror. In the next step you will try to have your string touching according to these marks (for instance just after the piece of tape).
10. Now take your bow (with or without arrow come at full draw - first without tab it would be more accurate and easy (again sorry for the small pain ! ) - have your string located according to the mark on your chin - see previously. Your assistant will give you a visual feed-back of this location, through the mirror.  
Important: do not lean your head toward the target / string at anytime but maintain your preliminaries (low shoulders and straight head) all along the process.
11. Repeat # 10 several times with your tab and an arrow. Your assistant must be ready with the mirror to show you at full draw where your string is touching your chin.
  - \* Come 6 times at full draw, with eyes closed, then open your eyes, and watch quickly in the mirror if your string is properly located, if so achieve your shoot. If not let down and start over.
  - \* Come 6 times at full draw with eyes up (toward the base of your top limb), then watch quickly in the mirror, if your string is properly located, if so achieve your shoot. If not let down and start over.
  - \* Come 6 times at full draw, while watching at a blank butt, then watch quickly in the mirror if your string is properly located, if so achieve your shoot. It not let down and start over.
  - \* During 6 arrows, alternate at each arrow each of the three above exercises (drawing with eyes closed, then up, then while looking at a blank butt). At full watch quickly in the mirror if your string is properly located, if so achieve your shoot. If not let down and start over.
  - \* During 2 ends of 4 arrows, alternate at each arrow each of the three above exercises (drawing with eyes closed, then Up, then while looking at a blank butt) plus a fourth one: drawing toward a regular target face. At full watch quickly in the mirror if your string is properly located, if so achieve your shoot. If not let down and start over.
  - \* From now while shooting at a regular target face alternate during **12 arrows**
    - one arrow when at full watch quickly in the mirror if your string is properly located, if so achieve your shoot. If not et down and start over.
    - one arrow without visual control at full draw. Nevertheless if you feel wrong facial marks let down and start over.

### **B. Archers using a mechanical release, with jaws**

1. Same.
2. With your mechanical release, grip a thin stiff stick, or thin arrow, or pencil..., as exactly as possible you are used to grip your string.
3. With the forefinger and the middle-finger of the ether hand grip the stick above and below your release. Grip the stick very deeply, in the second join of your fingers or deeper.
4. During the unit / release - stick - other hand" against your mouth, while watching ahead of your in the mirror. Balance the effort between your two



## ***Face Marks versus Arrow / String Forearm Alignment***

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shoulders. The stick should be vertical and off the middle of your face, on the target side.

At this step :

- Your forearms should be on the same horizontal line at your mouth or chin level.
- Observe that your forearms are aligned in any plan. you have achieved a perfect force alignment system, maybe are you a little “over aligned”, do not worry. We will try to approach this ideal form with your bow at full draw.
- Keep your arms, forearms and wrists relaxed
- Lower your shoulders.

5. Turn your head gently toward the target. Now you should feel a good contact between your string-hand and your jaw, maybe release / jaw, whatever you can feel remember it for the next step; try to see it (without moving your head) in the mirror. Your assistant holding the mirror can move a bit to make your observation easier, but touching feeling is more important.

6. Now take your bow (with or without arrow), come at full draw, have the same contact between your string-hand and your jaw, maybe release / jaw as previously.

Important: do not lean your head toward the target string at anytime, but maintain your preliminaries (low shoulders and straight head) all along the process.

7. Your assistant check your draw length (where is your arrow point) when you are at full draw as previously described. You can adjust the valley (draw length) of your compound bow it required.

8. Start over the process from step 4, but bringing your unit “release - stick - other hand” against your the middle of your chin, while watching ahead of your in the mirror. The stick should be vertical and off the middle of your face, on the target side Have your mechanical release at its usual height.

At this step:

- Your forearms should be on the same horizontal me at your neck level.
 - Observe that your forearms are aligned in any plan you have achieved a perfect force alignment system, you probably are “over-aligned do not worry. We will try to approach this ideal form with your bow at full draw.
- Keep your arms, forearms and wrists relaxed.
- Lower your shoulders.

9. Turn your head gently toward the target. Now you should feel the contact of your string-hand under or against your jaw, perhaps do you feel the contact between you release and a part of your face, and / or the contact of the string your chin, whatever the facial marks you have got, remember them for the next step; try to see them (without moving your head) in the mirror. Your assistant holding the mirror can move a bit to make your observation easier, but touching feeling is more important. Ask to your assistant to mark on your chin where the string should be. Due to the light bow weight (let off), the string location is ABOUT where is now your stick. A good way to mark this location is to affix a piece of tape on your chin with the rear edge just ahead of and against the stick. Whatever your choice, the mark should be done as close as possible of your release, to minimise the difference between your vertical stick and the angle of your string; try to see it (without moving your head) in the mirror.

In the next step you will try to have your string touching according to these marks (for instance just after the piece of tape).

10. Now take your bow (with or without arrow), come at full draw Have your string located according to the mark on your chin - see previously. Your assistant will give you a visual feed-back of this location, through the mirror.

Important: do not lean your head toward the target / string at anytime, but maintain your preliminaries (low shoulders and straight head) all along the process.

Face Marks versus Arrow / String Forearm Alignment

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11. Repeat # 10 several times...  
The end off this step is similar of the # 11 already described above.

### ***C. Archers using a mechanical release, with a string loop.***

- I. Same.
2. Same as B.2.
3. With the forefinger and the middle-finger of the other hand, grip the stick above and below the string loop.  
Grip the stick very deeply, in the second join of your fingers, or deeper.
4. Same as B.4.
5. Same as B.5.
6. Same as B.6., but do not release in this position, your string loop would hurt !

The rest of the session is same as B.

*Written for FITA by Pascal COLMAIRE*

FITA Training SUGGESTIONS starting on **November 26**, 2001.

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** -** COMMENTS and NEWS ****

This is our sixth week of practice with no change with last week.

Time-sharing: **45 %** Shooting and **55 %** other Developments (7:45 hours).

Total volume: **14 :45 hours** per week

Shooting: **4 sessions** per week of **1 :40 hour** each = 6:40 hours

Cardio : **2 sessions** per week of **45 min.** each = 1 :30 hours

Strengthening : **3 sessions** per week of **1 :15 hour** each = 4 hours

Endurance Strength development is recommended to start this long strengthening period (Endurance strength = light weights / high number of repetitions). Emphasis on legs and belt

Decrease of the stretching work, which will stop next week.

We have reached the highest percentage of "Other developments" with almost 55%.

This week we will:

- work on our string clearance and string alignment;
- implement our last session of stretching. Nevertheless our flexibility will be maintained through Yoga sessions that will start next week. Hence you can start to look for a good Yoga teacher;
- continue to develop our endurance strength, but next week we will have our first session of maximal strength in order to involve more muscular fibers;
- maintain the same level of Cardio work, but next week will move from 45 min. per session to 1:00 hour.

Next week we will also start some psychological development through the Yoga session.

The 3 next weeks you will be proposed some exercises regarding Full Draw Action.

I am often asked for a French version of the FITA training Tips. FITA, its Coaches Committee and myself would be glad to offer this service in French, but we have either not the skill or the physical time for such a work (my case).

Let imagine that some money becomes available to pay the translation of the FITA Training Tips in French (do not imagine a lot of money!). Do you know someone who could take care of the weekly translation of this 7 – 9 page document?

Have a good week of practice!

On behalf of the **FITA Coaches Committee**:

Pascal COLMAIRE

FITA Development Manager

FITA Training SUGGESTIONS starting on **November 26**, 2001.

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***The week at a glance:***

| Days      | #      | Session Type                   | Subject / Skill                                        | Volume                               |
|-----------|--------|--------------------------------|--------------------------------------------------------|--------------------------------------|
| Monday    | 1      | Strengthening<br>Visualisation | Endurance                                              | 1:20 hour<br>3 times a day           |
| Tuesday   | 1<br>1 | Shooting<br>Stretching         | String Clearance & Alight.<br>As per "Stretching Tips" | 73 arrows – 1:15 hour<br>1:20 hour   |
| Wednesday | 1<br>1 | Shooting<br>Strengthening      | String Clearance & Alight.<br>Endurance                | 115 arrows – 1:55 hour<br>1:20 hour  |
| Thursday  | 1      | Cardio Visualisation           |                                                        | 0:45 hour<br>3 times a day           |
| Friday    | 1<br>1 | Shooting<br>Strengthening      | String Clearance & Alight.<br>Endurance                | 115 arrows – 1:55 hours<br>1:20 hour |
| Saturday  | 1      | Stretching<br>Visualisation    | As per "Stretching Tips"                               | 1:20 hour<br>3 times a day           |
| Sunday    | 1<br>1 | Shooting<br>Cardio             | String Clearance & Alight.                             | 96 arrows – 1:35 hours<br>0:45 hour  |

**Note #1:**

Since we have recently restarted to practice, the shooting rhythm is still slow, allowing:

- rest between ends (you certainly have a lot to discuss with your friends ...);
- rest between arrows;
- to feel the shooting perceptions.

**Note #2:**

As you can notice Visualisation is scheduled the non-shooting days.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

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**MONDAY**

**Session: Strengthening.**

# of sessions: 1

RE-START SESSIONS – Second week.

Description: Since this is your second week of practice, use lightweights. Implement 3 sets of about 10 repetitions, excepted abdominal and some small muscles (forearms, wrists, calves...) for which you can work until the BEGINING of a "burning" feeling.  
We have not attached is a list of strengthening exercises since this is a period of general/overall strength development. Hence you can implement any of the common exercises for strengthening.  
Since you have 3 strengthening sessions per week, you can target 3 groups of muscles, for instance :  
Group # 1 : back, pectorals and neck  
Group # 2 : Arms and shoulders

## FITA Training SUGGESTIONS starting on **November 26**, 2001.

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Group # 3 : Belt and legs

Do not hesitate in modifying these groups, nevertheless it is suggested to alternate one exercise for the agonists and one for the antagonists, for instance one for the pectorals and one for the back.

Variations are proposed for each exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power).

Recommendations:

* **To prioritize:**

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (excepted some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;

* **To avoid:**

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying, .. – in archery all the body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance,...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

Session: Mimics / Visualization.

of sessions: at least 6 reps at each "session". Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization,

Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.


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- \* *External visualization* = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.
- \* *Internal visualization* = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...

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## TUESDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – **12 arrows** .

STRING ALIGNMENT.

Purposes of the string alignment:

1. *Aiming eye location.*

Since the string is ALWAYS in the center of the bow, the archer DOESN'T align the string. In fact the archer adjusts the position of his/her aiming eye in reference with the plan of the bow. This plan is often represented by the:

- string or the peep-sight  
and
- the sight pin or dot.

Hence we should not say “String alignment” but “Aiming eye location”.

2. *Stability control.*

During aiming the archer strives to maintain 4 reference points aligned:

- the objective;
- the sighting dot/pin;
- the string/peep sight;
- the aiming eye.

The stability quality of this alignment is an indicator of the stability of the unit bow-archer.

### For Recurve archers

#### Simulation.

At full draw the archers cants the top of his/her head from right to left while watching the string and the bow, and see respectively the string on the left and right – **3 times**.

#### Identification of the most consistent/natural location for string alignment.

At any distance (but Indoor - no wind).

1. Raise your bow;
2. Close your eyes;
3. Draw your bow back;
4. Open your aiming eye (or both eyes) at full draw and observe where is aligned your string, continue your shooting sequence.

**18 arrows** .

#### **Adoption**

Integrate the most common location of string alignment in your shooting sequence. Your vision should not travel from the string to the sight or target and so on. The string should be seen at its spot by the peripheral vision. String alignment is a part of your visual references such as a vertical bow, sight floating on the centre of the target face. All the visual references should be seen at the same time, even if the main visual focus is on the centre of the target face.

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Advise: Start with a broad visual attention and progressively narrow your focus on the centre of the target face – **18 arrows**

For Compound archers:

Identification of the initial head canting.

At any distance (but Indoor - no wind).

1. Pre-set your head
2. Raise your bow;
3. Close your eyes;
4. Draw your bow back;
5. Open your aiming eye (or both eyes) at full draw and observe if you had the good initial head canting for getting the scope aligned with the peep-sight once at full-draw, continue your shooting sequence.

18 arrows .

Adoption

Integrate the appropriate initial head canting into your shooting sequence. Avoid any head canting at the end of the draw. Such late head canting could disturb your body balance during several seconds* – **18 arrows**

* Try the following to see the effect of late head canting on your body stability:

- a) Get your stance without a bow.
- b) Turn your head toward the target (real or imaginary).
- c) Close your eyes and feel your body balance.
- d) Cant your head in one direction (toward your toes for instance) and feel the effect on your body balance.
- e) Witness how long your body needs to become stable.
- f) Start over, canting your head in another direction.

For Recurve and Compound archers

1. Affixed a mirror flat at a target butt. The top edge of the mirror should be at a height such that at full draw, the archer can aim at his/her aiming eye at about 3" from the top edge. To achieve this view, you can play with the inclination and height of the mirror.
2. Draw a line on the butt where is the top edge of the mirror (you can use some masking tape). Take the mirror away.
3. Draw another line on the butt at about 3" below the first one. See picture entitled "[Preparation to shoot at a mirror](#)" published with "[2002-5 Face marks & Alignment](#)"
4. Now grab your bow and take stance at a distance such that the end of your long stabiliser is at about 3 feet from the mirror. Move your sight down:
Olympic men at about 90 meters
Olympic women at about 75-80 meters
Compound men at about 100 meters
Compound women at about 85-90 meters.
5. Aim at the lower line, and shoot. Adjust your sight to be sure that your arrow hits ABOVE the top line, let say 2" above it – See picture entitled "[Sighting to shoot at a mirror](#)" published with "[2002-5 Face marks & Alignment](#)" – **8 arrows .**
6. When your sight is adjusted, re-affix the mirror at the butt.
7. Shoot 24 arrows at the mirror aiming at your aiming eye which should be roughly at the same level as the lowest of the 2 lines (the one at about 3" from the top edge) – see picture entitled "[Shooting at a mirror](#)". Try to maintain the best stability as possible between your eyes, your string and sight – or peep and scope - while aiming. Of course you can really shoot the arrow

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It is recommended to shoot one arrow, then retrieve it, to avoid any arrow breakage, if you shoot more than one arrow at a time, move a little your body on the left or right at each arrow.

**Volume:** 12 warm-up arrows + 3 simulations +40 arrows over the exercises = about **72-75 arrows** over the session.

**Session: Stretching.**

# of sessions: 1

Description: See “[Stretching Tips](#)” – a document included in the [2002-1 Training tips](#)

See illustrated examples published with the tips of the first 3 weeks.

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**WEDNESDAY**

**Session: Shooting.**

# of sessions: 1

General warm-up and shooting warm-up – **9 arrows** .

STRING CLEARANCE.

1. At the bow arm level.

With no hand on the string, raise your bow and check where is your string on your armguard or forearm. About one half -inch forward of this spot affix a piece of tape which is 2 mm raised up in its center (bridge shape). The bridge of tape should be affixed vertically, across your bow forearm/armguard. Identify with a pen, the side of the tape closest to the string (I prefer to mark this side before sticking the tape on the armguard). This mark will help to identify if the string hits the tape on its way or during its way back. See illustration “[String Clearance test](#)”. Shoot one arrow with this tape in place - pay attention to not flatten out the bridge -tape before the draw. After the shot, watch the tape, and analyze the hit (if any).

Also see “[String Clearance – Article](#)”

2. At the bow chest level.

Either watching yourself in a mirror, or with the help of an assistant observe at full draw where the string touches your chest (if any). About one half-inch forward of this spot affix a piece of tape that has a bridge shape - 2 mm raised up in the middle. See picture “[Tape on chestguard](#)”.

Note : the most critical point is the edge (hem or trim) surrounding your bow shoulder.

The bridge of tape should be affixed parallel to the string on your chestguard. Shoot one arrow with this tape in place - pay attention to not flatten out the “bridge” part before the draw. See picture entitled “[Chest clearance from back](#)”. After the shot, analyze the hit (if any).

If you conclude that the string clearance is poor, play with:

- the angle bow arm / shoulders line by the mean of chest &/or feet orientation, also the parallelism hips/shoulder.
  - the bow elbow position
  - bow hand position on the grip
- until a good string clearance.

**Volume:** variable, pending the initial quality of your string clearance, and the speed to solve the problem. Nevertheless you should shoot about 115 arrows total over the session, including the warm-up arrows.

## FITA Training SUGGESTIONS starting on **November 26**, 2001.

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Session: Strengthening.

of sessions: 1

RE-START SESSIONS

Description: Same as Monday

THURSDAY

Session: Cardio Maintenance.

of session: 1

Duration: 0:45 hour (see the important note below)

Description: **Long Duration – Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current Cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium				
Long	X			
Duration				

Today we propose a Cardio session made of “**Long Duration – Low Intensity**” exercises.
Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- * *External visualization* = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.
- * *Internal visualization* = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...

FRIDAY

FITA Training SUGGESTIONS starting on **November 26**, 2001.

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### **Session: Shooting**

# of sessions: 1 shooting session.

General warm-up and shooting warm-up – **13 arrows** .

STRING ALIGNMENT – EFICIENCY TEST.

Identification of the most efficient location for string alignment.

At one distance at which you can use a tri-spot target face, shoot **12 arrows** for sighting.

Affix a NEW tri-spot target face:

- Use one spot for the arrows shot with string aligned on the riser.
- Use a second spot for the arrows shot with the string aligned on one side of the sight tunnel.
- Use the third spot for another alignment of your choice.

Volume: Shoot 30 arrows per spot, alternatively 1 arrow per spot. Do not shoot a bunch of consecutive arrows at the same spot – **90 arrows** over this exercise.

Analyze: When analyzing the impacts, do not compare the scores, because your sight is adjusted for one out of the three situations. Analyze the tightness of the group of impacts achieved at each spot.

Suggestion: run this analyses on the back of the target face.

Volume: 13 arrows of warm-up + 12 sighting arrows + 90 arrows over the exercise = about **115 arrows** over the entire session.

### **Session: Strengthening.**

# of sessions: 1

RE-START SESSIONS

Description: Same as Monday and Wednesday

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## **SATURDAY**

### **Session: Stretching.**

# of sessions: 1

Description: See “[Stretching Tips](#)” – a document included in the [2002-1 Training tips](#)

### **Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

\* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*

\* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

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## **SUNDAY**

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Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **12 arrows** .

STRING ALIGNMENT STABILITY - Test

A. Test of duration of stable string alignment:

Set-up: One observer standing against a wall. Archer at 2 meters from the observer.

Task: Without arrow, the archer draws back and aims one observer's eyes, and aligns his/her string in the middle of his/her sight (which is on the observer's eye). As soon as the observer sees the archer's eye, sight and string **ALIGNED**, he/she starts a timer. The observer stops the timer when he/she sees a too poor alignment - for example:

- for Recurve: when there is space between the string and the aiming dot;
- for Compound: a reference between Peep sight and scope could probably be found.

Records at least **6 timings**, if they are not consistent, increase their number.

Note: this exercise seems valid for compound, but still needs some refinement. Any suggestion will be welcome.

B. Self-Control of the Alignment stability.

1. Affixed a mirror flat at a target butt. The top edge of the mirror should be at a height such that at full draw, the archer can aim at his/her aiming eye at about 3" from the top edge. To achieve this view, you can play with the inclination and height of the mirror.
2. Draw a line on the butt where is the top edge of the mirror (you can use some masking tape). Take the mirror away.
3. Draw another line on the butt at about 3" below the first one. See picture entitled "[Preparation to shoot at a mirror](#)" published with "[2002-5 Face marks & Alignment](#)".
4. Now grab your bow and take stance at a distance such that the end of your long stabiliser is at about 3 feet from the mirror. Move your sight down:
 - Olympic men at about 90 meters
 - Olympic women at about 75-80 meters
 - Compound men at about 100 meters
 - Compound women at about 85-90 meters.
5. Aim at the lower line, and shoot. Adjust your sight to be sure that your arrow hits **ABOVE** the top line, let say 2" above it – See picture entitled "[Sighting to shoot at a mirror](#)" published with "[2002-5 Face marks & Alignment](#)" – **6 arrows** .
6. When your sight is adjusted, re-affix the mirror at the butt.
7. Shoot **18 arrows** at the mirror aiming at your aiming eye which should be roughly at the same level as the lowest of the 2 lines (the one at about 3" from the top edge) – see picture entitled "[Shooting at a mirror](#)". Try to maintain the best stability as possible between your eyes, your string and sight – or peep and scope - while aiming. Of course you can really shoot the arrow
It is recommended to shoot one arrow, then retrieve it, to avoid any arrow breakage, if you shoot more than one arrow at a time, move a little your body on the left or right at each arrow.
8. Same, but shooting at a blank butt. Now you can move back to a further distance of your choice - **6 arrows**.
9. Same but shooting at a cut-out target face, only showing scoring zones 1 to **6 arrows** .
10. Same but shooting at a cut-out target face, only showing scoring zones 1 to **6 arrows** .
11. Same but shooting at a cut-out target face, only showing scoring zones 1 to **6 arrows** .
12. Same but shooting at a cut-out target face, only showing scoring zones 1 to **6 arrows** .

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13. Same but shooting at a cut-out target face, only showing scoring zones 1 to middle of the **6 arrows** .
14. Same but shooting at a cut-out target face, only showing scoring zones 1 to **6 arrows** .
15. Same but shooting at a complete target face - **12 arrows** .

Volume: 12 warm-up arrows + 6 timing tests + 6 sighting arrows + 72 arrows through the exercises = **96 arrows** over the entire session.

**Session: Cardio Maintenance.**

# of session: 1

Duration: 0:45 hour (see the important note below)

Description: **Long Duration – Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- \* your current Cardio development,
  - \* the activity you have chosen,
  - \* your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   |     |        |      |           |
| Long     | X   |        |      |           |
| Duration |     |        |      |           |

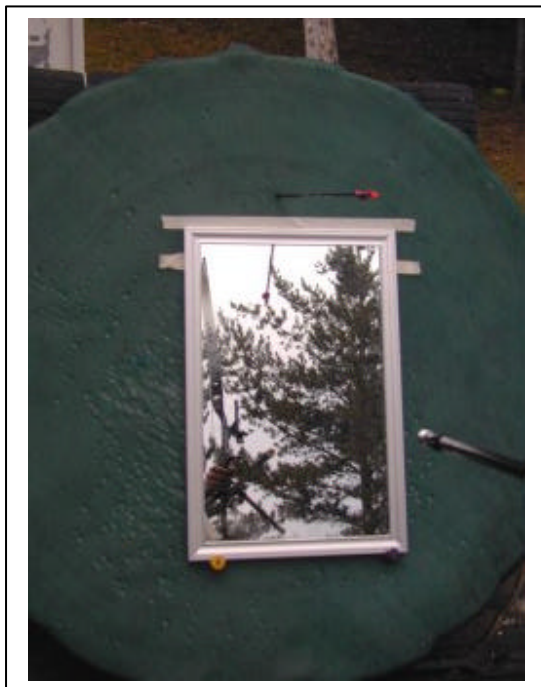
Today we propose a Cardio session made of “**Long Duration – Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

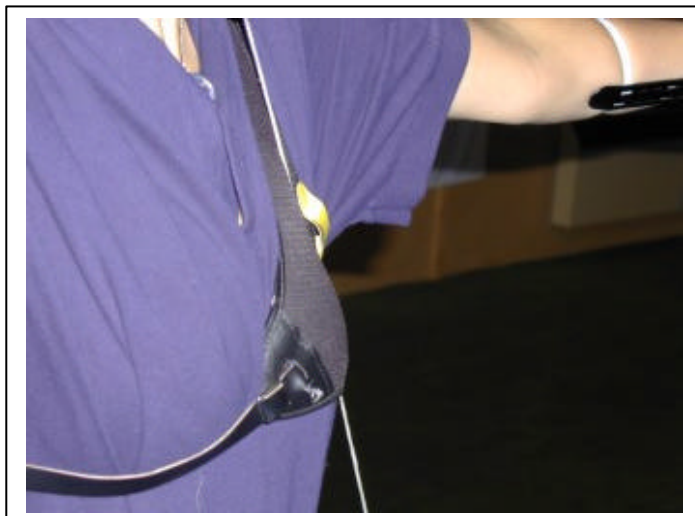
Choose an activity that you enjoy. You can change the activity as often as you want.

**FITA Training SUGGESTIONS** starting on **November 26, 2001.**

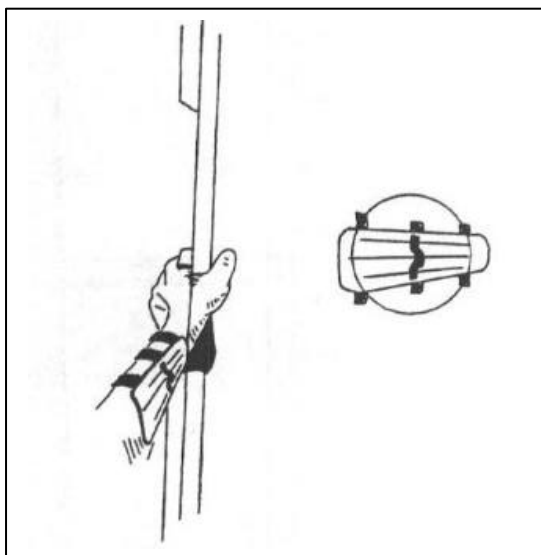
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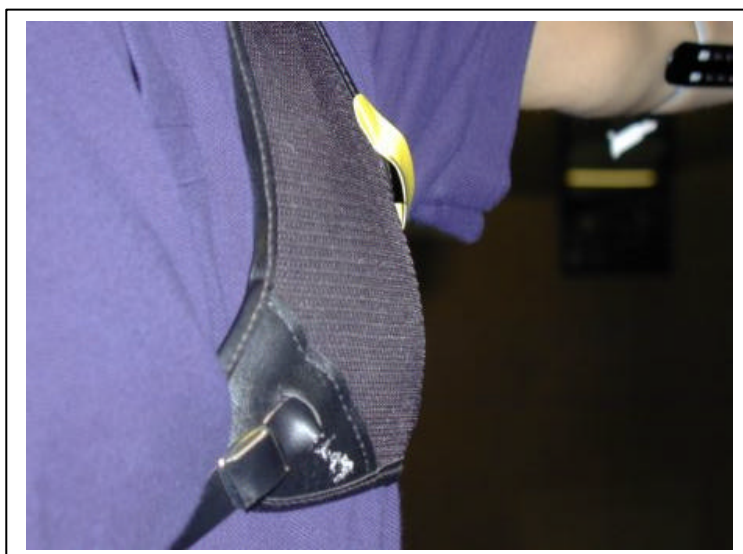
Shootingatamirror.jpg



Chestclearancefromback.jpg



StringClearancetest.jpg



Tapeonchestguard.jpg

CHECKING THE STRING CLEARANCE

During the propulsion of the arrow by the string, the string should have a clear path, because during this process the arrow is still nocked on the string.

During this process anything hit by the string will affect the amount of energy transmitted to the arrow and the direction of the arrow propulsion, and by consequence will affect the arrow flight and impact.

Where to check the string clearance?

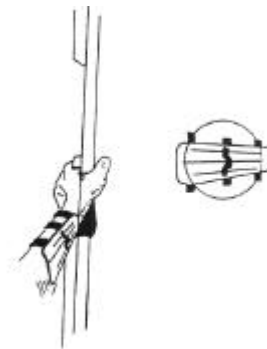
At the chest and bow-arm levels.

How to check the string clearance?

Below is a simple test that is cheap, fast, and very efficient. Below is explained how to check the string clearance at the bow arm level. The same process can be used to check the string clearance at the chest level. The most critical part at the chest level is the "edge" (or "hem" or "trim") of the chest guard, the one surrounding your bow shoulder.

Equipment: The basic archer equipment set-up, affix on to the arm-guard a piece of tape. The tape is lifted 2 or 3 mm in its middle, where the string may most likely hit the arm-guard.

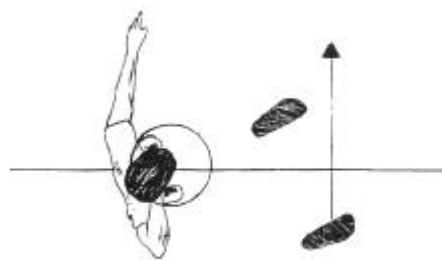
Instructions: Draw the bow with a proper bow hand position, an unlocked bow elbow and make sure the torso is not collapsed or twisted while drawing the bow. Keep the shoulders over the hips. Once at full draw, release, then check the tape



- If the tape is intact, the string clearance is good, keep your form.
- If the tape has come off or is crushed, check what side of the tape has been hit:
- If the unmarked side has been hit, the string hit the tape after the propulsion (*seldom phenomenon*) which does disturb the arrow's flight, keep your *form*.
- If the marked side has been hit, the string hit the tape during the propulsion. The string clearance is poor; you must change your form.

You probably know that the quality of the string clearance depends on some several things. The main factors are the bow shoulder, the bow elbow and bow hand.

If you open your stance, keep the chest untwisted during draw, if not, you will cancel out the effects of an open stance!



NOTE: this article has been written by
Pascal COLMAIRE, from the Canadian
Coaching Level one Manual

FITA Training SUGGESTIONS starting on **December 3, 2001.**

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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* -\*\* COMMENTS and NEWS \*\***

This is our seventh week of practice with the introduction of Yoga and various strengthening methods.

Time-sharing: **47 to 48%** Shooting and **53 to 52%** for other developments (8:45 hours).

Total volume: **16:45 hours** per week

Shooting: **4 sessions** per week of **2 hour** each 8 hours

Cardio: **2 sessions** per week of **1 hour** each = 2 hours

Strengthening : **3 sessions** per week of **1 :15 hour** each = 3:45 hours

*Pending your experience in strengthening, either you will continue the Endurance strength, or you will start the use of other strengthening methods.*

**Yoga (start) :** **2 sessions** per week of **1:30 min.** each = 3:00 hours

Unless that you already have an excellent background in Yoga, classes conducted by a teacher are mandatory. If you cannot find any Yoga classes, look for another discipline that also develop: General perceptions – Body, breathing and mind control – Relaxation ... For instance: Corporal expression, Tai-chi, Sophrology, Classical dance.

We have reached the highest number of hours for the “Other developments” with 8:45 hours. This amount will last until the end of February.

This week we will:

- work on our action at **full draw** (we will pursuit next week);
- have **no competition or test** (because we are introducing a very important development);
- **stop stretching** sessions;
- start some **other types of strength** development;
- **increase our Cardio** work from 45 min. to 1:00 hour (see note in the text);
- **introduce some Yoga** sessions. We are proposing Yoga because through this activity we can develop:
  - our body perceptions and control;
  - breathing control;
  - body balance;
  - mind control;
  - flexibility;
  - We are becoming more sensitive to nutrition
  - We are introduced to relaxation and energy saving motions.

If you cannot attend any Yoga instruction, please look for some lessons of one activity close from Tai Chi Chuan, Sophrology or Classical dance.

Next week a similar schedule will be propose; only a Sighting session will take place in order to better prepare a tournament (or test) scheduled on the following week (on December 22 or 23).

I am pleased to inform you that FITA is negotiating an agreement with a Canadian Coach to offer the FITA Training Tips in French. If no major problem arises, the first FITA Training Tips in French could be published from the beginning of 2002.

Have a good week of practice!

**FITA Training SUGGESTIONS starting on December 3, 2001.**

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On behalf of the **FITA Coaches Committee:**

Pascal COLMAIRE

FITA Development Manager

FITA Training SUGGESTIONS starting on December 3, 2001.

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***The week at a glance:***

| Days      | # | Session Type                   | Subject / Skill                               | Volume                     |
|-----------|---|--------------------------------|-----------------------------------------------|----------------------------|
| Monday    | 1 | Strengthening<br>Visualisation | 40 to 60 % of 1 MR                            | 1:15 hour<br>3 times a day |
| Tuesday   | 1 | Shooting                       | Testing the stability of the full draw action | 74 arrows – 1:15 hour      |
|           | 1 | Yoga                           | As per Teacher                                | 1:30 hour                  |
| Wednesday | 1 | Shooting                       | Repulse action.                               | 122 arrows – 2:05 hour     |
|           | 1 | Strengthening                  | As per Program                                | 1:15 hour                  |
| Thursday  | 1 | Cardio Visualisation           |                                               | 1:00 hour<br>3 times a day |
| Friday    | 1 | Shooting                       | Basic Draw action                             | 122 arrows – 2:05 hours    |
|           | 1 | Strengthening                  | As per program                                | 1:15 hour                  |
| Saturday  | 1 | Yoga<br>Visualisation          | As per Teacher                                | 1:30 hour<br>3 times a day |
| Sunday    | 1 | Shooting                       | Main action / Symetric action                 | 99 arrows – 1:35 hours     |
|           | 1 | Cardio                         | Combined Draw Actions                         | 1:00 hour                  |

**Note #1:**

The shooting rhythm is still slow: +/- 60 arrows per hour, allowing:

- rest between ends (you certainly have a lot to discuss with your friends ...);
- rest between arrows;
- to feel the shooting perceptions.

Be aware that the shooting rhythm will increase in the future, because our objective is to shoot at least 300 arrows per session, twice a week. It would take 5 hours per session at this slow rhythm; hence we will increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

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**MONDAY**

**Session: Strengthening.**

# of sessions: 1

Description: Since it is your 3<sup>rd</sup> week of strengthening, you should be able to implement 4 sets of 12 or more repetitions, according to the Endurance strength method with 40 to 60% of 1 MR (adapted from Letzelter in 1978) as follow:

| Intensity                                                                  | Sets & Repetitions |
|----------------------------------------------------------------------------|--------------------|
| 40 to 60% (1) of the maximal weight you can use, pending your development. | 20 to 10<br>14-20  |
| * 40% for the first set with weight "A"                                    | 12-15              |
| * 50-55% at the 2 <sup>nd</sup> set with weight "B" > "A"                  | 13-17              |

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* 45-50% at the 3 rd set with weight "C" such as "B" > "C" > "A"	10-12
* 55-60% at the 4 th set with weight "D" > "B"	

Rest between sets: 30 to 90 seconds.

Rest between exercises: 60 to 90 seconds.

Tempo (ratio of time for concentric & eccentric efforts): 3 / 3 sec.

For abdominals, calves and some small muscles for which you can work until a "burning" feeling

Do not hesitate to introduce variations in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

We have not attached is a list of strengthening exercises since this is a period of general/overall strength development. Hence you can implement any of the common exercises for strengthening.

Since you have 3 strengthening sessions per week, you can target 3 groups of muscles, for instance :

Group # 1 : back, pectorals and neck

Group # 2 : Arms and shoulders

Group # 3 : Belt and legs

Do not hesitate in modifying these groups, nevertheless it is suggested to alternate one exercise for the agonist and one for the antagonists, for instance pectorals and back.

Recommendations:

- To priorities:
 - . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
 - . the stand-up position (excepted some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
 - . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
 - . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
 - . breathing out during the effort (concentric part) – for physiological reason;
- To avoid:
 - . the machines, which guide your motions - in archery we have to control and direct our action;
 - . positions that reduce body's involvement, like seating, lying .. – in archery all the body participates to the body stability during the effort (draw and full draw);

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- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance,...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

### **Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- \* *External visualization* = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.
- \* *Internal visualization* = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...

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## **TUESDAY**

### **Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **12 arrows**.

TESTING the STABILITY of the FULL DRAW ACTION.

*Objective:* Observe if the archer stay in the shooting plane while getting his/her Trigger/Clicker and assess the body stability at full draw.

#### *Preparation:*

- If it is sunny, move the target in the shade, or use an umbrella to create some shade on the butt. Ideally the archer and the target should be in the shade.
- Reduce the shooting distance down to 10 meters as a start. If it is OK, you can increase the distance.
- Set a target face on the butt and sight accordingly.
- Install the lazerhead (PC) on the archer. Adjust the laserhaed to get the laser dot close from the aiming point – **18 arrows**.

The laserhead device is shown on pictures entitled “[Lazer-head by PC](#)” and “[Laserhead by PC in use- Close up](#)”.

#### *Process:*

- The archer should synchronise the arrival of his/her sight in the centre of the target with the “landing” of the string on his/her face – it is very IMPORTANT. A poor synchronisation would false the test; for instance if the archer achieves his/her facial marks with his/her sight above the bull's eye, when he/she will lower his/her sight we will observe the laser dot moving down on the target face.
- An assistant turns the laserhead on when the archer raises his/her bow. Avoid letting the laserhead continuously turned on, batteries would get rapidly empty.

A. Observe and record the:

## FITA Training SUGGESTIONS starting on **December 3, 2001.**

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- amount and direction of the deviation;
- size of the zone in which the dot is moving;

to assess the efficiency of your future work in this matter – **30** arrows.

Note somewhere that *usually* if the laser dot moves (for RH archer):

- 1) to the Right: it is usually due to a twisting (or level) of the archer's body in the horizontal plane (Bow shoulder moving toward the arrow);
- 2) Up: it is usually due to a leaning back (or level) of the archer's body in the shooting plane, away from the target (toward the right foot);
- 3) Down: it is usually because the archer moves his/her chin back with the string, creating a slight canting of the head in the shooting plane & flatter of his/her nape (forehead a little forward, and more string pressure on the nose);
- 4) Left: it is usually because the archer moves his/her head back with the string
- 5) Diagonally Right & Up: this is usually a combination of #1 and #2;
- 6) And so on for the other diagonals ...

Note: due to:

- a) the requirement to maintain the peep centred with the scope,
 - b) the non use of a clicker (no need to increase the draw length while aiming)
- Compound users deform much less than Recurve users. Nevertheless slight deformation are not unusual. For Compound archers the laserhead is also very helpful to assess the Dynamic Stability, e.g. laser dot stability/tremor on the target face at full draw.

B. Allow the archer to try by himself/herself to reduce the deviation/unbalance if any.

End the session with 3 sighting arrows and an 18 arrows match. – **14** arrows.

Volume: 12 arrows of warm-up + 18 arrows for adjustment + 30 arrows as evaluation + 12 arrows for instinctive rectification = about **74** arrows over the entire session.

Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

WEDNESDAY

Session: Shooting.

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# of sessions: 1

General warm-up and shooting warm-up – **12 arrows** .

**PUSH or REPULSE ACTION.**

*Objective:* Research of the bow arm action allowing to stay in the shooting plane, and avoiding any twisting while:

- extending our draw length - for users of clicker and back tension release aid (or release aid with trigger but using a back tension method);
- avoiding any creeping due to the spring effect of the bow – for Recurve archers with no clicker, including Bare-Bow division and also for Compound archers not identified above..

In other words: How to spread our bow blade/shoulder away and down from our spine?

*Special attention:* Have the feeling to relax down & away your string shoulder. While shooting during this session, reduce your draw action. The action should mainly come from the big muscles around your rib cage, allowing reducing the muscular work of your bow arm.

1. Simulate the action of your bow shoulder on a doorframe or any other pillar,... as per picture entitled [“Push simulation on a pillar”](#). Try to move your body in the shooting plane ONLY - **20** reps.
2. In front of a mirror, simulate your push action with an elastic band attached to your string elbow and held by your bow hand, watch the constant distance between your elastic band and bow shoulder/arm – see illustrations entitled [“Before push with elastic band”](#) and [“After push with elastic band”](#) – **14** repetitions
3. While shooting, an assistant applies an arrow flat across your top back just above your shoulder blades. At FULL DRAW (not during the draw), the assistant aims along the shaft while you are pushing to extend your draw length (clicker) / fighting the spring effect of the bow (no clicker). The arrow should keep the same orientation (whatever this orientation) – see picture entitled [“Assistant controlling the Push axis”](#) – **12** arrows.
4. At full draw, watch your bow arm while pushing to extend your draw length (clicker) / fighting the spring effect of the bow (no clicker). No twisting should be observed at the bow shoulder level, and the distance between the arrow and your bow-arm/shoulder should remain constant - **12** arrows.
5. Repeat #4 with eyes closed - **12** arrows.
6. Same, but with eyes up & blurred - **12** arrows.
7. Same but watching and shooting at a blank butt - **12** arrows.
8. Pursuit on cut-out spots or faces - 6 arrows per cut-out spot (6 situations) = **36** arrows.

*Note:* After step #3, we suggest an extra step using the following laser control device as shown on the pictures entitled [“Lazer-head by PC”](#) and [“Laserhead by PC in use- Close up”](#). It is not an expensive item, and it provides a tremendous feedback to the archer.

*Volume:* 12 arrows of warm-up + 14 simulations with an elastic band + 96 arrows over the exercises = **122** shots over the entire session.

### **Session: Strengthening.**

# of sessions: 1

Description: You have the choice of implementing the Monday session for other muscles. If the Monday session was too intense, you can implement a session - for other muscular groups - as last week and described below.

Use lightweights. Implement 3 sets of about 10 repetitions, excepted abdominal and some small muscles (forearms, wrists, calves...) for which you can work until the BEGINING of a “burning” feeling.



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We have not attached is a list of strengthening exercises since this is a period of general/overall strength development. Hence you can implement any of the common exercises for strengthening.

Since you have 3 strengthening sessions per week, you can target 3 groups of muscles, for instance :

Group # 1 : back, pectorals and neck

Group # 2 : Arms and shoulders

Group # 3 : Belt and legs

Do not hesitate in modifying these groups, nevertheless it is suggested to alternate one exercise for the agonists and one for the antagonists, for instance one for the pectorals and one for the back.

Variations are proposed for each exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power).

Recommendations:

*** To priorities:**

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (excepted some disabled persons) – because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;

*** To avoid:**

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying, .. – in archery all the body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance,...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

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## THURSDAY

### Session: Cardio Maintenance.

# of session: 1

Duration: 1:00 hour (see the important note below)

Description: **Long Duration – Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- \* your current Cardio development,
  - \* the activity you have chosen,
  - \* your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   |     |        |      |           |
| Long     | X   |        |      |           |
| Duration |     |        |      |           |

Today we propose a Cardio session made of “**Long Duration – Low Intensity**” exercises.  
Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

### Session: Mimics / Visualization.

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- \* *External visualization* = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.
- \* *Internal visualization* = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...

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## FRIDAY

### Session: Shooting

# of sessions: 1 shooting session.

General warm-up and shooting warm-up – **12 arrows**.

“BASIC” DRAW ACTION

This session on your draw will be completed by another one about “BACK TENSION”, scheduled for the next shooting session.

*Objective:* Research of the draw action allowing the archer to stay in the shooting plane while trying – with the string side of your body - to extend our draw length (clicker) / to get your trigger

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(Compound). In other words: How to move the string blade/shoulder avoiding any twisting in the archer' shoulders, waist or neck?

Special attention: While shooting during this session, reduce your push action. The action should mainly come from the big muscles around your rib cage, not from your string arm, forearm, wrist or hand.

1. Simulate the action of your string shoulder on a wall as per pictures entitled "[Before draw in the shooting plan - simulation on a wall](#)" and "[After draw in the shooting plan - Simulation on a wall](#)". Try to move your body in the shooting plane ONLY; you will certainly achieve this by moving your string blade away from the spine - **20** reps.
2. In front of a mirror, simulate your draw action with an elastic band attached to your string elbow and held by your bow hand, watch the constant distance between your elastic band and bow shoulder/ – **14** repetitions
3. While shooting, an assistant applies an arrow flat cross your top back just above your shoulder blades. At FULL DRAW (not during the draw), the assistant aims along the shaft if while you are pulling to get your clicker (Recurve) / trigger (Compound); the arrow should keep the same orientation (whatever this orientation) – same as picture entitled "[Assistant controlling the Push axis](#) – **12** arrows.
To complete step #3, we suggest the use of the "Laser-head control device" as introduced earlier this week. If so, please reduce the number of arrows for the other steps accordingly to match a total of 122 arrows for the entire session.
4. At full draw, watch your bow arm while getting your clicker (Recurve) / trigger (Compound). No twisting should occur at the following levels:
 - bow shoulder
 - waist
 - neckThe distance between the arrow and your bow-arm should remain constant - **12** arrows.
5. Repeat #4 with eyes closed - **12** arrows.
6. Same, but with eyes up & blurred - **12** arrows.
7. Same but watching and shooting at a blank butt - **12** arrows.
8. Pursuit on cutout spots or faces - 6 arrows per cutout spot (6 situations) = **36** arrows.

Volume: 12 arrows of warm-up + 14 simulations with an elastic band + 96 arrows over the exercises = **122** shots over the entire session.

Session: Strengthening.

of sessions: 1

RE-START SESSIONS

Description: Same as Monday or Wednesday

SATURDAY

Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;

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- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

### **Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each "session". Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

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## **SUNDAY**

### **Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **12 arrows** .

### **COMBINED DRAW ACTIONS (Basic + Back tension)**

**Objective:** Introduce Back Tension and research of the combined DRAW actions:

- Spread your string shoulder down and away from your spine (Basic)  
+ / and
  - concentric action of the posterior muscles of the string shoulder (Back Tension)
1. Simulate a Basic Draw action with your string elbow against a wall, as you did during the latest shooting session. Try to move your body in the shooting plan ONLY - **10** repetitions.  
**Special attention:** Your string blade should move away from your spine.
  2. Back tension simulation.  
Have the tips of your string -fingers on your sternum, while the inside of your string-hand is flat against your right chest. Move your string elbow forward while curling your fingers and bringing the external part of your fingers against the left part of your chest – see picture entitled "[Simulation preparing to Back Tension feeling](#)".

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Now while returning back to the original position feel the motion in the back part of your string shoulder. This feeling is close from what is usually called "Back Tension" feeling – see picture entitled "Back Tension simulation" – **10** repetitions

3. Simulate a Back Tension action with your string elbow against a wall as you did in #1, but this time try to move your body in the in the antero-posterior plan (toes to heels) - see pictures entitled "Before Back Tension - Simulation on a wall " and "After Back Tension - Simulation on a wall " - **10** repetitions
Special attention: Your humerus (arm), should turn clockwise viewed from the top.

4. Still with your string elbow against a wall, combined the simulations of the Basic Draw and those of Back Tension actions. Your body should move 45 degrees, e.g. a bit toward the imaginary target and toward your toes - **12** repetitions.

Special attention: Your string blade should be moved away from the spine, and the humerus (arm), should turn clockwise viewed from the top in the horizontal plan. Your string elbow should NOT move down.

5. Then simulate the combined Draw actions with an elastic band attached to your string elbow and held by your bow hand – **6** repetitions
7. While shooting, an assistant applies an arrow flat cross your top back just above your shoulder blades. The assistant aims along the shaft if at FULL DRAW (not during the draw), while you are pulling to get your clicker (Recurve) / trigger (Compound); the arrow should keep the same orientation (whatever this orientation) – similar as shown on picture entitled "Assistant controlling the Push axis" – **6** arrows.
To complete step #6, we suggest an extra step using a "Laser-head control device" as suggested previously.

8. At full draw, watch your bow arm while getting your clicker (Recurve) / trigger (Compound). No twisting should be observed at the following levels:

- bow shoulder
- waist
- neck

6 arrows.

8. Repeat #2 with eyes closed - **15** arrows.

9. Same, but with eyes up & blurred - **12** arrows.

10. Same but watching and shooting at a blank butt - **12** arrows.

11. Pursuit on cutout spots or faces - 6 arrows per cutout spot (6 situations) - **36** arrows.

Volume: 12 warm-up arrows + 87 arrows over the exercises = **99** arrows total over the session.

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour (see the important note below)

Description: **Long Duration – Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current Cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				

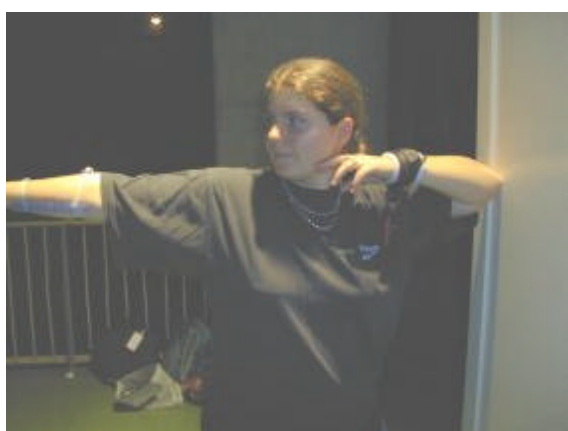
FITA Training SUGGESTIONS starting on **December 3, 2001.**

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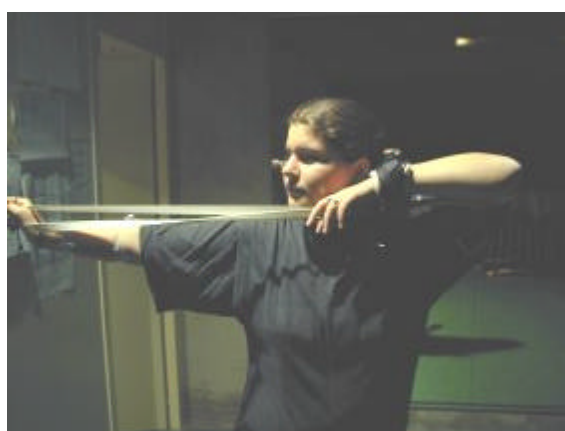
|                 |   |  |
|-----------------|---|--|
| Medium          |   |  |
| Long            | X |  |
| <b>Duration</b> |   |  |

Today we propose a Cardio session made of “**Long Duration – Low Intensity**” exercises.  
Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.



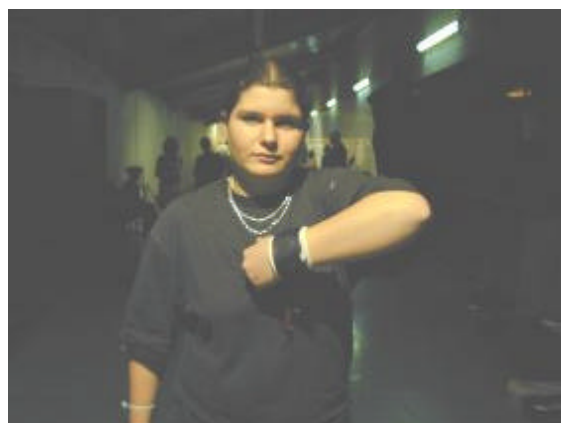
After draw in the shooting  
plan-Simulation on a wall



After push with elasticband



Assistant contolling the push axis



Back Tension simulation

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Simulation preparing to Back Tension feeling

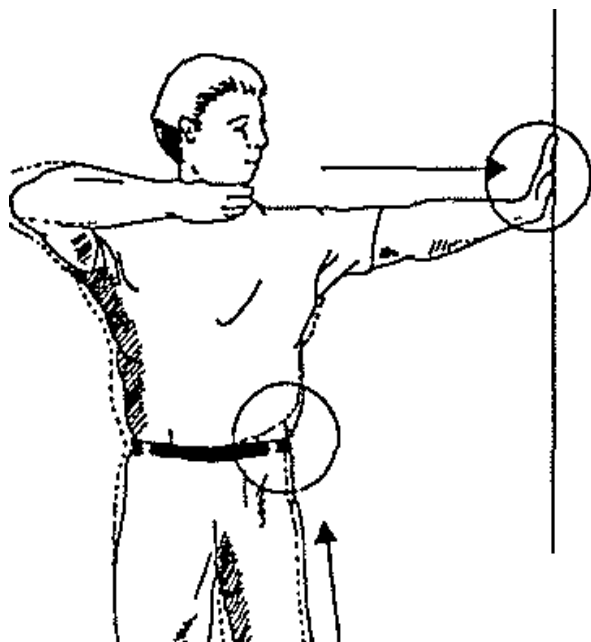


After Back Tension-Simulation on a wall

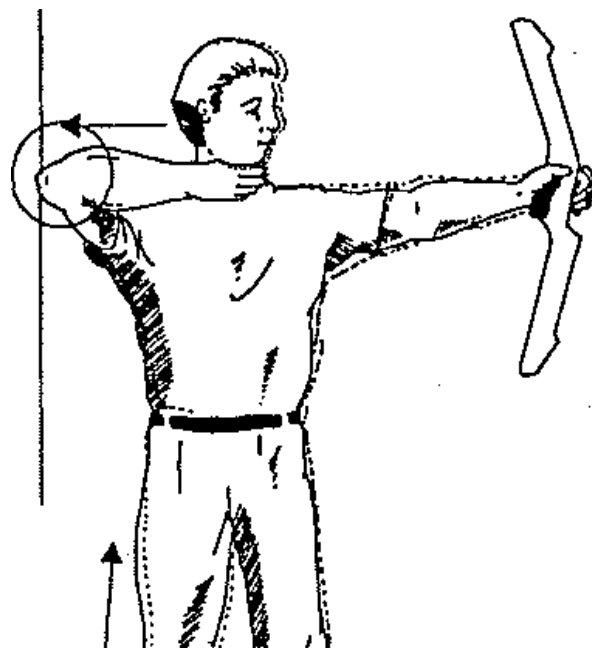


Lazer-head by PC


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Push simulation on a pillar



Pull simulation on a wall



Laser head by PC in use-Close up



FITA Training SUGGESTIONS starting on **December 10, 2001.**

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** -** COMMENTS and NEWS ****

French Announcement:

La FITA est particulièrement heureuse de vous annoncer qu'une version française des suggestions d'entraînement de la FITA sera disponible dès la semaine prochaine (9^{ème} semaine) grâce au dévouement de Denis BEAUDET. Denis est un entraîneur canadien et l'un de mes fidèles collaborateurs depuis de plusieurs années . Un grand merci du tir à l'arc francophone à Denis.

This is our eight week of practice with the a similar schedule as last week

Time-sharing:	47 to 48% Shooting and 53 to 52% for other developments (8:45 hours).	
Total volume:	16:45 hours per week	
Shooting:	4 sessions per week of 2 hour each	8 hours
Cardio:	2 sessions per week of 1 hour each	= 2 hours
Strengthening:	3 sessions per week of 1: 15 hour each	= 3:45 hours
	<i>It is suggested to reduce the Endurance strength down, and to increase the use of other strengthening methods</i>	
Yoga:	2 sessions per week of 1:30 min. each	= 3:00 hours
	Unless that you already have an excellent background in Yoga, classes conducted by a teacher are mandatory. If you cannot find any Yoga classes, look for another discipline that also develop: General perceptions – Body, breathing and mind control – Relaxation ... For instance: Corporal expression, Tai chi, Sophrology, Classical dance.	

We still have 8:45 hours for the “Other developments” which is the highest number of hours for these developments in this training plan. This amount will last until the end of February.

This week we will:

For this eighth week we will:

- * continue all the developments and keep the same volume of practice as last week;
- * have no competition or test (because we are introducing a very important development);
- * have a sighting session to prepare the tournament (or test from next week).

Next week a similar schedule will be proposed; only a tournament (or test) will be on the program.

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

Pascal COLMAIRE

FITA Development Manager

FITA Training SUGGESTIONS starting on December 10, 2001.

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***The week at a glance:***

| <b>Days</b>      | <b>#</b> | <b>Session Type</b>            | <b>Subject / Skill</b>                                | <b>Volume</b>                        |
|------------------|----------|--------------------------------|-------------------------------------------------------|--------------------------------------|
| <b>Monday</b>    | 1        | Strengthening<br>Visualisation | 40 to 60 % of 1 MR                                    | 1:15 hour<br>3 times a day           |
| <b>Tuesday</b>   | 1<br>1   | Shooting<br>Yoga               | Efficient Draw<br>As per Teacher                      | 75 arrows – 1:15 hour<br>1:30 hour   |
| <b>Wednesday</b> | 1<br>1   | Shooting<br>Strengthening      | Basic Symmetric Full Draw<br>Action<br>As per Program | 129 arrows – 2:05 hour<br>1:15 hour  |
| <b>Thursday</b>  | 1        | Cardio<br>Visualisation        | Aerobic Capacity                                      | 1:00 hour<br>3 times a day           |
| <b>Friday</b>    | 1<br>1   | Shooting<br>Strengthening      | Complete Full Draw Action<br>40 to 60 % of 1 MR       | 129 arrows – 2:05 hours<br>1:15 hour |
| <b>Saturday</b>  | 1        | Yoga<br>Visualisation          | As per Teacher                                        | 1:30 hour<br>3 times a day           |
| <b>Sunday</b>    | 1<br>1   | Shooting<br>Cardio             | Sighting<br>Aerobic Capacity                          | 102 arrows – 1:35 hours<br>1:00 hour |

**Note #1:**

The shooting rhythm is still slow: +/- 60 arrows per hour, allowing:

- rest between ends (you certainly have a lot to discuss with your friends ...);
- rest between arrows;
- to feel the shooting perceptions.

Be aware that the shooting rhythm will increase in the future, because our objective is to shoot at least 300 arrows per session, twice a week. It would take 5 hours per session at this slow rhythm; hence we will increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

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**MONDAY**

**Session: Strengthening.**

# of sessions: 1

Description: Since it is your 3<sup>rd</sup> week of strengthening, you should be able to implement 4 sets of 12 or more repetitions, according to the Endurance strength method with 40 to 60% of 1 MR (adapted from Letzelter in 1978) as follow:

| <b>Intensity</b>                                                           | <b>Sets &amp; Repetitions</b> |
|----------------------------------------------------------------------------|-------------------------------|
| 40 to 60% (1) of the maximal weight you can use, pending your development. | 20 to 10<br>14-20             |
| * 40% for the first set with weight "A"                                    | 12-15                         |
| * 50-55% at the 2 <sup>nd</sup> set with weight "B" > "A"                  | 13-17                         |

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* 45-50% at the 3 rd set with weight "C" such as "B" > "C" > "A"	10-12
* 55-60% at the 4 th set with weight "D" > "B"	

Rest between sets: 30 to 90 seconds.

Rest between exercises: 60 to 90 seconds.

Tempo (ratio of time for concentric & eccentric efforts): 3 / 3 sec.

For abdominals, calves and some small muscles for which you can work until a "burning" feeling

Do not hesitate to introduce variations in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

We have not attached is a list of strengthening exercises since this is a period of general/overall strength development. Hence you can implement any of the common exercises for strengthening.

Since you have 3 strengthening sessions per week, you can target 3 groups of muscles, for instance :

Group # 1 : back, pectorals and neck

Group # 2 : Arms and shoulders

Group # 3 : Belt and legs

Do not hesitate in modifying these groups, nevertheless it is suggested to alternate one exercise for the agonist and one for the antagonists, for instance pectorals and back.

Recommendations:

- To priorities:
 - exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
 - the stand-up position (excepted some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
 - control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
 - variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
 - breathing out during the effort (concentric part) – for physiological reason;
- To avoid:
 - the machines, which guide your motions - in archery we have to control and direct our action;
 - positions that reduce body's involvement, like seating, lying .. – in archery all the body participates to the body stability during the effort (draw and full draw);

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- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance,...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

### **Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

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## **TUESDAY**

### **Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **12 arrows** .

#### **EFFICIENT DRAW**

**Objective:** Be able to draw without any head and top body changes.

1. Simulate the “Combined Draw Actions” with an elastic band attached to your string elbow and held by your bow hand – see “2002-7 Full Draw Action 1”. Feel that your string hand moves SLIGHTLY along your chin (Recurve and some Compound archers) or jaw (Barebow and some Compound archers) – **12 repetitions**
2. While shooting at a very short distance.  
At full draw (not during the draw) watch in a mirror the string motion on your face. Try to see its progress (moving backward) – **7 arrows** .
3. Now eyes closed, still from a very short shooting distance, try to feel either:
  - the string moving backward on your face;
  - your string hand sliding backward under your chin, or against your jaw;
  - the string pressure increasing on your face (often on your chin and nose);
  - a combination of any above feelings.

18 arrows.

4. Same, but with eyes up & blurred - **7 arrows** .
5. Same but watching and shooting at a blank butt - **7 arrows** .
6. Pursuit on cut-out spots or faces - 7 arrows per cut-out spot (6 situations) - **42 arrows** .

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Optional: After step #6, we suggest an extra step using a “Laser-head control device (PC)” as suggested and illustrated in “2002-7 Full Draw Action 1”. If you add this work with the Laser-head, please revise the number for each step in order to tie a total of 75 arrows in the session.

Volume: 12 warm-up arrows + 63 arrows over the exercise = **75** arrows total over the session.

Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

WEDNESDAY

Session: Shooting.

of sessions: 1

General warm-up and shooting warm-up – **12 arrows** .

BASIC SYMMETRIC FULL DRAW ACTION.

Note: this session does target to learn/teach the COMPLETE Full Draw Action, but just the symmetric part of the FDA.

During the next session, Back Tension will be added on this basic Symmetric FDA. From there it will be up to you to choose YOUR most efficient FDA.

Objective: Research of the BASIC combined muscular actions of the bow and string sides of the archer's body which allow to maintain the lines of forces (Push and Pull) in their axis, just by spreading both shoulders down and away. At the same time flatten your chest, stretch your head up and lower your belly.

1. Simulate the action of your bow shoulder on a door frame or any other pillar... as per picture entitled “Push simulation on a pillar” and published in “2002-7 Full Draw Action 1”. Try to move your body in the shooting plane ONLY - **12** repetitions.
2. Shoot at a blank butt, eyes closed or not, **12 arrows** with – mainly - a repulse action.
3. Simulate the action of your string shoulder on a wall as per picture entitled “Pull simulation on a wall” and published in “2002-7 Full Draw Action 1”. Try to move your body in the shooting plane ONLY - **12** repetitions.
4. Shoot at a blank butt, eyes closed or not, **12 arrows** as Wednesday, i.e. with - mainly - a draw action.
4. Simulate a SYMMETRIC full draw action with an elastic band hold by your bow hand and affixed to your string elbow. Research the muscular actions:
 - maintaining the elastic band in the shooting plane;

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- avoiding any twisting or deformation of your body, especially the top, by **spreading down & away** your blades & shoulders (from your spine).

Have the feeling of relaxing down & away your shoulders. Stretch a bit your head up. See picture entitled "[Enlarge top triangle](#)" - **12** repetitions.

Some archers feel a kind of boat feeling, imagine that your head is the mast of the yacht, your bow hand is the prow of the ship, and your string elbow the stern. Now when you lower your shoulders apart, feel a slight raising of the mast, prow and stern.

The action should mainly come from the big muscles around your rib cage. Allowing a decrease of the muscular action of your arms. Have the feeling of expanding the triangle: aiming eye / bow shoulder / string shoulder.

### 6. Eyes closed while:

- getting your clicker (Recurve)
- getting your trigger (Compound)
- increasing slightly your draw (Bare Bow and others)

look for a symmetric and balanced expansion of the triangle: aiming eye / bow shoulder / string shoulder, while maintaining this triangle in the shooting plane - **12** arrows.

### 7. Repeat #2 with eyes up & blurred - **12** arrows.

### 8. Same at a blank butt- **12** arrows

### 9. Pursuit on cut-out spots or faces 9 arrows per cut-out face (six situations) = **54** arrows.

**Volume:** 15 warm-up arrows + 114 over the exercises = **129** arrows over the entire session.

## **Session: Strengthening.**

# of sessions: 1

**Description:** You have the choice of implementing the Monday session for other muscles. If the Monday session was too intense, you can implement a session - for other muscular groups - as last week and described below.

Use lightweights. Implement 3 sets of about 10 repetitions, excepted abdominal and some small muscles (forearms, wrists, calves...) for which you can work until the BEGINNING of a "burning" feeling.

We have not attached is a list of strengthening exercises since this is a period of general/overall strength development. Hence you can implement any of the common exercises for strengthening.

Since you have 3 strengthening sessions per week, you can target 3 groups of muscles, for instance :

Group # 1 : back, pectorals and neck

Group # 2 : Arms and shoulders

Group # 3 : Belt and legs

Do not hesitate in modifying these groups, nevertheless it is suggested to alternate one exercise for the agonists and one for the antagonists, for instance one for the pectorals and one for the back.

Variations are proposed for each exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,

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- maintain / increase your muscular coordination, and by consequence your strength efficiency (power).

Recommendations:

* **To priorities:**

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (excepted some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;

* **To avoid:**

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying, .. – in archery all the body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance,...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

THURSDAY

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour (see the important note below)

Description: **Long Duration – Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current Cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				

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|          |   |  |
|----------|---|--|
| Medium   |   |  |
| Long     | X |  |
| Duration |   |  |

Today we propose a Cardio session made of “**Long Duration – Low Intensity**” exercises.  
Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

**Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- \* *External visualization* = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.
- \* *Internal visualization* = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...

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**FRIDAY**

**Session: Shooting**

# of sessions: 1 shooting session.

General warm-up and shooting warm-up – **12 arrows**.  
COMPLETE FULL DRAW ACTION.

*Objective:* Combine the:

- Push action (bow part of the archer);
- and
- Draw combined action (string part of the archer).

*Description:*

**A. Push action – Revision:**

1. Simulate the action of your bow shoulder on a doorframe or any other pillar... as per picture entitled “Push in shooting plan- Simulation on a pillar”. Try to move your body in the shooting plane ONLY - **12** reps.
2. In front of a mirror, simulate your push action with an elastic band attached to your string elbow and held by your bow hand, watch the constant distance between your elastic band and bow shoulder/arm – see illustrations entitled “**Before push with elastic band**”, “**After push with elastic band**” (both illustrations published in “**2002-7 Full Draw Action 1**”) and “**Constant distance line of forces-Bow shoulder while pushing**” – **12** repetitions
3. While shooting, an assistant applies an arrow flat across your top back just above your shoulder blades. At FULL DRAW (not during the draw), the assistant aims along the shaft while you are pushing to:
  - extend your draw length for getting your clicker;
  - or, extend slightly your draw length for getting your trigger



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- or, extend slightly your draw length for cancelling the spring effect of the bow (no clicker).
The arrow should keep the same orientation (whatever this orientation) – see picture entitled “[Assistant controlling the push axis](#)” and published in “[2002-7 Full Draw Action 1](#)” – **9 arrows** .

B. Combined Draw action – Revision:

4. With your string elbow against a wall, combined the simulations of the *Basic Draw* and of *Back Tension* actions. Your body should move 45 degrees, e.g. a bit toward the imaginary target and toward your toes - **12 repetitions**.

Special attention: Your string blade should be moved away from the spine, and the humerus (arm), should turn clockwise viewed from the top in the horizontal plan. Your string elbow should NOT move down.

5. In front of a mirror, simulate the combined Draw actions with an elastic band attached to your string elbow and held by your bow hand – **12 repetitions**.
6. While shooting, an assistant applies an arrow flat cross your top back just above your shoulder blades. At FULL DRAW (not during the draw), the assistant aims along the shaft while you are pulling to:
 - extend your draw length for getting your clicker;
 - or, extend slightly your draw length for getting your trigger
 - or, extend slightly your draw length for cancelling the spring effect of the bow (no clicker).
The arrow should keep the same orientation (whatever this orientation) – similar as shown on picture entitled “[Assistant controlling the push axis](#)” and published in “[2002-7 Full Draw Action 1](#)” – **9 arrows** .

Complete Full Draw Action: A + B

7. In front of a mirror, simulate the Complete Full Draw Actions with an elastic band attached to your string elbow and held by your bow hand – **12 repetitions**.
8. While shooting, at full draw, watch your top body and the arrow, while you are:
 - extending your draw length to get your clicker;
 - or, extending slightly your draw length to get your trigger;
 - or, extending slightly your draw length to cancel the spring effect of the bow (no clicker).
No twisting or deformation should be observed at the following levels - **9 arrows** :
 - bow shoulder
 - waist
 - neck
8. Repeat #8 with eyes closed, feeling the perfect maintenance of all the axis of your physical form - **12 arrows**.
9. Same, but with eyes up & blurred - **12 arrows** .
10. Same but watching and shooting at a black butt - **12 arrows** .
11. Pursuit on cut-out spots or faces - 9 arrows per cut-out spot (6 situations) - **54 arrows** .

Note: For steps #3, 6 & 8 we suggest an extra step using a “[Laser-head control device \(PC\)](#)” as suggested previously.

Volume: 12 arrows of warm-up + 117 arrows over the exercises = about **129 arrows** over the entire session.

Session: Strengthening.

of sessions: 1

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Description: Same as Monday for another group of muscles.

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## SATURDAY

### Session: Yoga.

# of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

### Session: Mimics / Visualization.

# of sessions: at least 6 reps at each "session". Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

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## SUNDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – **12 arrows** .

INDOOR SIGHT ADJUSTMENT IN HEIGHT.

*Objective:* Refinement of your sight adjustment know-how.

At one official indoor shooting distance, 18 m for instance:

- a) adjust your sight to group your arrows around the center of the target face. Record the sight position – **6** arrows.
- b) move your sight to one way (up for example), and shoot +/- **6 arrows** until you group +/- 3 arrows roughly in the 7 zone (at 6 o' clock in our example). Record how much you have moved (up) your sight.
- c) divide the length of the above distance (how much you have moved your sight up) by 3.

## FITA Training SUGGESTIONS starting on **December 10, 2001.**

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- d) start over from point b) until you can group your arrows in the 8 zone – **6 arrows**.
- e) divide the length of the above distance (how much you have moved your sight up) by 2.
- f) Average the numbers that you got in c) and f). This average gives you a rough guess of how much you will have to move your sight (in height in our example) per zone. This average per zone is valid for correcting any height deviation off the center of the target face.
- g) Re-position your sight as a). Shoot **3 arrows** to confirm this sight position.
- h) From the average that you have calculated in f), sort out the value for half a zone. Move your sight up of this value. Shoot **3 arrows** and check if you can group your arrow around the line between 9 and 10 (at 6 o'clock); if not shoot some more arrows until you hit this line.
- i) Start over from a) in the opposite direction (down) to confirm, with only **3 arrows per step**.

WINDAGE SIGHT ADJUSTMENT for INDOOR

Objective: Refinement of your sight adjustment know-how.

At one official shooting distance, 18 m for instance:

- a) adjust your sight to group your arrows around the center of the target face. Record the sight position – **6 arrows**.
- b) move your sight to one way (left for example), and shoot +/- **6 arrows** until you group +/- 3 arrows roughly in the 7 zone (at 3 o'clock in our example). Record how much you have moved (left) your sight.
- j) divide the length of the above distance (how much you have moved your sight left) by 3.
- k) start over from point b) until you can group your arrows in the 8 zone – **6 arrows**.
- l) divide the length of the above distance (how much you have moved your sight left) by 2.
- m) Average the numbers that you got in c) and f). This average gives you a rough guess of how much you will have to move your sight (in windage in our example) per zone. This average per zone is valid for correcting any windage deviation off the center of the target face.
- n) Re-position your sight as a). Shoot **3 arrows** to confirm this sight position.
- o) From the average that you have calculated in f), sort out the value for half a zone. Move your sight (on the left) of this value. Shoot **3 arrows** and check if you can group your arrow around the line between 9 and 10 (on the right); if not shoot some more arrows until you hit this line.
- p) Start over from a) in the opposite direction (right) to confirm, with only **3 arrows per step**

Volume: 12 warm-up arrows and +/- 78 arrows over the exercises = between 90 and 102 arrows over the session.

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour (see the important note below)

Description: **Long Duration – Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current Cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

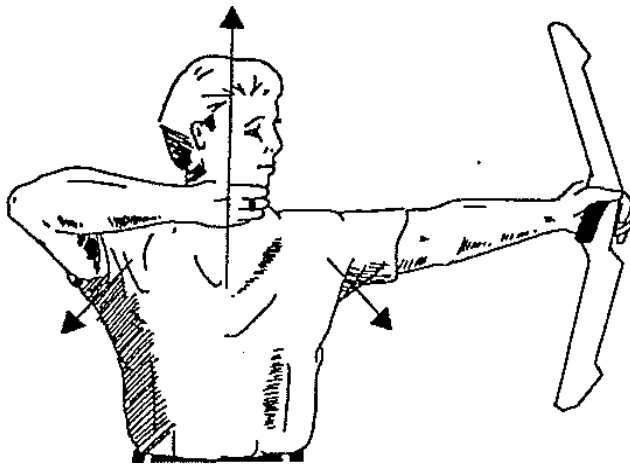
	Low	Medium	High	Intensity
Short				
Medium				
Long	X			

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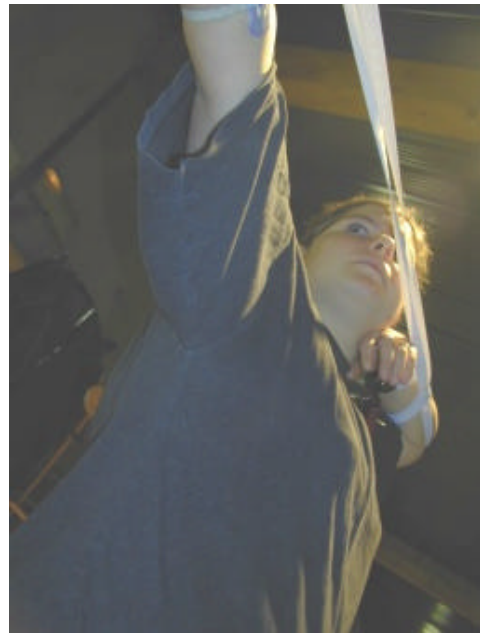
**Duration**

Today we propose a Cardio session made of “**Long Duration – Low Intensity**” exercises. Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.



Enlarge top triangle



Constant distance line of forces-  
Bowshoulder while pushing

FITA Training SUGGESTIONS starting on **December 17, 2001.**

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** -** COMMENTS and NEWS ****

French Announcement:

Savez-vous que les suggestions d'entraînement de la FITA paraissent désormais en français?

Non! Alors retourner à la précédente page Internet et cliquer sur l'onglet approprié.

Si oui, nous espérons que vous apprécierez obtenir ces suggestions dans la 2ème langue officielle de la FITA.

Encore merci à Denis BEAUDET – entraîneur canadien - pour son précieux travail de traduction.

This is our ninth week of practice with the a similar schedule the last 2 weeks:

Time-sharing:	47 to 48% Shooting and 53 to 52% for other developments (8:45 hours).	
Total volume:	16:45 hours per week	
Shooting:	4 sessions per week of 2 hour each	8 hours
Cardio:	2 sessions per week of 1 hour each	= 2 hours
Strengthening:	3 sessions per week of 1: 15 hour each	= 3:45 hours
	<i>It is suggested to reduce the Endurance strength down, and to increase the use of other strengthening methods</i>	
Yoga:	2 sessions per week of 1:30 min. each	= 3:00 hours
	Unless that you already have an excellent background in Yoga, classes conducted by a teacher are mandatory. If you cannot find any Yoga classes, look for another discipline that also develop: General perceptions – Body, breathing and mind control – Relaxation ... For instance: Corporal expression, Tai chi, Sophrology, Classical dance.	

We still have 8:45 hours for the “Other developments” which is the highest number of hours for these developments in this training plan. This amount will last until the end of February.

This week we will:

- * continue all the developments and keep the same volume of practice as last week;
- have one competition or test, before a rest week for the end of the year.

Next week will be the first of the 2 week of rest scheduled during this training plan.

Have a good week of practice and have a good time during the end of this year 2001!

On behalf of the **FITA Coaches Committee:**

Pascal COLMAIRE

FITA Development Manager

FITA Training SUGGESTIONS starting on **December 17, 2001.**

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## *The week at a glance:*

| Days      | #      | Session Type                   | Subject / Skill                                                       | Volume                               |
|-----------|--------|--------------------------------|-----------------------------------------------------------------------|--------------------------------------|
| Monday    | 1      | Strengthening<br>Visualisation | Maximal Strength                                                      | 1:15 hour<br>3 times a day           |
| Tuesday   | 1<br>1 | Shooting<br>Yoga               | Smooth Full Draw Action<br>As per Teacher                             | 76 arrows – 1:15 hour<br>1:30 hour   |
| Wednesday | 1<br>1 | Shooting<br>Strengthening      | Checking the Stability of the<br>Full Draw Action<br>Maximal Strength | 136 arrows – 2:05 hour<br>1:15 hour  |
| Thursday  | 1      | Cardio<br>Visualisation        | Aerobic Capacity                                                      | 1:00 hour<br>3 times a day           |
| Friday    | 1<br>1 | Shooting<br>Strengthening      | Bow Hand<br>Maximal Strength                                          | 136 arrows – 2:05 hours<br>1:15 hour |
| Saturday  | 1      | Yoga<br>Visualisation          | As per Teacher                                                        | 1:30 hour<br>3 times a day           |
| Sunday    | 1<br>1 | Shooting<br>Cardio             | Competition (or Test)<br>Aerobic Capacity                             | 105 arrows – 2:25 hours<br>1:00 hour |

### **Note #1:**

Despite the shooting rhythm is increased, it is still slow: +/- 65 arrows per hour, allowing:

- rest between ends (you certainly have a lot to discuss with your friends ...);
- rest between arrows;
- to feel the shooting perceptions.

Be aware that the shooting rhythm will regularly increase in the future, because our objective is to shoot at least 300 arrows per session, twice a week. It would take 5 hours per session at this slow rhythm; hence we will increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

## **MONDAY**

### **Session: Strengthening.**

# of sessions: 1

*Description:* According to a maximal strength method.

\* Intensity / load: > 75% of your 1 Maximal Repetition, for instance:

- if A is the load for the 1st set,
- at the 2nd set B should be higher than A
- at the 3rd set C should be between A & B
- at the 4th set D should be higher than B
- at the 5th set E should be between B & C
- at the 6th set F should be the highest load.

\* # of sets: 6

## FITA Training SUGGESTIONS starting on **December 17, 2001.**

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- * # of repetitions: no more than 8, for instance:
 - 7/8 at the 1st set,
 - 5/6 / 2nd
 - 6/7 / 3rd
 - 3/4 / 4th
 - 4/5 / 5th
 - 2/3 / 6th
- * Rest between sets: 2 min..
- * Rest between exercise: 3 min.
- * Tempo: natural, always in control, no jerk

For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

We have not attached is a list of strengthening exercises since this is a period of general/overall strength development. Hence you can implement any of the common exercises for strengthening.

Since you have 3 strengthening sessions per week, you can target 3 groups of muscles, for instance :

Group # 1 : back, pectorals and neck

Group # 2 : Arms and shoulders

Group # 3 : Belt and legs

Do not hesitate in modifying these groups, nevertheless it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back.

Recommendations:

- To prioritize:
 - . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
 - . the stand-up position (excepted some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
 - . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
 - . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
 - . breathing out during the effort (concentric part) – for physiological reason;
- To avoid:
 - . the machines, which guide your motions - in archery we have to control and direct our action;

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- . positions that reduce body's involvement, like seating, lying .. – in archery all the body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance,...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

See a suggested semi-specific strengthening exercise in pictures entitled: [“Shrink top triangle - Back repulsion - Strengthening”](#) and [“Enlarge top triangle – Back Repulsion - Strengthening”](#)

### **Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

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## **TUESDAY**

### **Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **10 arrows** .

**SMOOTHNESS OF THE ACTION AT FULL DRAW**

#### **A. With a clicker.**

##### **A.1. Observe your own action.**

At close distance from the butt, once at full draw – keep your head toward the target and just move your eyes in the mirror - observe the smooth progress the point of your arrow under the clicker in the mirror. Observe a progressive moving of the arrow point.

No rush! The exercise does not aim to make you faster to get the clicker, but more progressive & smooth. Some people are slow, others are fast, depending our nature, our biorhythm...

Nevertheless it is possible that a smooth action makes you a bit faster to get the clicker, but it would be a consequence - nothing else - which does not prove that you have to speed up your full draw action to get the clicker.



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Note: in this exercise the mirror is on the arrow side, very close from the point. . See illustration : « [Clicker motion observed in a mirror](#) ». If you are not comfortable to watch at this side, here are some solutions:

- move the mirror on the other side of the bow if you have an advanced clicker;
- if you have not an advanced clicker.
 - use a direct reading video, i.e. the camera will be on the arrow side and the screen on the other side of the bow very close from it (5") allowing you to see the screen at full draw without turning your head;
 - skip this step and move to the following one.

6 arrows

A.2. Observe your action with less accuracy

Once at full draw watch the clicker directly (no mirror or video); observe the decreasing space between the clicker and the bow window – **6 arrows**. See illustration : « [Clicker motion](#) »

A.3. Feel the progressive draw increase.

Once at full draw or toward the end of the draw, close your eyes, feel the progressive draw increase – **6 arrows**. You should feel the string:

- either pressing more and more on your face;
- or moving slightly back on your face.

If you do not feel one of the above feelings, that is either because your Full Draw Action is not efficient (no draw increase), or you are moving back as a block : your head, your string hand and your string. If this block - including your aiming eye - is not moved exactly in the aiming axis, your aiming task will not be easy. Furthermore the moving of your head could disturb your body balance .

A.4. Adapt your smooth action to the aiming situation

- * By shooting eyes up – **6 arrows**
- * By shooting at a blank butt – **6 arrows**
- * By shooting at cut-out faces or spots of smaller and smaller size , until you are able to maintain a progressive action while aiming at a “normal” size gold. See illustration : « [A cut out target face](#) » published in « [2002-5 Face marks & Alignment](#) » - 6 arrows per cut-out spot (5 cut-out spots and one regular face) = **36 arrows**.

B. With a “Back tension” type mechanic release.

Follow the same PROCESS as above.

It is not useful to watch your arrow point. In fact with such a type of release the arrow point has often tendency to move forward. If you can, watch the progressive rotation string elbow/arm thorough a mirror or a video. Such a motion is small and not always easy to observe, hence you will probably have to start at the step # 3.

C. With a Mechanical release with a trigger.

Objective: Get the trigger while keeping our mind away from the trigger.

C1. Simulation

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With your release gripping something, a stick for instance. Squeeze the trigger of 1/3 to 2/3 of its range. Maintain this pressure and have the feeling that your finger keeps a hook shape. Don't make your triggering finger stiff/tense, but just keep its hook shape and make it resistant.

Now firmly hold the stick (someone else can do) and the keep string arm (string arm) horizontal while pulling on the release – your finger is on the trigger keeping its hook shape – just pull, and pull until the release happens.

Release should happen with no motion of your triggering finger. It is almost like if the trigger has pressed on your triggering finger. The technique is close from the Back Tension release : “just pull back”. Nevertheless, some push activity is required – see previous sessions.

Note: This method works for all type of trigger (except those based on relaxed tension). It is a little easier with the release aid harnessed to your wrist, but also works with release aids that you hold in your hand; Dee WILDE the double '97 World Champion uses this method with such release (thumb / trigger) - **20** repetitions.

**C2.** While shooting eyes closed - **6 arrows**

**C3.** While shooting eyes close AND implementing your Complete Full Draw Action as worked last week – **6 arrows.**

**C4.** Same but shooting at a blank butt - **6 arrows**

**C5.** Same, but alternating one arrow eyes closed, one arrow watching the blank butt - **6 arrows .**

**C6.** Same while shooting at cut-out spots - 6 arrows per cut-out spots / 6 cut-out spots = **36 arrows**

**C7. Control:**

At a close distance from the butt, ask to an assistant to place his/her finger (I recommend the little one, because it is the thinnest) very relaxed on your trigger. From there you smoothly press the assistant's relaxed finger a bit (1/3 to 2/3 of the trigger range). Then you will get the remaining part of your trigger range with your combined draw action as described last Friday. Your assistant gives a feedback to you during & / or after each shot regarding the smoothness and progression of your triggering action – **6 arrows.**

Of course your assistant should NOT feel a sudden increase of your finger pressure, because if so, this is because you are “punching” the trigger, one of the most serious shooting fault.

Note: If you are punching the trigger.

At a close distance from the butt, close your eyes once at full draw. Let your triggering finger smooth on the trigger, while an assistant will press your relaxed finger progressively until the release, then alternate steps # C3 and C4.

Note: If you cannot get your trigger through according to this method, try something else, for instance:

- Squeeze your entire hand (the one holding the release).
- If you use a thumb release, squeeze the little finger, it will make the release canting in your hand, and by consequence will press the trigger on your thumb.

These alternative methods are not as good as the first one since your mind is still very close from the trigger, but at least it is not ON the trigger – Reminder: the objective is to keep your mind away from the trigger.

**Volume:** 10 warm-up arrows + 66 arrows over the exercises (could be more arrows for Compound with release aid having a trigger) = **76 arrows** total over the session.

**Session: Yoga.**

# of sessions: 1

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Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

WEDNESDAY

Session: Shooting.

of sessions: 1

General warm-up and shooting warm-up – **10 arrows**.

CHECKING the STABILITY of the FULL DRAW ACTION.

Objective: Observe if the archer stay in the shooting plane while getting his/her Trigger/Clicker and assess the stability of his/her full draw action.

Preparation:

- If it is sunny, move the target in the shade, or use an umbrella to create some shade on the butt. Ideally the archer and the target should be in the shade.
- Reduce the shooting distance down to 10 meters as a start. If it is OK, you can increase the distance.
- Set a target face on the butt and sight accordingly.
- Install the lazerhead (PC) on the archer. Adjust the laserhaed to get the laser dot close from the aiming point – **12 arrows**.

The lazerhead device is shown on pictures "[Push axis control with a laser-head \(PC\)](#)" and "[Laser-Head device \(PC\)](#)" published in "[2002-7 Full Draw Action 1](#)"

Process:

- The archer should synchronise the arrival of his/her sight in the centre of the target with the "landing" of the string on his/her face – it is very IMPORTANT. A poor synchronisation would false the test; for instance if the archer achieves his/her facial marks with his/her sight above the bull's eye, when he/she will lower his/her sight we will observe the laser dot moving down on the target face.
- An assistant turns the lazerhead on when the archer raises his/her bow. Avoid letting the lazerhead continuously turned on, batteries would get rapidly empty.

A. *Observe and record the:*

- amount and direction of the deviation;
- size of the zone in which the dot is moving;

18 arrows - if the laser dot moves (for RH archer):

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- 1) to the Right: it is usually due to a twisting (or level) of the archer's body in the horizontal plane (Bow shoulder moving toward the arrow);
- 2) Up: it is usually due to a leaning back (or level) of the archer's body in the shooting plane, away from the target (toward the right foot);
- 3) Down: it is usually because the archer moves his/her chin back with the string, creating a slight canting of the head in the shooting plane & flatter of his/her nape (forehead a little forward, and more string pressure on the nose);
- 4) Left: it is usually because the archer moves his/her head back with the string
- 5) Diagonally Right & Up: this is usually a combination of #1 and #2;
- 6) And so on for the other diagonals ...

*Note:* due to:

- a) the requirement to maintain the peep centred with the scope,
- b) the non use of a clicker (no need to increase the draw length while aiming),

Compound users deform much less than Recurve users. Nevertheless slight deformation are not unusual. For Compound archers the laserhead is also very helpful to assess the Dynamic Stability, e.g. laser dot stability/tremor on the target face at full draw.

### ***B. Tips for rectifying the deviation:***

- Best results are usually achieved when the assistant applies a light hand pressure on the archer (at full draw) to increase the deformation, with the instruction to the archer to resist to this push. "Usually" any external *resistance* (from the assistant) to the deformation does not improve anything.
- A change of effort (muscular action) at full draw, often lead to a change of laser dot deviation.

Assist the archer to reduce the deviation (if any) – **12 arrows** .

Same but with assistance one every second arrow – **12 arrows** .

Same with eyes closed; the assistant provides on-going and loudly comments on the deviation of the laser dot, and tells to the archer where was the dot upon release.

Now remove the laserhead, and stop the external assistance.

Shoot with eyes up & blurred - **9 arrows**.

Same but watching and shooting at a blank butt - **9 arrows** .

Pursuit on cut-out spots or faces - 9 arrows per cut-out spot (6 situations) - **54 arrows** .

*Volume:* 156 arrows over the exercises + 18 arrows of warm-up = about **195 arrows** over the entire session.

### **Session: Strengthening.**

# of sessions: 1

Description: As per Monday session for different muscles.

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## **THURSDAY**

### **Session: Cardio Maintenance.**

*# of session:* 1

*Duration:* 1:00 hour (see the important note below)

*Description:* **Long Duration – Low Intensity**

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Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current Cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium				
Long	X			
Duration				

Today we propose a Cardio session made of “**Long Duration – Low Intensity**” exercises.
Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- * *External visualization* = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.
- * *Internal visualization* = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...

FRIDAY

Session: Shooting

of sessions: 1 shooting session.

General warm-up and shooting warm-up – **12 arrows** .

BOW HAND

Objective: Get an impassive bow hand and fingers, in order to let the propulsion of the arrow done without any force applied on the riser, which could create some torque motion during the arrow propulsion period and disturb this step.

Simulations of bow hand relaxation. Wrist is relaxed on the grip, therefore when the grip moves forward just after the release, the wrist bends down – **12 repetitions**. See illustrations :

- « [Simulation of a relaxed bowhand at full draw](#) »
- « [Simulation of a relaxed bowhand after release](#) »

PHASE A

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**\* Olympic Archers**

A1. At about 4 meters from the target, load an arrow on your bow WITHOUT clicker, raise your bow arm at your shoulders level, an assistant behind you maintains you at your string shoulder, and draws your string just a bit (10cm). See illustration: « [Bowhand relaxation - shooting with an assistant](#) ».

Note to the assistant: draw just a bit toward the archer's chest, NOT higher, to avoid to punch the archer's face upon release.

Archer's task: OBSERVE YOUR bow-hand, make it as relaxed as possible, when the assistant releases you should see your bow wrist smoothly bending down and finishing very soft, your fingers should have stayed slightly curved and very relaxed - **10 arrows**. See illustration: : « [A relaxed bowhand](#) »

A2. Now do it alone - **10 arrows**. See illustration: "[Bowhand relaxation at reduced draw](#)"

A3. Same but increase your draw progressively at each arrow until a complete draw - **10 arrows**

A4. Same with your clicker on - **10 arrows**

**\* Compound archers.**

A1. At full draw, at a short distance, WATCH YOUR bow hand, make it as relaxed as possible while an assistant squeeze your trigger to release on your behalf. You should see your bow wrist bending down and finished very relaxed, your fingers should have stayed slightly curved and very soft - **20 arrows**. See illustration : « [A relaxed bowhand](#) »

A2. Now do it alone - **20 arrows**

|         |
|---------|
| PHASE B |
|---------|

**For both types of bows :**

- B1. Affix a 2" nail between your bow thumb and your bow forefinger. The length of the nail could be slightly different pending the thickness of your bow grip and natural finger position. Roof nails are usually very good for that exercise. See illustration : « [Bowfingers holding a nail](#) »  
At full draw watch your relaxed bow hand and fingers - release. The nail should be propelled away by your riser while you should not feel any pinhole in any of your fingers – **18 arrows**
- B2. For those who have some difficulties to properly implement this exercise, add the following step.  
Same exercise, but while watching your bow fingers through a mirror placed 50 cm ahead of your bow and a bit on the right (for right hand archers), showing the front of your riser and your fingers - **12 arrows**.

|         |
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| PHASE C |
|---------|

**For both types of bows :**

- C1. Take your sling off, shoot from a short distance (5 m) while watching your bow-hand ; the assistant will catch your bow - **12 arrows**. Voir illustration : « [Shooting without a sling - With assistant](#) »  
Note : pending the type of overdraw or extended arrow-rest some Compound archers may not be able to implement this exercise.
- C2. Same but shooting at a target face at a regular distance - **18 arrows**

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C3. Put your sling on, shoot eyes closed, while staying concentrated on your bow-hand. You can shoot from closer - **6 arrows**

C4. Same, but eyes up - **6 arrows**

C5. Same, but shooting at a blank butt at 18 meters - **6 arrows**

C6. Shoot at cut-out faces - 6 arrows per spot = **36 arrows**

Note 1: A slight tension in thumb & forefinger toward the target is acceptable.

Note 2: If your wrist is stiff after the release, relax it completely before lowering your bow.

Volume: 12 arrows of warm-up + 124 arrows over the exercises = about **136 arrows** over the entire session.

Session: Strengthening.

of sessions: 1

Description: Same as Monday for other muscles.

SATURDAY

Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

Session: Mimics / Visualization.

of sessions: at least 6 reps at each "session". Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*

* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

FITA Training SUGGESTIONS starting on **December 17, 2001.**

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**SUNDAY**

**Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **12 arrows** .

COMPETITION, or TEST

Volume :

- *if tournament - pending the format.*
- *if test:* about 90 arrows over the test + 15 warm-up arrows = about **105 arrows** over the session.

**Session: Cardio Maintenance.**

# of session: 1

Duration: 1:00 hour (see the important note below)

Description: **Long Duration – Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- \* your current Cardio development,
  - \* the activity you have chosen,
  - \* your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   |     |        |      |           |
| Long     | X   |        |      |           |
| Duration |     |        |      |           |

Today we propose a Cardio session made of “**Long Duration – Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.



**FITA Training SUGGESTIONS** starting on **December 17, 2001.**

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Bowhand relaxation



Bowfingers holding a nail



Bowhand relaxation at reduced draw



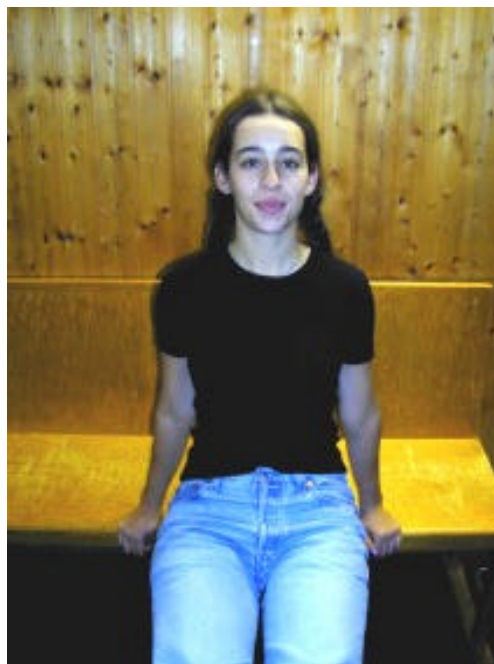
Bowhand relaxation-shooting with an assistant

FITA Training SUGGESTIONS starting on December 17, 2001.

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Clickermotion



Enlarge top body-Back  
Repulsion-Strengthening



Clicker motion observed in a mirror



Bowhand relaxation-shooting aith an assistant

**FITA Training SUGGESTIONS starting on December 17, 2001.**

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Simulation of a relaxed bowhand after release



Simulation of a relaxed bowhand at full draw



Shrunk top body-Back repulsion-Strengthening

**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** - ** COMMENTS and NEWS ****

No FITA Training Suggestions will be issued this week, since it is a rest week as per Training Program.

We will be back by December 31, 2001 with new suggestions for the first week of 2002.

Have a great break and a Merry Christmas!

On behalf of the **FITA Coaches Committee:**

Pascal COLMAIRE

FITA Development Manager.

**** COMMENTAIRES et NOUVELLES ** - ** COMMENTAIRES et NOUVELLES ****

Nous ne publions pas de suggestions d'entraînement cette semaine, car il s'agit d'une semaine de relâche prévue par le plan d'entraînement.

Nous serons de retour le 31 décembre avec de nouvelles suggestions pour la première semaine de 2002.

Bonne pause et joyeux Noël!

Au nom du **comité des entraîneurs de la FITA**

Pascal COLMAIRE

Directeur du développement FITA

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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\***

HAPPY NEW YEAR! I wish you great shots.

Back to training with our eleventh week of practice (including the previous rest week – week #10) with a schedule similar as the 3 weeks prior our break:

Time-sharing: **47 to 48%** Shooting and **53 to 52%** for other developments (8:45 hours).  
Total volume: **16:45 hours** per week  
Shooting: **4 sessions** per week of **2 hour** each 8 hours  
Cardio: **2 sessions** per week of **1 hour** each = 2 hours  
Strengthening: **3 sessions** per week of **1: 15 hour** each = 3:45 hours  
*It is suggested to reduce the Endurance strength down, and to increase the use of other strengthening methods*  
Yoga: **2 sessions** per week of **1:30 min.** each = 3:00 hours  
Unless that you already have an excellent background in Yoga, classes conducted by a teacher are mandatory. If you cannot find any Yoga classes, look for another discipline that also develop: General perceptions – Body, breathing and mind control – Relaxation ... For instance: Corporal expression, Tai chi, Sophrology, Classical dance.

We still have 8:45 hours for the “Other developments” which is the highest number of hours for these developments in this training plan. This amount will last until the end of February.

This week, we will:

- Work on our hands and release;
- restart with a lower volume of Cardio: 2 x 45 min. instead 2 x 1hour – This is optional, pending how you feel yourself;
- have no competition or test because during holidays most of you had a break;

The strengthening method proposed this week “Stripping method” is not a fancy remaining of the enjoyable holidays... it is a very “correct” and efficient strengthening method.

Next week will be working on our Follow-through and will have a test or shoot a local tournament.

Some of you informed me that some pictures were missing with the FITA Training Tips #4 and #7. Thank you for your remarks. This is now fixed. We apologize for these omissions.

We have also tried to post the picture in text just beside the related text. The French tips published for the 9<sup>th</sup> week are alike. Unfortunately many technical problems occurred and it was time consuming. Furthermore two illustrated documents, one in English and one in French would take too much room on the FITA Website. Hence the illustration and other appendixes will continue to be posted at a different place.

On behalf of the **FITA Coaches Committee**:

**Pascal COLMAIRE**

*FITA Development Manager*

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The week at a glance:

Days	#	Session Type	Subject / Skill	Volume
Monday	1	Strengthening	Stripping Method	1:15 hour
	1	Yoga	As per Teacher	1:30 hour
Tuesday	1	Shooting	Bow Hand	77 arrows – 1:15 hour
	1	Cardio	Aerobic Capacity	0:45 to 1:00 hour
Wednesday	1	Shooting	String Hand	143 arrows – 2:15 hour
	1	Strengthening	Stripping Method	1:15 hour
Thursday		Visualisation		3 times a day
Friday	1	Shooting	Release	143 arrows – 2:15 hours
	1	Strengthening	Stripping Method	1:15 hour
Saturday	1	Yoga	As per Teacher	1:30 hour
	1	Cardio*	Aerobic Capacity	0:45 to 1:00 hour
		Visualisation		3 times a day
Sunday	1	Shooting	Release	108 arrows – 1:45 hours

Notes

* This Saturday session of Cardio can be implemented on Sunday

Despite the shooting rhythm is increased, it is still slow: +/- 65 arrows per hour, allowing:

- rest between ends (you certainly have a lot to discuss with your friends ...);
- rest between arrows;
- to feel the shooting perceptions.

Be aware that the shooting rhythm will regularly increase in the future, because our objective is to shoot at least 300 arrows per session, twice a week. It would take 5 hours per session at this slow rhythm; hence we will increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase.

Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.

MONDAY

Session: Strengthening.

of sessions: 1

Description: "Stripping method".

* # of sets: 4

- Set #1: Load = +/- 60% of your 1 Maximal Repetition - Implement 12 to 20 reps.
- Set #2: Reduce the load a bit - Implement 12 to 20 reps.
- Set #3: Reduce again the load a bit - Implement 12 to 20 reps.
- Set #4: Reduce again the load a bit - Implement more than 12 reps.

* Tempo: natural, always in control, no jerk

* Rest between sets: 30 sec. to 1 min..

* Rest between exercise: 1 min. to 1.5 min.

For abdominals, calves and some small muscles you can work until a "burning" feeling

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

We have not attached is a list of strengthening exercises since this is a period of general/overall strength development. Hence you can implement any of the common exercises for strengthening.

Since you have 3 strengthening sessions per week, you can target 3 groups of muscles, for instance :

Group # 1 : back, pectorals and neck

Group # 2 : Arms and shoulders

Group # 3 : Belt and legs

Do not hesitate in modifying these groups, nevertheless it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back.

Recommendations:

- To prioritize:
 - . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
 - . the stand-up position (excepted some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
 - . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
 - . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
 - . breathing out during the effort (concentric part) – for physiological reason;
- To avoid:
 - . the machines, which guide your motions - in archery we have to control and direct our action;
 - . positions that reduce body's involvement, like seating, lying, .. – in archery all the body participates to the body stability during the effort (draw and full draw);
 - . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

See a suggested strengthening exercise for your neck, described in pictures # 1 and 2

Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;

- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

TUESDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **10 arrows**.

BOW HAND CONTROL

Objective: Be sure that your grip is adapted to you bow hand, and that no torque is created.

Preliminary recommendation: Read the article “Get A Grip!” by Rick McKinney in Archery Focus from September/October 1999, pages 40 to 42.

1. Cover your grip with Vaseline. Shoot while feeling if your hand doesn't slip on the left or right. It is normal that your hand slips up toward the bottom of the throat. If your bowhand slips toward one side, either add a layer of material or file accordingly*. At the conclusion of this test clean your grip and your bow hand.
2. Ask to an assistant to observe if your bow doesn't torque upon the propulsion, as follow. The assistant should lay down on the floor, on his/her back, just under the tip of your long stabilizer – see picture # 3. In this position the assistant will see your stabilizer and the ceiling. He/she will certainly be able to find a mark on the ceiling, on which he/she will align your stabilizer to better observe if your stabilizer remains on its axis upon the propulsion or if it kicks toward one side.
 - * If your stabilizer kicks to the left, you need to file the right side of the grip. Take care to not create any flat spots or sharp ridges on your grip.

Important: implement these two tests in that order, because any grip modification to compile with test #1 could introduce a bow torque.

Volume: Could be very different from an archer to another one, pending the results of the tests and the needs of rectification. We will suppose that you will 10 warm-up arrows + 67 arrows over the exercises = **77 arrows** total over the session.

Session: Cardio Maintenance.

of session: 1

Duration: 45 minutes to 1:00 hour (see the important note below)

Description: **Long Duration – Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current Cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium				
Long	X			
Duration				

Today we propose a Cardio session made of “**Long Duration – Low Intensity**” exercises.
Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

WEDNESDAY

Session: Shooting.

of sessions: 1

General warm-up and shooting warm-up – **11 arrows**.

STRING HAND.

Objective: Have less tension as possible in string wrist and forearm, to avoid changing pressure on the string. When the string moves forward upon release, the tensionless string wrist bends down (and moves back due to the remaining muscular activity of the muscles located in the back side of your string shoulder) with the flexed string arm.

Recurve archers

Simulation of string hand relaxation.

With your string fingers, grip your middle bow finger that is pointed down. Have a flat string wrist & hand (knuckles should not point out); your string hand should be "twistable". Both elbows should be slightly up.

Simulate a release while watching your string hand. At the end of the simulation, be sure that your hand is relaxed, the wrist should be bent down and the fingers quite relaxed – see picture # 4.

R1. At 4 meters from the target, load an arrow on your bow WITHOUT clicker. Raise your bow and introduce the draw of the string (10 cm), toward your chest level (not higher) to avoid kicking your chin upon release! Release while watching your string hand – see pictures # 5 and 6 - **12 arrows**

Important: Don't stop the draw, ensure a CONTINUOUS backward motion of the string until the release. ALWAYS WATCH your string hand being slowly & progressively more relaxed, follow it with your eyes all the release trajectory long. At each arrow, increase your draw a little, until reaching full draw

R2. When you cannot observe the string hand directly anymore (because your string hand is under your chin), use a mirror to observe your hand during and after the release - **12 arrows**.
You can introduce your clicker after 4 to 6 arrows.
Always keep the string hand, as relaxed as possible.

Note: Try a deeper string grip if you cannot avoid that:

- your knuckles show-up on the back of your string hand;
- string wrist bends out.

Compound archers

Simulation of string hand relaxation.

With your release gripping something, a stick for instance, firmly hold the stick with your other hand. Keep your both elbows SLIGHTLY up and pull apart.

For those using a release with trigger, squeeze the trigger of 1/3 to 2/3 of its range.

Maintain this pressure.

For those using a release with trigger, feel your triggering finger as a hook shape. Don't make your triggering finger stiff/tense, but just keep its hook shape and make it resistant.

Take a special care to the tension within your whole string hand & fingers.

For those using a trigger, the tension within the other fingers (the non-triggering ones) should be constantly the same.

Look for the most efficient tension level

C1. Now while shooting in front of a mirror, observing your hand on the release - **24 arrows**.

Our advice: start with a very relaxed whole string hand & fingers, then gradually – arrow per arrow tense them up a little. Check the how curled are your fingers and the space between them and the inside of the palm. Strive to visually identify the most efficient shape for next step (B1)

For Both type of bow users

Your tensionless string wrist should be bent down after the release. String-hand should slide along your neck, never away (we'll work on this during our next session).

B1. Shoot eyes closed, while staying concentrated on your string-hand - **12 arrows**

B2. Same, but eyes up - **12 arrows**

B3. Same, but shooting at a blank butt - **12 arrows**

B4. Shoot at cut-out faces - 12 arrows per spot = **72 arrows**.

Volume: 11 arrows of warm-up + 132 arrows over the exercises = about **143 arrows** over the entire session.

Session: Strengthening.

of sessions: 1

Description: As per Monday session for different muscles.

THURSDAY

Session: Mimics / Visualization.

of sessions: at least 6 reps at each "session". Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*

* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

FRIDAY

Session: Shooting



of sessions: 1 shooting session.

General warm-up and shooting warm-up – **12 arrows**.

RELEASE

Objective: Keep the same muscular activity from full draw, to the end of the shot (muscular follow-through).

For finger archers : only one change - the level of tension in your string fingers.

For archers with a mechanic release : no change

Simulations of string hand relaxation (Recurve).

- a) With your string fingers, grip your pointed down middle bow finger. Raise enlaced hands up to your throat level. Have your elbows slightly above the horizontal and a flat string wrist & hand (no knuckles). Your string hand should be "twistable".
Simulate a release while watching your string hand – see pictures # 4 and 7.
- b) While gripping your pointed down middle bow finger as above, turn your head, and watch your string bow-elbow during release simulations. This elbow should keep the same angle, moving back and away, horizontally ; the motion should come FROM the shoulder joint see picture # 8.
- c) Combine both simulations while watching toward the target, your string hand should slide along your neck, and stop about at the vertical of your ear (below it) – see picture # 9.

12 repetitions of each steps

Note to Compound archers: pending your facial marks (where is your string hand on your face) you could face some difficulties in turning your head in the following exercise.

#1. String elbow

At about 4 meters from the butt, at full draw, turn your head 180 degrees for watching your string elbow, release while observing:

- the constant angle at the elbow level,
- your string elbow moving back on the same horizontal plan (more or less),
- the pivoting/rotation motion of your string arm at the shoulder joint - **12 arrows**.

See pictures # 10 and 11.

#2. Release form observation.

- 2.1. At full draw, observe your release form through a mirror. Keep your string hand as relaxed as possible. Release WHILE WATCHING your string hand and arm in the mirror - 24 arrows for those who were not able to implement the previous exercise, **12 arrows** for the others.
- 2.2. Shoot eyes closed, while staying concentrated on your release, feel that your body and release remain in the shooting plan (no twist) - **12 arrows**
- 2.3. Same, but eyes up - **12 arrows**
- 2.4. Same, but shooting at a blank butt from an official shooting distance (18 meters)- **12 arrows**
- 2.5. From an official shooting distance, shoot at a set of progressive cut-out faces (five cut-out target faces and one complete face) - **12 arrows** per spot = **72 arrows**

Volume: 11 warm-up arrows + 132 arrows over the exercises = **143 arrows** total

Session: Strengthening.

of sessions: 1

Description: Same as Monday for other muscles.

SATURDAY



Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

Session: Cardio Maintenance.

of session: 1

Duration: 45 minutes to 1:00 hour (see the important note below)

Description: **Long Duration – Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current Cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium				
Long	X			
Duration				

Today we propose a Cardio session made of “**Long Duration – Low Intensity**” exercises.
Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- * *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- * *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

SUNDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **6 arrows**.

RELEASE on Reversed spots

Same session as Friday until #2.4., but with 6 arrows per situation instead of 12 = **30 arrows**

Since week #4 you have been suggested to use some cut-out target faces of decreasing sizes for adapting a technical skill:

- from shooting eyes closed and/or at a blank butt
- to shooting at a complete target face.

Hence you should have now a bunch of cut-out spots (e.g. the central part that you took off). Here is a suggestion for using these spots for a similar adaptation process as the one using the cut-out faces.

You need to prepare 3 columns:

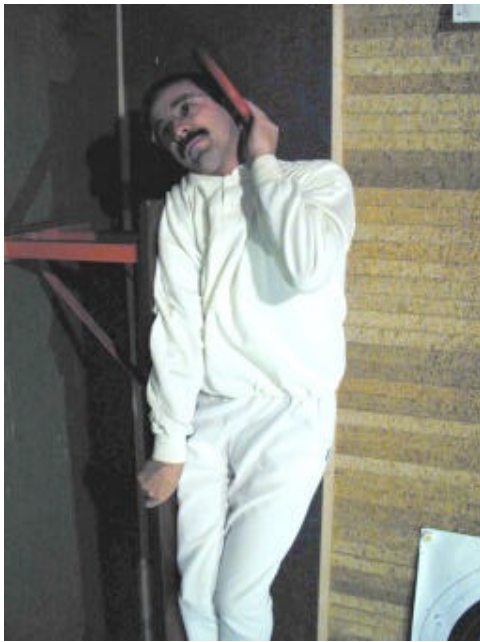
- * 1st column: completely bare;
- * 2nd column: display a set of “reverse” cut-out spots, e.g. showing the white side (coloured side against the butt). With the biggest spot on top and the smallest at the bottom of this column.
- * 3rd column: display a set of cut-out spots showing their coloured side to you. With the biggest spot on top and the smallest at the bottom of this column.

From an official shooting distance, shoot alternatively **one arrow** at the:

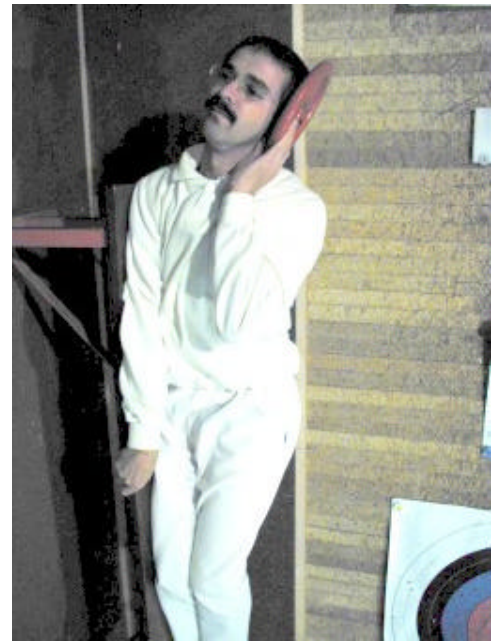
- 1st column = no spot, just in the butt
- top spot of the 2nd column = the biggest white spot
- top spot of the 3rd column = top coloured spot showing scoring zones 7 to 10. For Compound: 8 to 10.
 - 1st column = no spot, just in the butt
 - 2nd top spot of the 2nd column = the 2nd biggest white spot
 - 2nd top of the 3rd column = coloured spot showing scoring zones 8 to 10. For Compound: 10, 9 and half of the 8.
- 1st column = no spot, just in the butt
- 3rd top spot of the 2nd column = the 3rd biggest white spot
- 3rd top of the 3rd column = coloured spot showing scoring zones 10, 9 & half of the 8. For Compound: 10 and 9.
 - 1st column = no spot, just in the butt
 - 4th top spot of the 2nd column = the 4th biggest white spot
 - 4th top of the 3rd column = coloured spot showing scoring zones 10 & 9. For Compound: 10 and half of the 9.
- 1st column = no spot, just in the butt
- 5th top spot of the 2nd column = the 5th biggest white spot
- 5th top of the 3rd column = coloured spot showing scoring zones 10 & middle of the 9. For Compound: “big 10”.
 - 1st column = no spot, just in the butt
 - regular target face
 - regular target face.

Shoot 4 times this circuit = **72 arrows**

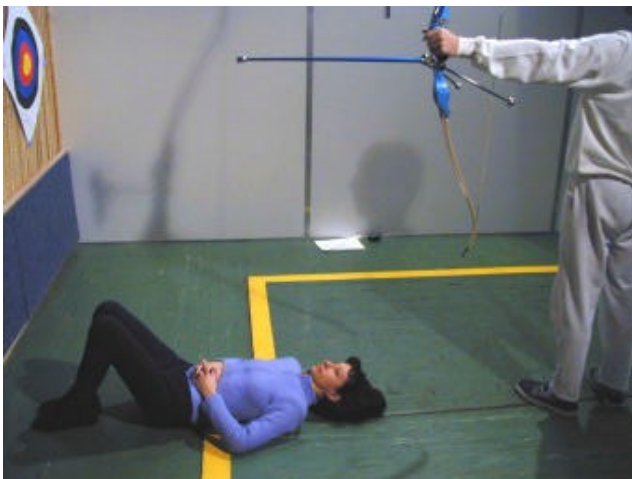
Volume: 6 warm-up arrows + 102 arrows over the exercises = **108 arrows total**



#1



#2



#3



#4



#5



#6



#7



#8



#9



#10



#11

FITA Training SUGGESTIONS starting on **January 7, 2002.**

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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\***

This is our twelfth week of practice with an unchanged schedule:

|                |                                                                                     |              |
|----------------|-------------------------------------------------------------------------------------|--------------|
| Time-sharing:  | <b>47 to 48%</b> Shooting and <b>53 to 52%</b> for other developments (8:45 hours). |              |
| Total volume:  | <b>16:45 hours</b> per week                                                         |              |
| Shooting:      | <b>4 sessions</b> per week of <b>2 hour</b> each                                    | 8 hours      |
| Cardio:        | <b>2 sessions</b> per week of <b>1 hour</b> each                                    | = 2 hours    |
| Strengthening: | <b>3 sessions</b> per week of <b>1: 15 hour</b> each                                | = 3:45 hours |
| Yoga:          | <b>2 sessions</b> per week of <b>1:30 min.</b> each                                 | = 3:00 hours |

This week we will:

- work on our Follow-through;
- have one competition or test.

Next week we will check our string clearance and work our aiming stability.

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

***Pascal COLMAIRE***

*FITA Development Manager*





***The week at a glance:***

| Days      | #      | Session Type                      | Subject / Skill                             | Volume                               |
|-----------|--------|-----------------------------------|---------------------------------------------|--------------------------------------|
| Monday    | 1      | Strengthening<br>Visualisation    | Maximal Strength                            | 1:15 hour<br>3 times a day           |
| Tuesday   | 1<br>1 | Shooting<br>Yoga                  | Follow-through<br>As per Teacher            | 77 arrows – 1:10 hour<br>1:30 hour   |
| Wednesday | 1<br>1 | Shooting<br>Strengthening         | Follow-through<br>Maximal Strength          | 143 arrows – 2:05 hour<br>1:15 hour  |
| Thursday  | 1<br>1 | Cardio<br>Visualisation<br>Social | Aerobic Capacity<br>Job/School Arrangements | 1:00 hour<br>3 times a day           |
| Friday    | 1<br>1 | Shooting<br>Strengthening         | Follow-through<br>Maximal Strength          | 143 arrows – 2:05 hours<br>1:15 hour |
| Saturday  | 1      | Yoga<br>Visualisation             | As per Teacher<br>With attention exercises  | 1:30 hour<br>3 times a day           |
| Sunday    | 1<br>1 | Shooting<br>Cardio                | Competition (or Test)<br>Aerobic Capacity   | 108 arrows – 2:30 hours<br>1:00 hour |

**Note #1:**

As anticipated the shooting rhythm is increased, but is still slow: +/- 70 arrows per hour, allowing:

- rest between ends (you certainly have a lot to discuss with your friends ...);
- rest between arrows;
- to feel the shooting perceptions.

Be aware that the shooting rhythm will regularly increase in the future, because our objective is to shoot at least 300 arrows per session, twice a week. It would take 5 hours per session at this slow rhythm; hence we will increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

**MONDAY**

**Session: Strengthening.**

# of sessions: 1

*Neural Adaptation (maximal strength)*

*Description:* Neural adaptation is a way to increase your strength with little muscular mass development.

- \* # of sets: 3 to 5 in theory, I recommend at least 4 with a preference for 5.
- \* of repetitions : 1 to 5.
- \* Intensity: As heavy as you can, no less than :
  - 90% of your Maximal R.M. if you are a beginner in strengthening
  - 85% of your Maximal R.M. if you have 1 to 4 year(s) of experience in strengthening
  - 75% of your Maximal R.M. if you have 5 years or more of experience in strengthening
- \* Rest between sets: 3:30 minutes to 5 minutes.
- \* Rest between exercise: 3 min.
- \* Tempo: natural, always in control, no jerk

For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

We have not attached is a list of strengthening exercises since this is a period of general/overall strength development. Hence you can implement any of the common exercises for strengthening.

Since you have 3 strengthening sessions per week, you can target 3 groups of muscles, for instance :

Group # 1 : back, pectorals and neck

Group # 2 : Arms and shoulders

Group # 3 : Belt and legs

Do not hesitate in modifying these groups, nevertheless it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back.

Recommendations:

- To prioritize:
  - . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
  - . the stand-up position (excepted some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
  - . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
  - . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
  - . breathing out during the effort (concentric part) – for physiological reason;
- To avoid:
  - . the machines, which guide your motions - in archery we have to control and direct our action;
  - . positions that reduce body's involvement, like seating, lying, .. – in archery all the body participates to the body stability during the effort (draw and full draw);
  - . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

See a suggested strengthening exercise in picture [# 1](#)

**Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- \* *External visualization* = *see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization* = *You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

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**TUESDAY**

**Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **12 arrows.**

**FOLLOW-THROUGH**

Objective: Be able to let the string going off the fingers or release aid, without any mental, visual and physical modification.

Note: Only the “Finger” archers have a slight physical modification, in the tension level of their string fingers muscles.

1. Follow-through simulations:

- \* Recurve Archers: With your string fingers, grab one of your bow fingers.
- \* Compound archers: With your release, grab any stick. Hold the stick with your bow hand, and your trigger in our string hand.

For both type of bows:

Raise your both forearms in the above position up to your throat level. They should be now horizontal and aligned. With your back muscles, pull on your hands as described above. Turn your head toward the butt, increase your pull effort on your arms to simulate a full draw effort. See picture # 2. Move your eyes in a mirror - mirror very close from your face - watch in the bottom of your own eyes, check your eyes impassivity while simulating a release, no trouble should occur - **12 reps.**

2. Same exercise but while shooting at a short distance (+/- 6 meters) - **12 arrows**
3. Shoot at a blank butt from any distance (18 meters / Indoor - 70 meters / Outdoor) - **12 arrows**
4. Shoot at cut-out faces; 6 cut-out faces; 6 arrows per cut-out = **36 arrows**
5. Shot at a normal face - **15 arrows.**

*Volume:* 12 warm-up arrows + 65 arrows over the exercises = **77 arrows** total over the session

**Session: Yoga.**

# of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.



Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

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## WEDNESDAY

### Session: Shooting.

# of sessions: 1

General warm-up and shooting warm-up – **12 arrows.**

### Follow Through

**Objective:** Keep the same mental activity from full draw until the end of the shot.

### Simulations.

a) *Recurve archers:* With your string fingers, grip your pointed down middle bow finger;

*Compound archers:* With your release aid, grab a stick

simulate your position at full draw – make a loud and continuous sound from your throat like “Hhhhhuuuuuummm...” simulate a release while keeping the exact sound until two seconds after the release.

Avoid any : “Hhhhhuuuuuuuummm...” (interruption upon release)

Or

“Hhhhhuuuu**U**uummm...” (higher intensity upon release).

Goal: The continuity and intensity of the sound should be exactly the same – **8 simulations**

b) Same but with an elastic band – **10 simulations**

Now while shooting.

- 1 Same while shooting eyes closed at a short distance, 10 meters – **15 arrows**
- 2 Same while watching yourself – in your own eyes - in a mirror – **15 arrows**
- 3 Same while shooting at a blank butt at the regular distance, 18 or 25 meters – **15 arrows**
- 4 Same shooting at cut-out faces; 5 cut out faces; 6 arrows per cut-out face – **30 arrows total**
- 5 Same while shooting at a regular face from the regular distance – **12 arrows**
- 6 Same but with no sound every second arrows – **14 arrows**
- 7 Same without any sound – **12 arrows**

**Volume:** 12 warm-up arrows + 18 simulations + 113 arrows over the exercises = **143 arrows** over the session.

### Session: Strengthening.

# of sessions: 1

Description: As per Monday session for different muscles.

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## THURSDAY



### Session: Cardio Maintenance.

# of session: 1

Duration: 1:00 hour (see the important note below)

Description: **Long Duration – Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- \* your current Cardio development,
  - \* the activity you have chosen,
  - \* your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   |     |        |      |           |
| Long     | X   |        |      |           |
| Duration |     |        |      |           |

Today we propose a Cardio session made of “**Long Duration – Low Intensity**” exercises. Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

### Session: Mimics / Visualization.

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: as per Monday session

### Session: Job (or school) arrangements.

Contact your boss to:

- inform him/her of your needs for your 2002 training and competition availability;
- give a copy of the tournament that you will attend;
- draft your main goals;
- Arrange any files/tasks that would need your follow-up and/or expertise while you will be away.

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## FRIDAY

### Session: Shooting

# of sessions: 1 shooting session.

General warm-up and shooting warm-up – **12 arrows.**

FOLLOW-THROUGH.

#### A. For Recurve archers

##### **Double clicker method**

1. Get your clicker, then let down - **5** times.
2. Get your clicker, and CONTINUE to extend your draw during 2-3 seconds, then let down – **5** times.
3. Affix a second clicker under your usual one. This additional clicker should be 1 to 2mm. further (closer to the target) – See illustration # 3.
4. Shoot eyes closed with the 2 clickers. Strive to continue all your physical and mental activities between the 2 clickers, as these activities were before the first clicker – **18 arrows.**

Attention: there are several steps to overpass:

- a) click without any reaction



- b) click and be able to maintain
- c) click and CONTINUE about 2 to 3 seconds.
- 5. Same with your eyes up and blurred - **18 arrows.**
- 6. Same at a blank butt – **18 arrows.**
- 7. Still at a blank butt, alternate:
  - a) the shot of one arrow with the 2 clickers as previously,
  - b) the shot of one arrow with one clicker only, BUT these seconds arrows must be shot like if there was a second imaginary clicker to get. In other words, even when you use one clicker only, you continue all your physical and mental activities about 2 mm. After the sound of the clicker – **18 arrows.**
- 8. Shoot with one clicker only, but as above (see #7b) at cut-out faces; 5 cut-out faces; 7 arrows per spot = **35 arrows**
- 9. Shoot **18 arrows** with one clicker only, but as above (see #7b) at a regular face.

## **B. For Compound Archers**

### ***Two targets exercise.***

Prepare two targets:

- one right in front of you - called the “shot” target;
  - the other one at least 3 target spaces away on the right (for R/H archer) - called the “aimed” target.
1. Once at full draw aim at the “shot” target in front of you, then move your eyes, not your sight, at the “aimed” target on the right - focus visually and mentally that “aimed” target. Get your trigger/clicker and release. Strive to keep an impassive aiming (visual and mental focus) - **24 arrows**
  - 2 – 3 & 4. Make the 2 targets progressively closer and closer from each other; have at least 3 more steps before the “aimed” and “shot” target are side to side - 24 arrow per step, i.e at least **72 arrows.**  
Note: There is one distance between the 2 targets at which your riser will hide the “aimed” face, just pass over this step.
  5. At the second last step, you will have either:
    - 2 target faces side by side,
    - or
    - one on tri-spot face, you will aim at one spot, while shooting at one other – **24 arrows.**
  6. Aim and shoot at the same target face, or spot - **24 arrows**

*Total volume:* 12 warm-up arrows + 131-132 arrows over the exercises = **143-144** arrows total over the session

### **Session: Strengthening.**

# of sessions: 1

Description: Same as Monday for other muscles.

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## **SATURDAY**

### **Session: Yoga.**

# of sessions: 1

Description: as Tuesday session

Add some *attention* exercises like the following ones adapted from Schmid & Peper, 1993.



1. Focus on breathing, alternating between normal breathing and a deeper, slower breath.
2. Attend to specific sounds that are may be present, identify and label each sound.
3. Then simultaneously listen to all the sounds blending together without any attempt made at identification.
4. Alternate between a specific (narrow) and broad awareness is then repeated for your bodily experiences and then emotions and thoughts. The goal is to empty your mind of thoughts and feelings.
5. Fixate an object whilst using peripheral vision to be aware of other features in the environment. Imagine a narrow funnel centering on the chosen object before gradually widening the funnel to take in everything in the room.

**Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: as Monday session

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**SUNDAY**

**Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – at least **18 arrows**.

COMPETITION, or TEST

*Volume :*

- *if tournament - pending the format.*
- *if test:* about 90 arrows over the test + 18 warm-up arrows = about **108 arrows** over the session.

**Session: Cardio Maintenance.**

# of session: 1

Duration: 1:00 hour

Description: as Thursday session





# 1



# 2



# 3



FITA Training SUGGESTIONS starting on **January 14, 2002.**

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** - ** COMMENTS and NEWS ****

This is our 13th week of practice with an unchanged schedule:

Time-sharing:	47 to 48% Shooting and 53 to 52% for other developments (8:45 hours).	
Total volume:	16:45 hours per week	
Shooting:	4 sessions per week of 2 hour each	8 hours
Cardio:	2 sessions per week of 1 hour each	= 2 hours
Strengthening:	3 sessions per week of 1: 15 hour each	= 3:45 hours
Yoga:	2 sessions per week of 1:30 min. each	= 3:00 hours

This week we will work on our ***String Clearance*** and ***Aiming Stability***;

Next week we will start working on our routines and ***sequences*** for shooting one arrow.

Have a good week of practice!

On behalf of the **FITA Coaches Committee**:

Pascal COLMAIRE

FITA Development Manager



The week at a glance:

Days	#	Session Type	Subject / Skill	Volume
Monday	1	Strengthening Visualisation	Maximal Strength	1:15 hour 3 times a day
Tuesday	1 1	Shooting Yoga	String Clearance As per Teacher	78 arrows – 1:10 hour 1:30 hour
Wednesday	1 1	Shooting Strengthening	Stable Aiming Maximal Strength	150 arrows – 2:05 hour 1:15 hour
Thursday	1	Cardio Visualisation	Aerobic Capacity	1:00 hour 3 times a day
Friday	1 1	Shooting Strengthening	Stable Aiming Maximal Strength	150 arrows – 2:05 hours 1:15 hour
Saturday	1	Yoga Visualisation	As per Teacher	1:30 hour 3 times a day
Sunday	1 1	Shooting Cardio	Aiming Stability Aerobic Capacity	111 arrows – 1:40 hours 1:00 hour

Note #1:

As anticipated the shooting rhythm is increased, but is still slow: +/- 70 arrows per hour, allowing:

- rest between ends (you certainly have a lot to discuss with your friends ...);
- rest between arrows;
- to feel the shooting perceptions.

Be aware that the shooting rhythm will regularly increase in the future, because our objective is to shoot at least 300 arrows per session, twice a week. It would take 5 hours per session at this slow rhythm; hence we will increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase.

Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.

MONDAY

Session: Strengthening.

of sessions: 1

Neural Adaptation (maximal strength)

Bulgarian Pyramid method.

Description:

- * Intensity / load: > 75% of your 1 Maximal Repetition
- * # of sets : 6
- * # of repetitions: more than 8, for instance 7 at the 1st set - 6 / 2nd - 4 / 3rd - 2 / 4th - 3 / 5th - 5 / 6th
- * Rest between sets: 2 - 3 min..
- * Rest between exercise: 3 - 4 min.
- * Tempo: natural

For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

We have not attached is a list of strengthening exercises since this is a period of general/overall strength development. Hence you can implement any of the common exercises for strengthening.

Since you have 3 strengthening sessions per week, you can target 3 groups of muscles, for instance :

Group # 1 : back, pectorals and neck

Group # 2 : Arms and shoulders

Group # 3 : Belt and legs

Do not hesitate in modifying these groups, nevertheless it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back.

Recommendations:

- To prioritize:
 - . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
 - . the stand-up position (excepted some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
 - . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
 - . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
 - . breathing out during the effort (concentric part) – for physiological reason;
- To avoid:
 - . the machines, which guide your motions - in archery we have to control and direct our action;
 - . positions that reduce body's involvement, like seating, lying, .. – in archery all the body participates to the body stability during the effort (draw and full draw);
 - . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

See a suggested semi-specific strengthening exercise in pictures # 1 and 2.

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- * *External visualization* = *see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- * *Internal visualization* = *You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

TUESDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **12 arrows.**

STRING CLEARANCE.

1. At the bow arm level.

With no hand on the string, raise your bow and check where is your string on your armguard or forearm. About half an inch forwards of this spot affix a piece of tape which is 2 mm raised up in its center (bridge shape – a bandage is fine). The bridge of tape should be affixed vertically, across your bow forearm/armguard, or if you prefer parallel to the string. Identify with a pen, the side of the tape closest to the string (I prefer to mark this side before sticking the tape on the armguard). This mark will help to identify if the string hits the tape while pushing the arrow or during its way back. See illustration “# 3”. Shoot one arrow with this tape in place - pay attention to not flatten out the bridge-tape before the draw! After the shot, watch the tape, and analyze the hit (if any).

If you conclude that the string clearance is poor, play with the following elements until a good string clearance:

- ***the angle “bow arm / shoulders line”*** by the mean of chest &/or feet orientation, also the parallelism hips/shoulder. Usually your shoulders should remain above your hips and feet, since any twist between top body and hips reduces the string clearance. See picture # 4.
- ***the position of your bow shoulder join***. This join should remain above the hipbone (of the same side!). Moving this join toward the string reduces drastically the string clearance. Nevertheless your bow arm can rotate clockwise in the shoulder girdle, as long as the girdle remains on spot
- ***the bow elbow position***. See pictures # 5, 6, 7 & 8 showing exercises for the correct elbow position.
- bow hand position on the grip. See picture # 9, 10 & 11

2. At the bow chest level.

Either watching yourself in a mirror, or with the help of an assistant observe at full draw where the string touches your chest (if any). About a half-inch forward of this spot affix a piece of tape that has a bridge shape - 2 mm raised up in the middle (a bandage is fine). See picture # 12.

The most critical point is the edge (hem or trim) of the chestguard surrounding your bow shoulder.

The bridge of tape should be affixed parallel to the string on your chestguard. Shoot one arrow with this tape in place - pay attention to not flatten out the “bridge” part before the draw. After the shot, analyze the hit (if any).

If you conclude that the string clearance is poor, play with the following elements until a good string clearance:

- ***the angle “bow arm / shoulders line”*** as above
- ***the position of your bow shoulder join*** as above



- **the verticality of your body.** Leaning toward the target helps to clear the string from your chest; towards your toes too, but could disturb your body stability.
- **The inner chest tension.** Lowering your energy in your belly helps to flatten your chest, this is also good for body balance (lower center of gravity) and for staying relaxed.

Volume: variable, pending the initial quality of your string clearance, and the speed to solve the problem. Nevertheless you should shoot about **78 arrows** total over the session, including the warm-up arrows.

Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

WEDNESDAY

Session: Shooting.

of sessions: 1

General warm-up and shooting warm-up – **12 arrows.**

For Indoor

STABLE LATERAL AIMING

Objective : Stability of the unit bow-archer in the shooting plane, even without visual feedback, e.g. even without aiming.

IMPORTANT: this exercise is only valid for archers who do NOT deform their body while aiming, to get their clicker/trigger.

Shooting distance: 25 or 30 meters (18 meters by default).

Target: Affix a vertical line across the butt; you can use masking tape, toilet paper, ... pending your accuracy and the shooting distance. Some archers use the left or right edge of a target face.

1. Adjust the windage of your sight - **12 arrows**
2. As soon as you have started to aim at the vertical line, close your eyes; without any rush continue the rest of your shooting sequence with your eyes closed down. Note: it is better for this exercise to spend a longer time at full draw than what you are use to – **24 arrows.**

If your arrows are (for a right-hand archer):

- a) on the right of the line: move a bit your both feet to face the target more (open stance)

See the attached illustration # 13, that explains this exercise.

- b) on the left of the line: move a bit your both feet to be make your back facing the target (closed stance).



- c) close from the line: your body orientation is fine, furthermore now you are sure that the unit archer-bow, is able to maintain its direction (at least in this plan) even without visual feedback and correction. Memorize your feet position.
3. If necessary, cases a) and b), shoot **30** arrows with the new stance. If still required, rectify again and start over.
4. If you have moved your feet to achieve a constant lateral aiming, especially if you have turn your back toward the target, check now your string clearance – **12** arrows. Do you remember the method that consists in affixing a piece of tape slightly raised in its middle, on your armguard? If not, see the session from yesterday.
In case of bad string clearance, try to find the best compromise between the clearance of your string and your aiming stability (body orientation) – **30** arrows.
5. Complete the session with a **30** arrows scoring round – pending how many arrows that you have already shot so far - to complete the 143 arrows over the session
- Volume:* 12 arrows of warm-u + 128 arrows over the exercises = about **150 arrows** over the entire session.

Session: Strengthening.

of sessions: 1

Description: As per Monday session for different muscles.

THURSDAY

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour (see the important note below)

Description: **Long Duration – Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current Cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium				
Long	X			
Duration				

Today we propose a Cardio session made of “**Long Duration – Low Intensity**” exercises.
Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- * *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- * *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

FRIDAY

Session: Shooting

of sessions: 1 shooting session.

General warm-up and shooting warm-up – **12 arrows.**

STABLE AIMING / TILLER ADJUSTMENT

Objective: Stable unit bow-archer in the vertical plan even without visual feedback and correction, e.g. even without aiming.

IMPORTANT: this exercise is only valid for archers who do NOT deform their body while aiming, to get their clicker/trigger.

Shooting distance: 25 or 30 meters (18 meters by default).

Affix an horizontal line across the butt, made of masking tape, toilet paper, ...

See illustration # 14

1. Adjust your sight - **12 arrows**
2. As soon as you have started to aim at the horizontal line, close your eyes; without any rush continue the rest of your shooting sequence with your eyes closed. It is better for this exercise to be a longer time at full draw than what you are use to be – **24 arrows.**

If your arrows are:

- a) below the line: increase the weight of the bottom limb, and / or decrease the weight of the top limb, pending if you want to keep or not the same bow weight.
- b) above the line: opposite adjustment as above.
- c) close from the line: your bow tiller is fine, furthermore now you are sure that the unit archer-bow, is able to maintain its direction (at least in this plan) even without visual feedback and correction.

Note: if you increase the weight of one limb and decrease the weight of the other limb of the same amount, you will not change your total bow weight.

3. If you have changed the weight of one or two limb(s) – cases a) and b):
 - 3.1. Re-adjust – **36 arrows**:
 - your wheel timing (Compound), then your nocking point and your peep-sight height;
 - your nocking point (Recurve), by implementation of the test that you are used to
 - 3.2. Re-adjust your sight - **12 arrows.**
 - 3.3. Start over the tiller adjustment process from step #2 – **24 arrows.**
4. Pending the result of step #4.3. you could have to start over from #4.1. – **24 arrows**
5. Once you get the proper adjustment:
 - * Register it.
 - * Tight all the screws
 - * Have a mark on each screw.
6. Complete the session with some arrows shot at a complete face - to complete the 150 arrows over the session

Volume: 12 arrows of warm-up + 138 arrows over the exercises = about **150 arrows** over the entire session.

Session: Strengthening.

of sessions: 1

Description: Same as Monday for other muscles.

SATURDAY

Session: Yoga.

of sessions: 1

Description: as Tuesday session

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: as Monday session

SUNDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – at least **12 arrows**.

CHECKING the STABILITY of AIMING with Laserhead (PC).

Objective: Observe if the archer stay in the shooting plane while getting his/her Trigger/Clicker and assess the stability of his/her full draw action.

Preparation:

- If it is sunny, move the target in the shade, or use an umbrella to create some shade on the butt. Ideally the archer and the target should be in the shade.
- Reduce the shooting distance down to 10 meters as a start. If it is OK, you can increase the distance.
- Set a target face on the butt and sight accordingly.
- Install the lazerhead (PC) on the archer. Adjust the laserhaed to get the laser dot close from the aiming point – **12 arrows**.

The laserhead device is shown on pictures “[Push axis control with a laser-head \(PC\)](#)” and “[Laser-Head device \(PC\)](#)” published in “[2002-7 Full Draw Action 1](#)”

Process:

- The archer should synchronise the arrival of his/her sight in the centre of the target with the “landing” of the string on his/her face – it is very IMPORTANT. A poor synchronisation would false the test; for instance if the archer achieves his/her facial marks with his/her sight above the bull's eye, when he/she will lower his/her sight we will observe the laser dot moving down on the target face.
- An assistant turns the laserhead on when the archer raises his/her bow. Avoid letting the laserhead continuously turned on, batteries would get rapidly empty.

A. *Observe and record the:*

- amount and direction of the deviation;
- size of the zone in which the dot is moving;

12 arrows - if the laser dot moves (for RH archer):

- 1) to the Right: it is usually due to a twisting (or level) of the archer's body in the horizontal plane (Bow shoulder moving toward the arrow);
- 2) Up: it is usually due to a leaning back (or level) of the archer's body in the shooting plane, away from the target (toward the right foot);



- 3) Down: it is usually because the archer moves his/her chin back with the string, creating a slight canting of the head in the shooting plane & flattering of his/her nape (forehead a little forward, and more string pressure on the nose);
- 4) Left: it is usually because the archers moves his/her head back with the string
- 5) Diagonally Right & Up: this is usually a combination of #1 and #2;
- 6) And so on for the other diagonals ...

Note: due to:

- a) the requirement to maintain the peep centred with the scope,
- b) the non use of a clicker (no need to increase the draw length while aiming),

Compound users deform much less than Recurve users. Nevertheless slight deformation are not unusual. For Compound archers the laserhead is also very helpful to assess the Dynamic Stability, e.g. laser dot stability/tremor on the target face at full draw.

B. Tips for rectifying the deviation:

- Best results are usually achieved when the assistant applies a light hand pressure on the archer (at full draw) to increase the deformation, with the instruction to the archer to resist to this push. “Usually”, but not always any external *resistance* to the deformation from the assistant does not improve anything.
- A change of effort (muscular action) at full draw, often lead to a change of laser dot deviation.

Assist the archer to reduce the deviation (if any) – **9 arrows**.

Same but with assistance one every second arrow – **12 arrows**.

Same with eyes closed; the assistant provides on-going and loudly comments on the deviation of the laser dot, and tells to the archer where was the dot upon release.

Now remove the laserhead, and stop the external assistance.

Shoot with eyes up & blurred - **9 arrows**.

Same but watching and shooting at a blank butt - **9 arrows**.

Pursuit on cut-out spots or faces - 6 arrows per cut-out spot (6 situations) - **36 arrows**.

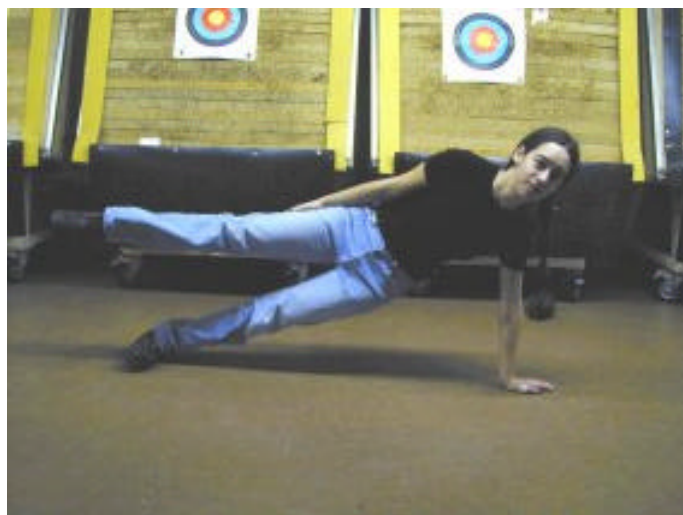
Volume: 12 warm-up arrows + 99 arrows over the exercises = **111 arrows** over the entire session.

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour (see the important note below)

Description: as Thursday session



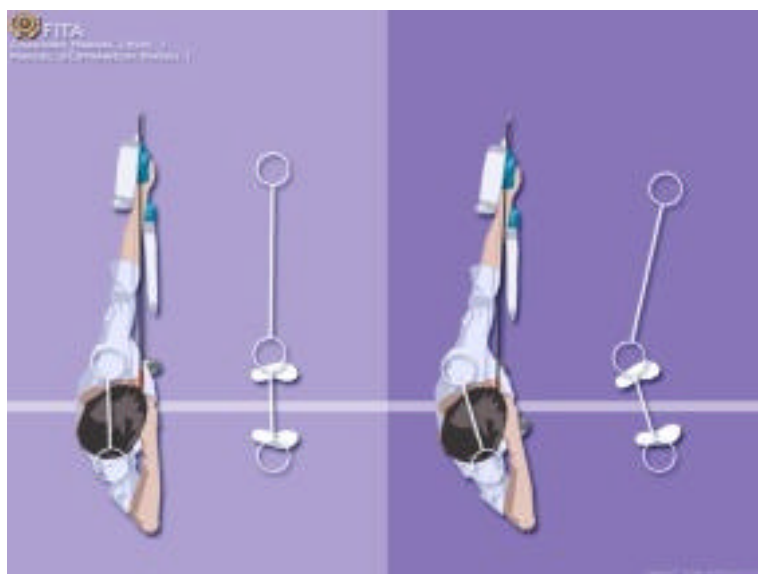
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#2



#3



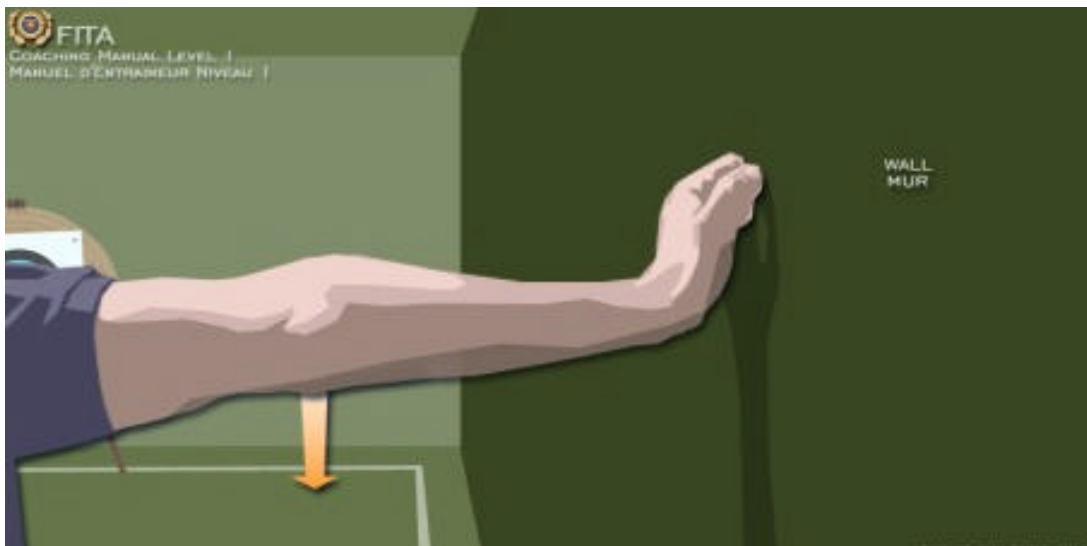
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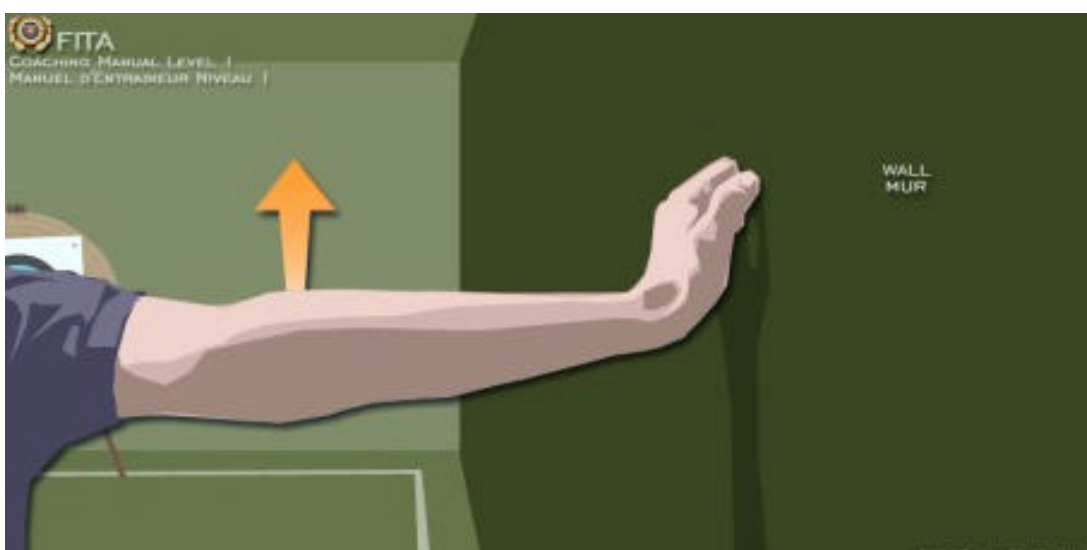
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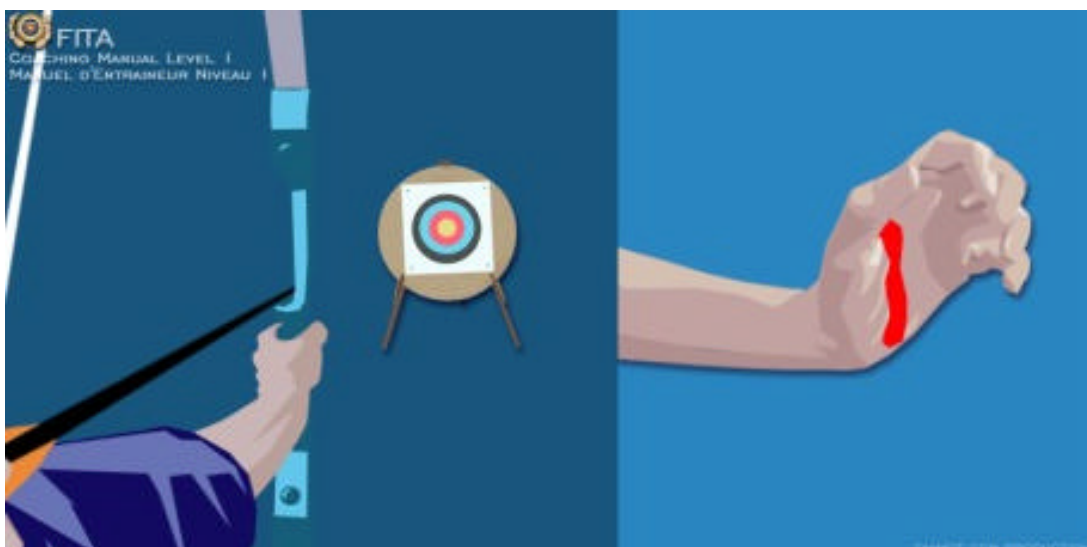
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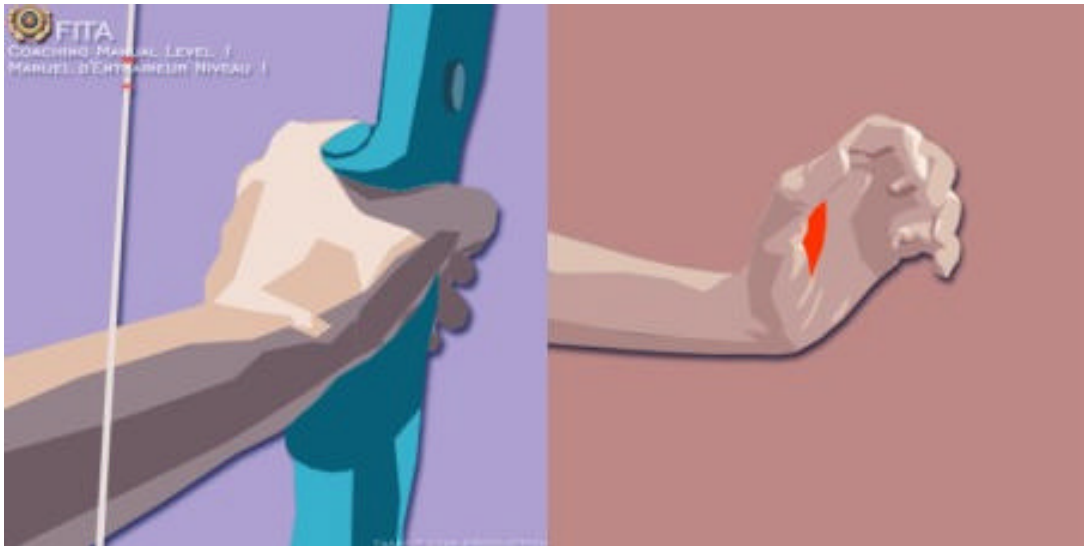
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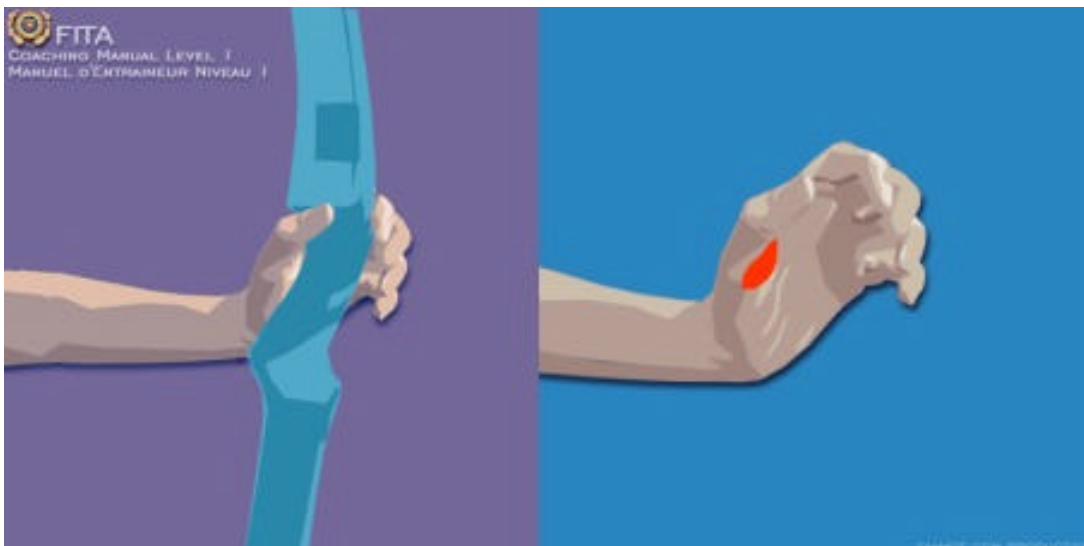
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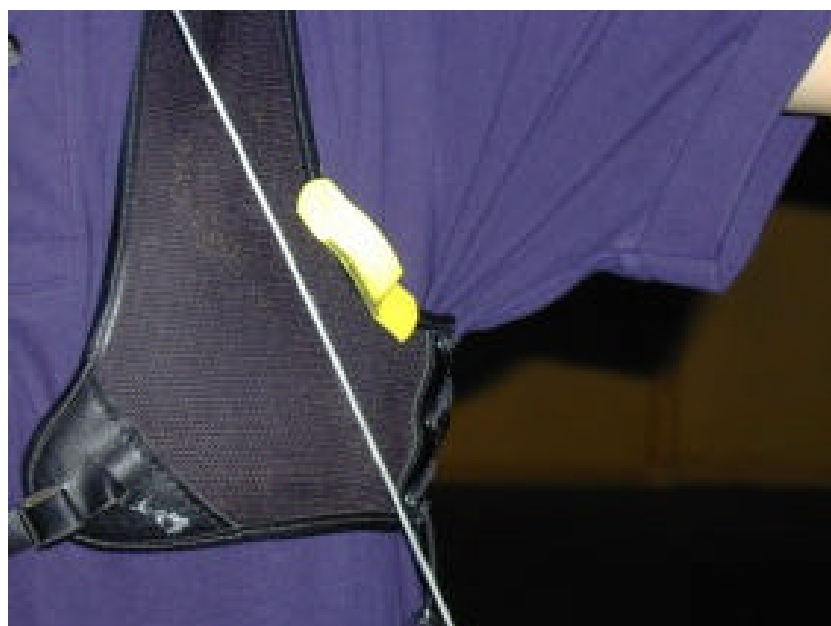
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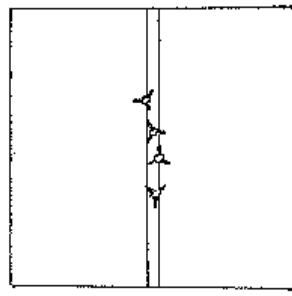


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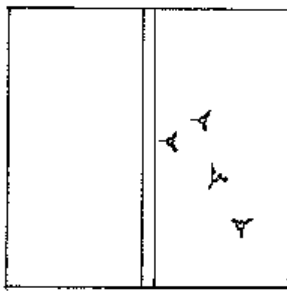


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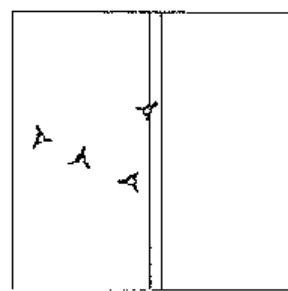
1- Adjust your sight: 18 to 30 meters



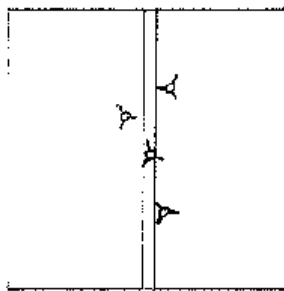
2- Aim - Close your eyes - Shoot 2 or 3 seconds later



Right arrows:

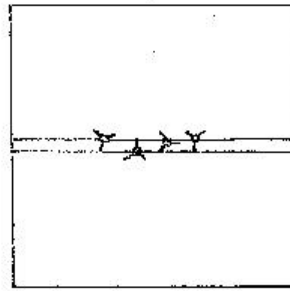


Left arrows:

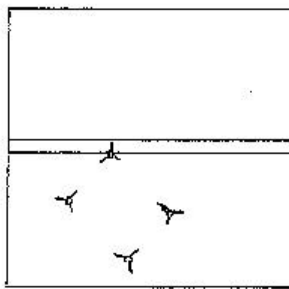


Stable horizontal shooting orientation

1- Adjust your sight : 18 to 30 meters

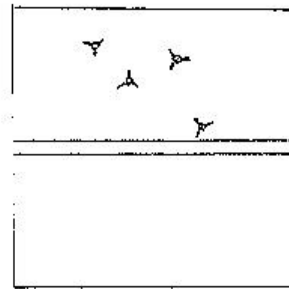


2- Aim - Close your eyes - Shoot after some seconds



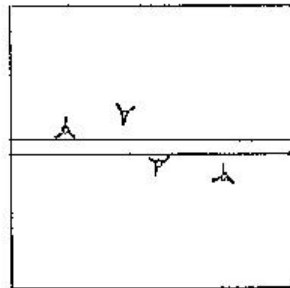
Low arrows:

Add weight to bottom limb
Remove equivalent weight to top limb
Re-tune your nocking point
Re-start to #1



High arrows:

Add weight to top limb
Remove equivalent # to bottom limb
Re-tune your nocking point
Start over to #1



Stable vertical shooting orientation



**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** - ** COMMENTS and NEWS ****

This is our 14th week of practice with an unchanged schedule:

Time-sharing:	47 to 48% Shooting and 53 to 52% for other developments (8:45 hours).	
Total volume:	16:45 hours per week	
Shooting:	4 sessions per week of 2 hour each	8 hours
Cardio:	2 sessions per week of 1 hour each	= 2 hours
Strengthening:	3 sessions per week of 1: 15 hour each	= 3:45 hours
Yoga:	2 sessions per week of 1:30 min. each	= 3:00 hours

Over the past weeks, we have revised, develop or strengthen most of the technical components according to an analytic process, we can now move to a more global work of all these points: the “shooting sequence”.

This week we will work on our ***technical and perception routines for one arrow.***

Next week we will working on our breathing routine for shooting one arrow. A tuning sequence and a tournament are also scheduled.

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

Pascal COLMAIRE

FITA Development Manager





The week at a glance:

Days	#	Session Type	Subject / Skill	Volume
Monday	1	Strengthening Visualisation	Maximal Strength	1:15 hour 3 times a day
Tuesday	1 1	Shooting Yoga & Attention	1 arrow technical sequence As per Teacher	79 arrows – 1:10 hour 1:30 hour
Wednesday	1 1	Shooting Strengthening	1 arrow technical sequence Maximal Strength	157 arrows – 2:15 hour 1:15 hour
Thursday	1	Cardio Visualisation	Aerobic Capacity	1:00 hour 3 times a day
Friday	1 1	Shooting Strengthening	1 arrow feeling sequence Maximal Strength	157 arrows – 2:15 hours 1:15 hour
Saturday	1	Yoga Visualisation	As per Teacher	1:30 hour 3 times a day
Sunday	1 1	Shooting Cardio	1 arrow feeling sequence Aerobic Capacity	115 arrows – 1:40 hours 1:00 hour

Note #1:

As anticipated the shooting rhythm is increased, but is still slow: +/- 70 arrows per hour, allowing:

- rest between ends (you certainly have a lot to discuss with your friends ...);
- rest between arrows;
- to feel the shooting perceptions.

Be aware that the shooting rhythm will regularly increase in the future, because our objective is to shoot at least 300 arrows per session, twice a week. It would take 5 hours per session at this slow rhythm; hence we will increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase.

Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.

MONDAY

Session: Strengthening.

of sessions: 1

Neural Adaptation (maximal strength)

Description: According to a maximal strength method.

* Intensity / load: > 75% of your 1 Maximal Repetition, for instance:

- if A is the load for the 1st set,
- at the 2nd set B should be higher than A
- at the 3rd set C should be between A & B
- at the 4th set D should be higher than B
- at the 5th set E should be between B & C
- at the 6th set F should be the highest load.

* # of sets: 6

* # of repetitions: no more than 8, for instance:

- 7/8 at the 1st set,
- 5/6 / 2nd



- 6/7 / 3rd
- 3/4 / 4th
- 4/5 / 5th
- 2/3 / 6th
- * Rest between sets: 2 min..
- * Rest between exercise: 3 min.
- * Tempo: natural, always in control, no jerk

For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

We have not attached is a list of strengthening exercises since this is a period of general/overall strength development. Hence you can implement any of the common exercises for strengthening.

Since you have 3 strengthening sessions per week, you can target 3 groups of muscles, for instance :

Group # 1 : back, pectorals and neck

Group # 2 : Arms and shoulders

Group # 3 : Belt and legs

Do not hesitate in modifying these groups, nevertheless it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back.

Recommendations:

To prioritize:

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (excepted some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;

To avoid:

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying, .. – in archery all the body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance,...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

See a suggested semi-specific strengthening exercise in pictures # 1 and 2.

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- * *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- * *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

TUESDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **12 arrows.**

ONE ARROW PHYSICAL SEQUENCE

Objective: Have a refined knowledge of all your physical activities to shoot one arrow. This knowledge will improve your concentration power.

Either:

Identify by yourself all the motions and positioning that you do to shoot one arrow, from gripping your bow and string (with your fingers or your release) to the return of your bow on floor or foot.

or

Ask to one person to write down all the motions and positioning that he/she can see, made by yourself for shooting one arrow. This assistant can use the video (recommended).

Write down this sequence; you can use the chart entitled “[My Sequences](#)”, but it is not a requirement.

Volume: 12 warm-up arrows + 67 arrows over the exercise = 79 arrows total over the session.

Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

You can add some exercise to sharpen your **attention** like the following one:

Watching the clock face (adaptation from the article written by Albinson & Bull, 1998).

Focus attention on a clock face, watch the second hand sweep. Every five seconds snap your fingers (for instance), during one minute; then every 10 seconds during another minute, and again every 5 seconds during a third minute. Strive to discover how and where your attention is; below are some alternatives:

- You watch the number of seconds (where you will snap your fingers) and wait the arrival of the second arm;
- Your eyes move back & forth from the number to the arm;
- You always follow the clock arm;
- You use an overall / broad supervision;
- Other ...

We suggest testing each of the above method to discover the one fitting you the best.

If you replace the clock arm with your sight and the second numbers with the centre of the target, you should use the same method.

To lower your mind activities and because in archery we aim at the centre of the target, we recommend to affix your central vision on the number and your peripheral vision on the arm clock. While shooting you will focus on the centre of the target whereas your peripheral vision will help your sight to wander round and round this centre.

WEDNESDAY

Session: Shooting.

of sessions: 1

General warm-up and shooting warm-up – **12 arrows.**

ONE ARROW PHYSICAL SEQUENCE

1. At a very close distance (5m), close your eyes while gripping your bow / string, and implement your sequence with your eyes close until that your bow is returned on floor/foot - **25 arrows**

Then continue to refine the description of your sequence while implementing each step of your sequence at any distance with your eye(s) open (aiming):

2. slower as usual - **30 arrows**
3. faster as usual - **30 arrows**
4. at your usual pace - **12 arrows.**

By the end of this step, your physical sequence (also called sequence of motions) should be written down.

It is strongly recommended to write it on a computer, save with the date.

Any future change in your sequence, should be saved under a new date; the document describing the previous sequence should be kept. Hence if the new change(s) does not work, you will know exactly where to return.

5. Identify all the motions that are - **18 arrows:**

- energy consuming,
- biomechanically not efficient for your shoot
- exciting / irritating

for instance: to drum bow fingers - re-adjust your chest-guard, arm-guard, sling, belt quiver, ...

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As it is easier to repeat simple things (and sequence) strive to simplify your sequence as much as you can. Nevertheless some motions which are non-related to the shooting process can be kept, but not too many to avoid superstition or fetishism. For this session an assistant is very helpful.

6. End this session by shooting with your simplified sequence – **30 arrows**. You can score these arrows. Make the changes (if any) to your computerized document.

*Volume:* 12 arrows of warm-u + 145 arrows over the exercises = about **157 arrows** over the entire session.

**Session: Strengthening.**

# of sessions: 1

Description: As per Monday session for different muscles.

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**THURSDAY**

**Session: Cardio Maintenance.**

# of session: 1

*Duration:* 1:00 hour (see the important note below)

*Description:* **Long Duration – Low Intensity**

*Note:* It is difficult to provide accurate suggestions in this matter, because pending:

- \* your current Cardio development,
  - \* the activity you have chosen,
  - \* your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   |     |        |      |           |
| Long     | X   |        |      |           |
| Duration |     |        |      |           |

Today we propose a Cardio session made of “**Long Duration – Low Intensity**” exercises. Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

**Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- \* *External visualization* = *see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization* = *You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

## FRIDAY

### Session: Shooting

# of sessions: 1 shooting session.

General warm-up and shooting warm-up – **12 arrows.**

#### ONE ARROW FEELING SEQUENCE.

Objective: Identify all the feelings that are associated to your proper technical form (physical feelings) and to your efficient arousal (psychological feelings) through the following various situations:

#### *A. Physical feelings*

1. Eyes closed.

At a very close distance (5m), with your eyes closed identify all the feelings related to the shot of one arrow, from gripping your bow and string (with your fingers or your release) until your bow is returned on floor/foot- **30 arrows**

Then continue while aiming from any distance.

2. While shooting slower as usual - **30 arrows**

3. While shooting faster as usual - **30 arrows**

4. While shooting at your usual pace - **30 arrows**

Write down your feeling sequence for shooting one arrow; you can use the chart entitled “[My Sequences](#)”, but it is not a requirement.

Note: by the end of this day your kinesthetic sequence (also called sequence of feelings, or of perceptions) should be written down. It is **strongly recommended** to write it on a computer, save with the date.

Any future change in your sequence, should be saved under a new date; the document with the previous sequence should be kept. So if the new change(s) does not work, you will know exactly where to return at.

#### *B. Psychological feelings*

5. Shoot **25 arrows** for identifying the psychological feelings that make you implementing a perfect one arrow sequence and shooting efficiently .

Volume: 12 warm-up arrows + 145 arrows over the exercises = **157 arrows** total over the session.

### Session: Strengthening.

# of sessions: 1

Description: Same as Monday for other muscles.

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## SATURDAY

### Session: Yoga.

# of sessions: 1

Description: as Tuesday session

### Session: Mimics / Visualization.

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: as Monday session

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## SUNDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – at least **12 arrows.**

### ONE ARROW PERCEPTIONS SEQUENCE

#### *Alternative #1:*

You have access to long shooting distances: the **Hidden Target** exercise.

Description: Shoot at a hidden target (70m or 90 m) by another target right in front of it (20m ahead). After each shoot announce where you think that the arrow should be. A spotter will confirm or correct your estimation. This exercise is described in the article entitled “[Hidden Target](#)” that is posted at the end of these tips.

or

#### *Alternative #2*

Re-implement the Friday shooting session with a reduced number of arrows per steps.

*Total volume over the session:* 12 warm-up arrows + 103 arrows over the exercises = 115 arrows

### **Session: Cardio Maintenance.**

# of session: 1

Duration: 1:00 hour (see the important note below)

Description: as Thursday session

## Hidden Target Exercise.

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Shooting Feeling Development

Your archery technique has been refined during several months. The competition season is started and now you need to improve your accuracy by increasing your percentage of "good" shots. It is not a question of arguing over your previously developed technique. You need to know what is the feeling of a good shot, in order re-experiment it arrow after arrow.

For that purpose you are proposed a drill called "hidden target" (see illustration).

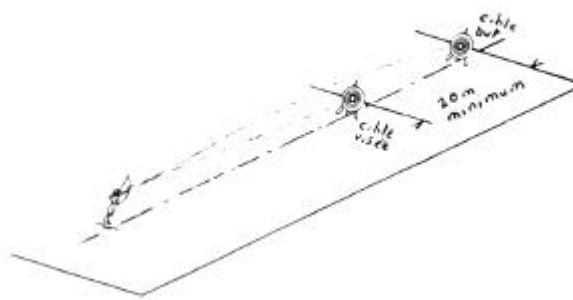
Focus on 2 skills (not including equipment that encompasses the best utilisation of your equipment).

The two skills are:

1. Knowing exactly how your body should feel when shooting properly (kinaesthetic perceptions).
2. Determining your level of concentration.

These are a few drills that can help you focus on these two areas. The difficulty lies in breaking them up from a simple step (e.g. shooting with your eyes closed) to a more complex process involving shooting your best results (e.g. simulating a match). Therein lies the importance of working with a coach.

We will limit ourselves for the moment to the introduction of one drill. It will permit you to evaluate your own performance when shooting. This drill is called "hidden target" (see illustration).



Setting Up advises for the Drill

1. Choose a day with no wind. The use of numbered arrows is recommended.
2. Prepare two targets as identical as possible: butts affixed at the same spot on the stand – target face affixed at the same spot on the butt – identical stands, including the space between their feet.
3. Set one of these targets at a long shooting distance, at least 70 meter. Adjust your sight on this target and do NOT move it for the next step (at least for starting the next step)..
4. Now set the second target right in front the first one, but about 20 meters closer from the shooting line.
5. To position yourself exactly on the axe passing through the centres of the two targets, do as follow:
 - From the shooting line aim at the axes that run by the left foot of from each stand; this creates a reference point on the shooting line, mark it on the shooting line.
 - Do the same procedure for the right feet.
 - Place yourself in the middle of the two reference points that you have marked on the shooting line
 - Mark the ground/floor in order to re-position yourself exactly at the same spot on the shooting line, end after end.

Hidden Target Exercise.

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6. Do NOT move your sight. Allow yourself a few practice arrows since some adjustments to your sight are always necessary. Shoot your numbered arrows in an order (not mandatory, but helps to identify what did you do in case that the spotter cannot identify some impacts).  
From here you are aiming at the closest target, but your arrows fly over it to land in the second target, the hidden one.
7. A spotter that is out of harms way on either side of the targets will help you to spot your arrows and to speed up the adjustment of your sight.
8. Follow-through on the aiming target; i.e. do not try to follow the arrow trajectory to evaluate the impact on the hidden target. You would improve a wrong skill.

### Drill Procedure

- After each shot, tell to the spotter where you ESTIMATE that you arrow is (for instance: 8 at 4 o'clock). The spotter will call the REAL impact.
- After each shot, the spotter writes down on an evaluation form your estimation and the real impact.  
Example of an evaluation form:

| Arrow Number | Archer's Evaluation | Real Impact | Feeling Level |
|--------------|---------------------|-------------|---------------|
| 1            | 8/4                 | 8/5         | 1             |
| 2            | 7/6                 | 9/11        | 7             |
| 3            | 10/2                | 10/2        | 0             |
| 4            | 9/8                 | 8/8         | 1             |
| ... / ...    |                     |             |               |

Suggestions (to be adapted to the archer's level), in the "Feeling Level", write the total of (difference of "SCORE") + (difference of "TIME"), that you can notice between the "Archer's Evaluation" column and the "Real Impact" column.

For instance:

- \* Arrow #1: (Difference in SCORE = 0) + (Difference in "TIME" = 1) = 1
- \* Arrow #2: (Difference in SCORE = 2) + (Difference in "TIME" = 5) = 7
- \* Arrow #3: (Difference in SCORE = 0) + (Difference in "TIME" = 0) = 0
- \* Arrow #4: (Difference in SCORE = 1) + (Difference in "TIME" = 0) = 1

At the end of the session, total the number of "0", "1", "2", ... shown in the "Feeling Level" column.

### Strategy:

Through this exercise the archer is "forced" to evaluate how was the coordination between his/her visual references and feeling references (all type of feeling; related to the Form and Technique, to the Physical Effort, to Mindset, ...) UPON release.

### Objectives:

To increase the percentage of good evaluations, in other words the number of "0", "1" and "2" in the "Feeling Level" column.

Your improvements in this exercise will prove that your shooting feeling is getting more accurate.

Pascal COLMAIRE.





# My Sequences

Name : \_\_\_\_\_

Date : \_\_\_\_ / \_\_\_\_ / \_\_\_\_

| Sequences  | From stepping the shooting line until leaving this line |  |  |  |  |  |  |  |  |  |  |  |
|------------|---------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|
| Movements  |                                                         |  |  |  |  |  |  |  |  |  |  |  |
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|            |                                                         |  |  |  |  |  |  |  |  |  |  |  |
|            |                                                         |  |  |  |  |  |  |  |  |  |  |  |
| Visual     |                                                         |  |  |  |  |  |  |  |  |  |  |  |
|            |                                                         |  |  |  |  |  |  |  |  |  |  |  |
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|            |                                                         |  |  |  |  |  |  |  |  |  |  |  |
| Breathing  | Deep Breath                                             |  |  |  |  |  |  |  |  |  |  |  |
|            | 3 / 4                                                   |  |  |  |  |  |  |  |  |  |  |  |
|            | 1 / 2                                                   |  |  |  |  |  |  |  |  |  |  |  |
|            | 1 / 4                                                   |  |  |  |  |  |  |  |  |  |  |  |
|            | Empty Lungs                                             |  |  |  |  |  |  |  |  |  |  |  |
| Perceptive |                                                         |  |  |  |  |  |  |  |  |  |  |  |
|            |                                                         |  |  |  |  |  |  |  |  |  |  |  |
|            |                                                         |  |  |  |  |  |  |  |  |  |  |  |
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|            |                                                         |  |  |  |  |  |  |  |  |  |  |  |
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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\***

This is our 15th week of practice with an unchanged schedule:

|                |                                                                                     |              |
|----------------|-------------------------------------------------------------------------------------|--------------|
| Time-sharing:  | <b>47 to 48%</b> Shooting and <b>53 to 52%</b> for other developments (8:45 hours). |              |
| Total volume:  | <b>16:45 hours</b> per week                                                         |              |
| Shooting:      | <b>4 sessions</b> per week of <b>2 hour</b> each                                    | 8 hours      |
| Cardio:        | <b>2 sessions</b> per week of <b>1 hour</b> each                                    | = 2 hours    |
| Strengthening: | <b>3 sessions</b> per week of <b>1: 15 hour</b> each                                | = 3:45 hours |
| Yoga:          | <b>2 sessions</b> per week of <b>1:30 min.</b> each                                 | = 3:00 hours |

Last week we moved to a more global technical by introducing the one arrow sequence.

This week we will work on our ***breathing routines for one arrow***. We will also prepare (tuning) and attend a tournament (or test).

Next week we will work on our visual and complete routines for shooting one arrow. One sight adjustment session will be scheduled over the next two weeks.

We are now preparing the Indoor competition-objective of this season, scheduled in 6 weeks.

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

***Pascal COLMAIRE***

*FITA Development Manager*







***The week at a glance:***

| Days             | #      | Session Type                   | Subject / Skill                                | Volume                               |
|------------------|--------|--------------------------------|------------------------------------------------|--------------------------------------|
| <b>Monday</b>    | 1      | Strengthening<br>Visualisation | Maximal Strength                               | 1:15 hour<br>3 times a day           |
| <b>Tuesday</b>   | 1<br>1 | Shooting<br>Yoga & Attention   | 1 arrow breathing sequence<br>As per Teacher   | 80 arrows – 1:10 hour<br>1:30 hour   |
| <b>Wednesday</b> | 1<br>1 | Shooting<br>Strengthening      | Tuning<br>Maximal Strength                     | 164 arrows – 2:20 hour<br>1:15 hour  |
| <b>Thursday</b>  | 1      | Cardio<br>Visualisation        | Aerobic Capacity                               | 1:00 hour<br>3 times a day           |
| <b>Friday</b>    | 1<br>1 | Shooting<br>Strengthening      | 1 arrow breathing sequence<br>Maximal Strength | 164 arrows – 2:20 hours<br>1:15 hour |
| <b>Saturday</b>  | 1      | Yoga<br>Visualisation          | As per Teacher                                 | 1:30 hour<br>3 times a day           |
| <b>Sunday</b>    | 1<br>1 | Shooting<br>Cardio             | Tournament or Test<br>Aerobic Capacity         | 118 arrows – 2:10 hours<br>1:00 hour |

**Note #1:**

As anticipated the shooting rhythm is increased, but is still slow: +/- 70 arrows per hour, allowing:

- rest between ends (you certainly have a lot to discuss with your friends ...);
- rest between arrows;
- to feel the shooting perceptions.

Be aware that the shooting rhythm will regularly increase in the future, because our objective is to shoot at least 300 arrows per session, twice a week. It would take 5 hours per session at this slow rhythm; hence we will increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

**MONDAY**

**Session: Strengthening.**

# of sessions: 1

**Maximal Eccentric Contractions Method**

**Goal:** to increase your maximal strength (neural adaptation with little muscular mass development).

**Description:**

- \* # of sets: 3
- \* of repetitions : 3 to 6 (5 is a good number)
- \* Intensity: As heavy as you can, up to 150 % of your maximal R.M. You can ask the help of an assistant for the concentric motions, but should implement the eccentric part of the effort (at least most of it) by yourself;
- \* Rest between sets and repetitions : 3 minutes
- \* Tempo: natural

For abdominal, calves and some small muscles for which you can work until a “burning” feeling



Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

We have not attached is a list of strengthening exercises since this is a period of general/overall strength development. Hence you can implement any of the common exercises for strengthening.

Since you have 3 strengthening sessions per week, you can target 3 groups of muscles, for instance :

Group # 1 : back, pectorals and neck

Group # 2 : Arms and shoulders

Group # 3 : Belt and legs

Do not hesitate in modifying these groups, nevertheless it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back.

Recommendations:

To prioritize:

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (excepted some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;

To avoid:

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying, .. – in archery all the body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance,...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

See a suggested semi-specific strengthening exercise in pictures [# 1](#) and [2](#).

**Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- \* *External visualization* = *see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization* = *You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

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## TUESDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – **14 arrows.**

ONE ARROW BREATHING SEQUENCE.

By the end of this week your breathing sequence should be written down. It is **strongly recommended** to write it on a diskette, save with the date.

Any future change in your breathing sequence, should be saved under a new date, and the document with the previous sequence should be kept. So if the new changes do not work, you will know exactly where to go back.

Identify all the relationships between your each breathing step and your motions &/or some feelings - **30** arrows.

Identify the PURPOSE, if any, of each breathing step; for instance do you exhale (at a specific moment) for relaxation purpose, or for recuperation, or for concentration, ...

The attached article “**Breathing**” could help you, even if it is written for a complete sequence, not for one arrow only.

Implement the identified sequence as follow. When you are asked to shoot slower or faster, just slow down or speed up your breathing sequence:

1. Eyes closed - **30** arrows
2. While shooting slower as usual - **30** arrows
3. While shooting faster as usual - **30** arrows
4. While shooting at your usual pace - **30** arrows

*Total volume over the session:* 14 arrows warm-up + 150 arrows over the exercises = **164 arrows**

### Session: Yoga.

# of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...



You can add some exercise to sharpen your **attention** like the following one:

**SOFT EYES - HARD EYES.**

To know if you tighten the muscles around your eye while focussing onto a specific external cue, and if you feel your eye becoming “soft” while focussing on peripheral cues, implement the following simple exercise, which will help you to switch from one attention state to another one:

Watch at your thumbnail up at arm’s length, and have a narrow focus on to a specific mark or part of the thumbnail, then shift to a broad-external focus to bring into focus the background. You are encouraged to practice this attention switching technique in a variety of general situations outside archery, in order to rapidly identify your eye tension of the moment. You should also practice to remain with the same eye tension as long as possible, to allow some period of calmness to your mind, and to develop the habit to aim with a constant focus.

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**WEDNESDAY**

**Session: Shooting.**

# of sessions: 1

General warm-up and shooting warm-up – **12 arrows.**

**TUNING**

*Description:* There are so many written and Audio-visual publications on this subject that we will not detail any tuning process here; it would be too long and repeat the information that you can easily find somewhere else. For instance you can use the tuning process described in the Easton catalog. If you have not yet this catalog, you can order it from the following website:  
<http://www.eastonarchery.com/>

Several bow makers also provides good advises, like the PSE Compound BowUser’s guide:  
[www.pse-archery.com](http://www.pse-archery.com)

Two already published documents may help you:

- \* “**French Test**” has been published with “**2002-3 Raise & Draw Start**”
- \* “**Tiller Adjustment**” has been published with “**2002-13 Stable Aiming**”

*Volume:* 12 arrows of warm-u + 152 arrows over the tuning exercises = about **164 arrows** over the entire session.

*Note:* The above number of arrows can vary a lot pending your need of tuning and adjustment. Strive to complete the session up to **164** arrows, for instance by matching your back-up equipment to the equipment #1, or by scoring rounds, match simulations, skill development, ...

**Session: Strengthening.**

# of sessions: 1

Description: As per Monday session for different muscles.

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**THURSDAY**

**Session: Cardio Maintenance.**

# of session: 1

*Duration:* 1:00 hour (see the important note below)

*Description:* **Long Duration – Low Intensity**

*Note:* It is difficult to provide accurate suggestions in this matter, because pending:

- \* your current Cardio development,
- \* the activity you have chosen,
- \* your shape of the day,

the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   |     |        |      |           |
| Long     | X   |        |      |           |
| Duration |     |        |      |           |

Today we propose a Cardio session made of “**Long Duration – Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

### Session: Mimics / Visualization.

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- \* *External visualization* = *see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization* = *You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

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## FRIDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – **14 arrows.**

ONE ARROW BREATHING SEQUENCE.

*Objective:* Complete the column (or chapter) of the Breathing sequence on your “[My Sequences](#)” form published *last week* (or any other form). Just identify your breathing sequence for shooting one arrow, i.e. from when you move your string hand toward the string, until you lower your bow after the follow-through step. For the moment do not care of how you breathe between arrows.

*Exercise Description:*

1. Time (ask to an assistant) how long you need to shoot one arrow; timing period is from a signal given by the assistant (your arrow is already loaded on the bow), until about 2 seconds after your release.
2. Time the same period of shooting, but while you visualize this period of actions.

*Suggestion:* Time alternatively 12 arrows (that are really shot) with 3 visualized arrows.

Best “tool” to match these 2 situations is breathing, i.e. identify your breathing sequence - see “[Breathing](#)” document - than breath accordingly while visualizing. By matching these two timings, you be more concentrate on your shooting and benefit more from visualization.

*Volume:* 14 warm-up arrows + 15 arrows over the exercises = **164 arrows** total over the session.

### Session: Strengthening.

# of sessions: 1

Description: Same as Monday for other muscles.

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## SATURDAY

### Session: Yoga.

# of sessions: 1

Description: as Tuesday session

### Session: Mimics / Visualization.

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: as Monday session

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## SUNDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – at least **12 arrows**.

COMPETITION, or TEST

*Volume:*

- *if tournament - pending the format.*
- *if test:* 10 warm-up arrows + 108 arrows over the test (3 scoring round + one 18 arrow match) = **118 arrows** over the session.

### Session: Cardio Maintenance.

# of session: 1

Duration: 1:00 hour (see the important note below)

Description: as Thursday session

# BREATHING

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Introduction:

In the shooting in general the breathing is considered as important. But strangely, the archery knows to this day, few real rules, or standards. This article underlines some principles.

Ventilation and actions

Breathing and beginning an action

We can observe that at the to be human being, the beginning of her/his action is generally accompanied or followed immediately with an inspiration. For example: the archer

- inhales then advances to the shooting line;
- inhales, then brings its string hand to the quiver to pull there an arrow;
- inhales, then brings its (drawing) hand;
- inhales then lifts its bow to the target.

Breathing and meticulous execution

- When an individual executes a meticulous action, we can generally observe that it retains its breath, then it ends its action with expiration. Thus for example the archer:
- retains breath, then exhales in placing its feet on the line of shooting;
- retains breath, then exhales in placing its arrow on the bow (string and arrow-rest);
- retains breath, then exhales in placing its string-fingers and its bow-hand;
- exhales slightly in placing its string and its (drawing) hand to the face.

Note: By report to indications above-mentioned, sometimes we observe different associations between gestures and the breathing at some archers. Therefore it acts rather uses that rules.

The rule of the continuity breathing motion during the propulsion of the projectile

The importance of the continuity in the shooting is well known. It allows especially the archer to continue its orientation adjustment, while the projectile is still guided by the weapon. For a greatest quality of this continuity, it invite to spread this continuation d action to all activities that the archer executes since a bit before the releasing of the shooting, until to a bit after the end of the propulsion. Therefore if for example, the archer retains its breath during the phase of aimed, and the crossing of the clicker/ pressure on the trigger of its release, it has to prolong this retention until to approximately a (1) seconds after the departure of the arrow.

We conceive easily that to exhale simultaneously or just before the departure of the string of fingers / the release, would risk altering the global quality of the continuity during the time while the string pushes the arrow, and therefore to produce a far impact of the spot aimed.



BREATHING

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## The rule of the breathing sequence

The importance of the rhythmic execution for one end is recognised; it is similarly for the mental training (visualisation).

Then, it is indispensable to visualise what we try to really do, to bring a most to the training practices. This returns to tell that it is necessary to visualise with the same duration that one shoots. Otherwise one risks developing a different mental rhythm of our execution, and the one would alter the other. Here the breathing sequence following all its interest, because it allows to rhythm the execution duration (that it is physical or mental).

Given that the essential action of the archer is on the shooting line, it invites to take as time unit, the period included between the occupation of the shooting line, and its liberation. This allows us to rhythm periods of time between the shot of 2 arrows, lapse of very important time in management of the competitive behaviour. That understands the analysis the shooting undertaken, the recovery, the preparation to the shooting following, therefore of the concentration, the self-suggestion, management of the stress. This is often the non-respect of these periods included between 2 arrows that, during the visualisation, alters the total time of the mental sequence.

## Two (2) other fundamental data.

### *The breathing and the concentration.*

To be concentrated is been lived the present instant, without wandering mental]y in the time or the imaginary. The simple fact to keep its attention on its own breathing allows being in the present and cuts us from the external tumult.

### *The breathing and the attention.*

The archer has to have an attention both:

- broad-external, to take in consideration possible effects the wind for example;
- broad-internal, so as to supervise the overall of its technical execution;
- narrow-external, so as to aim with precision, especially indoor.

The breathing facilitates a mode d'internal attention, and rather narrow.

## Working breathing

The time first that an archer tries to define its breathing sequence, it meets well often difficulties. They consist in:

- to be able to observe its ventilation without the altering;
- to be concentrated on its ventilation while realising correctly the shot.

This fact it meets almost always a moment where the athlete declares: "It is better when I leave my breathing doing". If that happens, to yourself or to your athletes, do not disarm! Because to let doing the unknown, we are not beyond making variations, then what of worst in a sport, for which only the fidelity of reproduction is important

Even if recognise kindness of the notion let's doing", i.e. to be mentally present on the action without interfering on the former, such does a supervisor, it is necessary to know exactly what we have to supervise (what would happen).

Then persevere!







**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\***

This is our 16th week of practice with an unchanged schedule:

|                |                                                                                     |              |
|----------------|-------------------------------------------------------------------------------------|--------------|
| Time-sharing:  | <b>47 to 48%</b> Shooting and <b>53 to 52%</b> for other developments (8:45 hours). |              |
| Total volume:  | <b>16:45 hours</b> per week                                                         |              |
| Shooting:      | <b>4 sessions</b> per week of <b>2 hour</b> each                                    | 8 hours      |
| Cardio:        | <b>2 sessions</b> per week of <b>1 hour</b> each                                    | = 2 hours    |
| Strengthening: | <b>3 sessions</b> per week of <b>1: 15 hour</b> each                                | = 3:45 hours |
| Yoga:          | <b>2 sessions</b> per week of <b>1:30 min.</b> each                                 | = 3:00 hours |

This week we will:

- work on our **visual routines** for **one arrow**;
- define our **sequences for one arrow**;
- increase our **sighting** skill (how to adjust the sight).

Next week will be quite similar with the **sequences for one end** at the program. It will be the last week with similar schedule.

Reminder: We are preparing the Indoor competition-objective of this season, scheduled in 5 weeks.

Have a good week of practice!

On behalf of the **FITA Coaches Committee**:

**Pascal COLMAIRE**

*FITA Development Manager*





***The week at a glance:***

| Days             | #      | Session Type                   | Subject / Skill                                           | Volume                               |
|------------------|--------|--------------------------------|-----------------------------------------------------------|--------------------------------------|
| <b>Monday</b>    | 1      | Strengthening<br>Visualisation | Isometric Method                                          | 1:15 hour<br>3 times a day           |
| <b>Tuesday</b>   | 1<br>1 | Shooting<br>Yoga & Attention   | 1 arrow visual sequence<br>As per Teacher & Eyes Attitude | 81 arrows – 1:15 hour<br>1:30 hour   |
| <b>Wednesday</b> | 1<br>1 | Shooting<br>Strengthening      | Sighting<br>Maximal Strength                              | 171 arrows – 2:30 hour<br>1:15 hour  |
| <b>Thursday</b>  | 1      | Cardio<br>Visualisation        | Aerobic Capacity                                          | 1:00 hour<br>3 times a day           |
| <b>Friday</b>    | 1<br>1 | Shooting<br>Strengthening      | 1 arrow visual sequence<br>Maximal Strength               | 171 arrows – 2:30 hours<br>1:15 hour |
| <b>Saturday</b>  | 1      | Yoga<br>Visualisation          | As per Teacher                                            | 1:30 hour<br>3 times a day           |
| <b>Sunday</b>    | 1<br>1 | Shooting<br>Cardio             | 1 arrow sequences<br>Aerobic Capacity                     | 121 arrows – 1:45 hours<br>1:00 hour |

**Note #1:**

As anticipated the shooting rhythm is increased, but is still slow: +/- 70 arrows per hour, allowing:

- rest between ends (you certainly have a lot to discuss with your friends ...);
- rest between arrows;
- to feel the shooting perceptions.

Be aware that the shooting rhythm will regularly increase in the future, because our objective is to shoot at least 300 arrows per session, twice a week. It would take 5 hours per session at this slow rhythm; hence we will increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

**MONDAY**

**Session: Strengthening.**

# of sessions: 1

**Isometric method**

*Description:* Back & Shoulders according to the isometric method.

- \* # of sets: 3 to 5, pending your current level.
- \* Holding time (tempo): 10 to 12 seconds.
- \* Intensity: As heavy as you can to hold at least 10 seconds, no less than 80%.
- \* Rest between sets: 3 min.

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,





- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

We have not attached is a list of strengthening exercises since this is a period of general/overall strength development. Hence you can implement any of the common exercises for strengthening.

Since you have 3 strengthening sessions per week, you can target 3 groups of muscles, for instance :

Group # 1 : back, pectorals and neck

Group # 2 : Arms and shoulders

Group # 3 : Belt and legs

Do not hesitate in modifying these groups, nevertheless it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back.

Recommendations:

To prioritize:

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (excepted some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;

To avoid:

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying, .. – in archery all the body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance,...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

### **Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

\* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*

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* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

TUESDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **12 arrows.**

ONE ARROW VISUAL SEQUENCE

Complete the column (or chapter) of the Visual sequence on your “My Sequences” form (or any other form of your choice). Just identify the sequence for shooting one arrow, i.e. from when you move your string hand toward the string, until you lower your bow after the follow-through step. At the moment do not care of what you are watching at between arrows.

Usually we look at what we are currently doing, for instance:

- Look at the shooting line and your feet while stepping the shooting line (first arrow only);
- Look at the target to refine your body orientation (first arrow only);
- Look at the arrow in the quiver to get out one arrow;
- Look at the arrow-rest and string to load one arrow;
- Look at the target during one preparation breathing;
- Look at the string and the string fingers while gripping the string;
- And so on.

By the end of this day your visual sequence should be written down. It is strongly recommended to write it on a diskette, save with the date. Any future change in your sequence, should be saved under a new date, and document with the previous sequence should be kept. So if the new changes do not work, you will know exactly where to return.

Identify all the things you are watching, which are:

- efficient for your arousal
- psychologically not efficient for your arousal

Total volume over the session: 12 arrows warm-up + 69 arrows over the exercises = **81 arrows**

Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

You can add some exercise to sharpen your **attention** like the following one:

EYES ATTITUDE

Objective: While shooting you look at different things in relation with each step of your sequence. Now we will approach the way to look at these things, and how to move our vision from one to another one of these things.

Pre-requisite: This session should be easier if you have already practice some sort of meditation and the exercise from last week about SOFT EYES - HARD EYES.

Exercise:

Look at something on right ahead of you. Now switch something located on your right (or left) hand side.

What did you do? How did you move from the first to the second point?

Below are the 3 most common techniques:

1) Start to move your eyes first, then your head.

You probably have “lost” some visual references during the swiping o your eyes, a kind of blurred period.

2) Start to move your head first, then your eyes.

Here again you probably have “lost” some visual references during the swiping o your eyes; experimenting a kind of blurred visual period.

3) Turn your head with your eyes always centered in their orbit

This time you should have not lost any visual references, or very few. You should not have experimented any blurred period, but have you felt a greater control, mastery, and some sort of wisdom.

This simple exercise show us how much important is the eye activity for our arousal. Add this conclusion to the one from the Hard-Soft eye exercise, and now anticipate the attitude of your eyes that you will experiment during your next shooting session.

WEDNESDAY

Session: Shooting.

of sessions: 1 including to exercises

General warm-up and shooting warm-up – **12 arrows.**

INDOOR SIGHT ADJUSTMENT IN HEIGHT.

Objective: Refinement of your sight adjustment know-how.

At one official indoor shooting distance, 18 m for instance:

- adjust your sight to group your arrows around the center of the target face. Record the sight position – **12 arrows.**
- move your sight to one way (up for example), and shoot +/- **12 arrows** until you consistently hit the 7 zone (at 6 o’ clock in our example). Record how much you have moved your sight (up).
- divide the length of the above distance (how much you have moved your sight up) by 3.
- start over from point b) until you consistently hit the 8 zones – **12 arrows.**
- divide the length of the above distance (how much you have moved your sight up) by 2.
- Average the numbers that you got in c) and e). This average gives you a rough guess of how much you will have to move your sight (in height in our example) per zone. This average per zone is valid for correcting any height deviation off the center of the target face.
- Re-position your sight as a). Shoot **6 arrows** to confirm this sight position.
- From the average that you have calculated in f), sort out the value for half a zone.
- Now use this value for moving your sight (up) in order to group your arrow around the line between 9 and 10 (at 6 0’clock). Shoot **6 arrows** and check if you your arrows arrive as expected; if not shoot some **more arrows** until you hit this line and recalculate the average per half zone.
- Start over from a) in the opposite direction (down) to confirm, with only 6 arrows per step = **48 arrows**

EYES ATTITUDE – PRACTICAL PART

Revise the results of the Tuesday Attention session conducted during the Yoga session, session entitled “Eyes Attitude”.



Revise also the list of visual steps that you have identified during the Monday shooting session

Shoot as follow - **63 arrows**:

- keeping as often as possible your eyes **stable** in their orbits, especially while moving from one to another visual step.
- maintaining the **same focus** or zoom, especially while aiming.

Volume: 12 warm-up arrows + 159 arrows over the 2 exercises (96 for the first exercise and 63 for the second one) = **171 arrows** over the session.

Session: Strengthening.

of sessions: 1

Description: As per Monday session for different muscles.

THURSDAY

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour (see the important note below)

Description: **Long Duration – Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current Cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium				
Long	X			
Duration				

Today we propose a Cardio session made of “**Long Duration – Low Intensity**” exercises.
Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization,
Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- * *External visualization* = *see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- * *Internal visualization* = *You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

FRIDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **18 arrows.**

ONE ARROW VISUAL SEQUENCE

1. Re-implement the parts of the previous sessions about “visual sequence for one arrow” that are offering some interest for you.
2. Identify all the things you are watching, which are:
 - efficient for your arousal
 - psychologically not efficient for your arousalSimplify your visual sequence as much as you can, the fewer eyes motions the lower mind activity. Just identify the sequence for shooting one arrow, i.e. from when you move your string hand toward the string, until you lower your bow after the follow-through step. At the moment do not care of what you are looking at between arrows.
3. Shoot while experimenting different eye's attitude and take note of your findings, e.g. the visual type of attention and the eye stiffness/softness that provide the best results.

By the end of this day your visual sequence should be written down. It is strongly recommended to write it on a diskette, save with the date. Any future change in your sequence, should be saved under a new date, and document with the previous sequence should be kept. So if the new changes do not work, you will know exactly where to return.

Volume: 18 warm-up arrows + about 153 arrows over the exercises (you can score some of them) = 171 arrows total over the session.

Session: Strengthening.

of sessions: 1

Description: Same as Monday for other muscles.

SATURDAY

Session: Yoga.

of sessions: 1

Description: as Tuesday session

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: as Monday session

SUNDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – at least **13 arrows.**

ONE ARROW PHYSICAL SEQUENCE

Implement the simplified sequence, as follow:

1. Eyes closed
At a very close distance (5m), close your eyes while finishing to grip your bow / string, and implement your sequence with your eyes close until that your bow is returned on floor/foot - **18 arrows**

FITA Training SUGGESTIONS starting on **February 4**, 2002.



From there, you can aim and:

- Time and score your shots;
- Continue to refine the description of your sequence;
- Choose one shooting distance, or combination of distances and keep it/them for each following step;

while shooting:

2. Slower as usual - **30 arrows**

3. Faster as usual - **30 arrows**

4. At your usual pace - **30 arrows**

5. Shoot and score 18 arrows at the most efficient rhythm.

Volume: 13 warm-up arrows + 108 arrows over the exercises = **121 arrows** total

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour (see the important note below)

Description: as Thursday session



My Sequence

Name : _____

Date : ____ / ____ / ____

Sequences	From stepping the shooting line until leaving this line
Movements	
Visual	
Breathing	Deep Breath 3 / 4 1 / 2 1 / 4 Empty Lungs
Perceptive	
Attention	



FITA Training SUGGESTIONS starting on February 11, 2002.

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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* -\*\* COMMENTS and NEWS \*\***

This is our 17th week of practice and the last one according to the schedule below:

|                |                                                                                     |              |
|----------------|-------------------------------------------------------------------------------------|--------------|
| Time-sharing:  | <b>47 to 48%</b> Shooting and <b>53 to 52%</b> for other developments (8:45 hours). |              |
| Total volume:  | <b>16:45 hours</b> per week                                                         |              |
| Shooting:      | <b>4 sessions</b> per week of <b>2 hour</b> each                                    | 8 hours      |
| Cardio:        | <b>2 sessions</b> per week of <b>1 hour</b> each                                    | = 2 hours    |
| Strengthening: | <b>3 sessions</b> per week of <b>1: 15 hour</b> each                                | = 3:45 hours |
| Yoga:          | <b>2 sessions</b> per week of <b>1:30 min.</b> each                                 | = 3:00 hours |

This week we will:

- define our **sequences for one end**;
- work on our **fluidity**;
- increase our **sighting** skill (how to adjust the sight).

Next week we will:

- start to develop our **specific strength** (while shooting);
- have an equipment **tuning session**;
- attend a **regional tournament**;
- change for the following **schedule** until the end of March.

|               |                                                                                                       |           |
|---------------|-------------------------------------------------------------------------------------------------------|-----------|
| Time sharing: | <b>2/3</b> Shooting and <b>1/3</b> for other developments (5 hours).                                  |           |
| Total volume: | <b>15 hours</b> per week                                                                              |           |
| Shooting:     | <b>5 sessions</b> per week of <b>2 hours</b> each<br>including 3 sessions of <b>SHOOTING STRENGTH</b> | 10 hours  |
| Cardio:       | <b>2 sessions</b> per week of <b>1 hour</b> each                                                      | = 2 hours |
| Yoga :        | <b>2 sessions</b> per week of <b>1:30 min.</b> each                                                   | = 3 hours |

**Specific Strength:** Means strengthening exercises while shooting.

During Yoga sessions, emphasize flexibility of the lower body, to recover the flexibility level as before strengthening, and Cardio (running).

Reminder: We are preparing the Indoor competition-objective of this season, scheduled in 4 weeks.

Have a good week of practice!

On behalf of the **FITA Coaches Committee**:

**Pascal COLMAIRE**

*FITA Development Manager*





**FITA Training SUGGESTIONS starting on February 11, 2002.**

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The week at a glance:

Days	#	Session Type	Subject / Skill	Volume
Monday	1	Strengthening Visualisation	Strip in a row Method	1:15 hour 3 times a day
Tuesday	1 1	Shooting Yoga	Effortless & Fluidity As per Teacher	82 arrows – 1:15 hour 1:30 hour
Wednesday	1 1	Shooting Strengthening	Sighting Maximal Strength	178 arrows – 2:30 hour 1:15 hour
Thursday	1	Cardio Visualisation	Aerobic Capacity	1:00 hour 3 times a day
Friday	1 1	Shooting Strengthening	1 end sequences Maximal Strength	178 arrows – 2:30 hours 1:15 hour
Saturday	1	Yoga Visualisation	As per Teacher	1:30 hour 3 times a day
Sunday	1 1	Shooting Cardio	Effortless & Fluidity Aerobic Capacity	124 arrows – 1:45 hours 1:00 hour

Note #1:

As anticipated the shooting rhythm is increased, but is still slow: +/- 70 arrows per hour, allowing:

- rest between ends (you certainly have a lot to discuss with your friends ...);
- rest between arrows;
- to feel the shooting perceptions.

Be aware that the shooting rhythm will regularly increase in the future, because our objective is to shoot at least 300 arrows per session, twice a week. It would take 5 hours per session at this slow rhythm; hence we will increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase.

Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.

MONDAY

Session: Strengthening.

of sessions: 1

Stripping in a row" method

Description: Back & Shoulders according to the "Stripping in a row" method.

* # of sets: 3

For this method you can use the machines, or prepare 3 sets of barbells or dumbbells of 3 different weights.

1. Start the exercise with 70% or more of your Single Maximal Repetition, the weight should allow you to implement 7-8 reps
2. Rapidly take off some weight (from the machine) or change for a lighter barbell or dumbbells, continue the exercise with less time as possible for the change, strive to achieve at least 7 or 8 more repetitions, giving a minimum total of 14 reps.



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3. Still rapidly take off some weight (from the machine) or change for a lighter barbell or dumbbells, continue the exercise with less time as possible for the change, strive to achieve at least 6 or 7 more repetitions, giving a minimum total of 20 reps.
  - 4.. Start over the 3 previous steps for the second and third set - you can change the weight for any of the steps, but try to respect the number of reps.
- \* Tempo: natural, always in control, no jerk
  - \* Rest between sets: 45 seconds to 1 min.
  - \* Rest between the exercises : 1 min. to 1:30 min.

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

We have not attached a list of strengthening exercises since this is a period of general/overall strength development. Hence you can implement any of the common exercises for strengthening.

Since you have 3 strengthening sessions per week, you can target 3 groups of muscles, for instance :

Group # 1 : back, pectorals and neck

Group # 2 : Arms and shoulders

Group # 3 : Belt and legs

Do not hesitate in modifying these groups, nevertheless it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back.

Recommendations:

To prioritize:

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (excepted some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;

To avoid:

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying .. – in archery all the body participates to the body stability during the effort (draw and full draw);



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- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- * *External visualization* = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.
- * *Internal visualization* = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...

TUESDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **12 arrows** .

EFFORTLESS

Objective: Implement a fluid sequence with a minimum of tensing of any sort. Balanced efforts will help a lot. Stay in control. You can simulate one round of the World Indoor Championship in order to make you used to the coming tournament.

Task: Update your sequences form all the session long.

Total volume over the session: 12 arrows warm-up + 60 arrows over the exercises = **82 arrows**

Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.



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Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

You can emphasize the **Relaxation** exercise.

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## WEDNESDAY

### Session: Shooting.

# of sessions: 1 including to exercises

General warm-up and shooting warm-up – **18 arrows**.

### WINDAGE SIGHT ADJUSTMENT for INDOOR

*Objective:* Refinement of your sight adjustment know-how.

At one official shooting distance, 18 m for instance:

- adjust your sight to group your arrows around the center of the target face. Record the sight position – **6 arrows**.
- move your sight to one way (left for example), and shoot +/- **6 arrows** until you group +/- 3 arrows roughly in the 7 zone (at 3 o'clock in our example). Record how much you have moved (left) your sight.
- divide the length of the above distance (how much you have moved your sight to the left) by 3.
- start over from point b) until you can group your arrows in the 8 zone – **6 arrows**.
- divide the length of the above distance (how much you have moved your sight to the left) by 2.
- Average the numbers that you got in c) and e). This average gives you a rough guess of how much you will have to move your sight (in windage in our example) per zone. This average per zone is valid for correcting any windage deviation off the center of the target face.
- Re-position your sight as a). Shoot **3 arrows** to confirm this sight position.
- From the average that you have calculated in f), sort out the value for half a zone. Move your sight (on the left) of this value. Shoot **3 arrows** and check if you can group your arrow around the line between 9 and 10 (on the right); if not shoot some more arrows until you hit this line.
- Start over from a) in the opposite direction (right) to confirm, with only **3 arrows per step**

Volume for this exercise #1 = +/- **39 arrows**

### CONTROL EXERCISE OF THE SIGHTING SKILL

- Adjust your sight to hit the center of the target face – **3 arrows**
- Decide which part of the target face your arrow should hit, while aiming the center, and move your sight accordingly.
- Shoot **6 arrows** to check if you have sighted properly to achieve your project from step #2.
- Re-position your sight as 1). Shoot **3 arrows** to confirm this sight position.
- Decide another part of the target face that your arrow should hit, while aiming the center, and move your sight accordingly.
- Shoot **6 arrows** to check if you have sighted properly to achieve your project from step #5.
- Start over to step #3 and so on, over and over.

Strive to cover all the target face round (from 1 to 12 o'clock), but not in a progressive order, and at different distances from the center (these distances depend on your level of accuracy).

Volume for this exercise #2 = +/- **121 arrows**



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Volume: 18 warm-up arrows + 39 arrows over the exercise #1 (windage adjustment) + 121 arrows over the control exercise #2 = +/- 178 arrows over the session.

Session: Strengthening.

of sessions: 1

Description: As per Monday session for different muscles.

THURSDAY

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour (see the important note below)

Description: *Medium Duration – Medium Intensity*

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current Cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium		X		
Long				
Duration				

Today we propose a Cardio session made of “*Medium Duration – Medium Intensity*” exercises. Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- * *External visualization* = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.
 - * *Internal visualization* = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...
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## FRIDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – **18 arrows** .

IDENTIFICATION OF YOUR ONE END SEQUENCE & IDEAL PERFORMANCE STATE

*Objective:* Better identify (and write down if not yet done) your One End Sequence.

*Procedure:* Have a paper on a clipboard on the shooting line to write down the description of your one end sequence. Then alternate the 2 steps below, i.e. alternate some practical and visualized ends. For instance shoot one round and visualize one end.

#### 1) Use the following game = **Practical shots.**

All archers shoot at the same time - as in regular tournament - everybody on the shooting line.

At the conclusion of each 3-arrow end, the archer with the highest score wins one point. Shoot one round of **30 arrows** at 18 meters.

Between ends, take some note on your sequences, especially regarding your routines between 2 arrows, this time frame usually includes 3 periods:

- Analysis / Recuperation of the previous shot (with or without binoculars)
- Equipment preparation (loading the next arrow, re-adjusting the chest guard or arm guard, sight adjustment, ...)
- Personal preparation to the next shot (research of a readiness state).

During this first step, an assistant / timer gives to you the signal to go and step the shooting line, from there you have 20 seconds to get prepare (as in official FITA tournaments); then the timer will announce the “Green light” allowing you to start your shooting sequence. The timer person will record the time between the “Green light” and your last/third release, stopping the timer about 2 seconds after the last release.

Start over with one round of **30 arrows** shot by 6 arrow ends at 25 meters (18 meters again if you cannot shoot 25 meters).

*Volume:* 18 warm-up arrows + about 60 arrows over the exercise = **78 arrows** total over this first step.

#### 2) Time the same periods of shooting (3 & 6 arrow ends), but while you **visualize** one complete end of 3 and 6 arrows.

The best “tool” to match these 2 situations is breathing, i.e. identify your breathing sequence - see the document entitled “[Breathing](#)” which is attached to “[2002-15 Breathing one arrow sequence](#)” - then breath accordingly while visualizing. By matching these two timings (practical & visualized ones), you will get better benefits from visualization.

*NOTE:* It seems acceptable to have a difference of +/- 10%, i.e.:

- \* 4 seconds of difference between the real shooting time and the visualized time for an archer shooting 3 arrows in about 40 seconds
- \* 10 seconds for an archer shooting in 1’40”

*Volume:* Over the 2<sup>nd</sup> step, visualize 2 ends of 3 arrows and 2 ends of 6 arrows = **18 arrows** .

*Reminder:* you can alternate, or change the order of step 1) and step 2) until you have shot/visualized about **93 arrows**, including the visualized ones and warm-up.

#### 3) Complete the session with **82** scoring arrows using what you have discovered through the above exercises:



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1 x 12 arrow match (alternate shooting rhythm) + 3 visualized and timed arrows (same rhythm) = **15 arrows**;

1 x 18 arrow match + 1 visualized and timed 6 arrow end = **24 arrows** ;

1 x 12 arrow match (alternate shooting rhythm) + 3 visualized and timed arrows (same rhythm) = **15 arrows**;

1 x 18 arrow match + 1 visualized and timed 6 arrow end = **24 arrows** ;

3 x Shoot-off arrows + 1 visualized and timed Shoot-off arrow = **4 arrows** .

Total volume: 18 warm-up arrows + 60 arrows shot in step 1) to better know your one end sequence + 18 visualized arrows + 82 arrows through the real & visualized matches = **178 arrows** total over the session.

Session: Strengthening.

of sessions: 1

Description: Same as Monday for other muscles.

SATURDAY

Session: Yoga.

of sessions: 1

Description: as Tuesday session

Session: Mimics / Visualization.

of sessions: at least 6 reps at each "session". Repeat at least 3 sets per day.

Description: as Monday session

SUNDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – at least **12 arrows** .

EFFORTLESS

Objective: Implement a fluid sequence with a minimum of tensing of any sort. Balanced efforts will help a lot. Stay in control. You can simulate one round of the World Indoor Championship in order to make you used to the coming tournament.

Task: Update your sequences from all the session long.

Total volume over the session: 12 arrows warm-up + 60 arrows over the exercises = **82 arrows**

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour

Description: as Thursday session



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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\***

This is our 18th week of practice with a new schedule as below:

Time-sharing: 2/3 Shooting and 1/3 for other developments (5 hours).  
Total volume: **15 hours** per week  
Shooting: 5 sessions per week of **2 hours** each  
                    including 3 sessions of SHOOTING STRENGTH 10 hours  
                    Shooting Strength: Means strengthening exercises while shooting.  
Cardio: 2 sessions per week of **1 hour** each = 2 hours  
Yoga: 2 sessions per week of **1:30 min.** each = 3 hours  
                    During Yoga sessions, emphasize flexibility of the lower body, to recover the flexibility  
                    level as before strengthening, and Cardio (running).

The above schedule will last until the end of March.

This week we will:

- Introduce the development of the **shooting strength**;
- **Tune our equipment.** We will have a control / refinement session in 2 weeks. Next week we will have a session for tuning our backup equipment;
- Attend a **regional tournament**.

Next week we will:

- continue to develop our **specific strength** (while shooting);
- have an equipment **tuning session for our backup equipment**;
- **rehearse** the Indoor competition-objective of this season, scheduled in 3 weeks (from now).

Have a good week of practice!

On behalf of the **FITA Coaches Committee**:

**Pascal COLMAIRE**

*FITA Development Manager*

P.S.: at the time to send this material to the Webmaster of the FITA Website, we are still waiting for the authorization to use the material included in our article entitled "Zazen", hence this document is not attached to this set of training tips.





**FITA Training SUGGESTIONS starting on February 18, 2002.**

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The week at a glance:

Days	#	Session Type	Subject / Skill	Volume
Monday	1	Shooting	Strength	83 arrows - 1:10 hour
Tuesday	1	Shooting	Equipment Tuning	127 arrows – 1:40 hour
	1	Yoga - Zazen	As per Teacher	1:30 hour
Wednesday	1	Shooting	Strength	185 arrows – 2:25 hour
	1	Cardio	Aerobic Capacity	1:00 hour
Thursday		Visualisation		3 times a day
Friday	1	Shooting	Strength	185 arrows – 2:25 hours
	1	Cardio	Aerobic Capacity	1:00 hour
Saturday	1	Yoga	As per Teacher	1:30 hour
		Visualisation		3 times a day
Sunday	1	Shooting	Tournament or Test	127 arrows – 1:40 hours

Note #1:

As anticipated the shooting rhythm is still increased, we have now reached +/- 75 arrows per hour, an average shooting rhythm.

Be aware that the shooting rhythm will again increase in the future, because our objective is to shoot at least 300 arrows per session, twice a week. It would take 5 hours per session at this slow rhythm; hence we will progressively increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase.

Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.

MONDAY

Session: Shooting.

of sessions: 1

General warm-up.

Shooting Strength.

Description: Long full draw duration (Pyramid).

1. Pre-determine an accuracy zone on a regular target face for your shooting distance.
2. Adjust your sight while completing your warm-up – 12 arrows

Legend: For reading the exercise below, **4 arrows / 5"** means that you have to shoot 4 arrows and "hold" each one 5 seconds before release

* Olympic archers: implement the following pyramids. Compound archers: read the instruction and use the 2 pyramids that are further down:

4th end: 1 arrow / 15"
 3rd end: 2 arrows / 10" 5th end: 2 arrows / 10"
 2nd end: 3 arrows / 7" 6th end: 3 arrows / 7"
 1st end: 4 arrows / 5" **← Start** **End →** 7th end: 4 arrows / 5"



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4th end: 1 arrow / 20"  
3rd end: 2 arrows / 14"    5th end: 2 arrows / 14"  
2nd end: 3 arrows / 10"    6th end: 3 arrows / 10"  
1st end: 4 arrows / 6"    ← Start    End →    7th end: 4 arrows / 6"

3. Try to get your clicker and release as close as possible of the allocated time.
4. Each arrow should hit your pre-determined accuracy zone (#1), whatever the time you hold the draw.  
Note on a scorecard the score of each arrow as follow: 9/4 for a 9 at 4 o'clock, so you will be able to identify any grouping deviation of your arrows along the exercise.
5. Tips: During the hold you can breath regularly. Maintain your energy in the bottom body and the top body as relaxed as you can.
6. Complete the session by rehearsing a part of the tournament format to be held in 3 weeks.
7. Analyze:
  - a) Calculate the total score per pyramid (or average per arrow since there are pyramids starting with 4 or 5 arrows), then compare your adaptation to the different pyramids.
  - b) Compare the scores between the uphill ends and downhill ends.  
A lower score during the downhill ends shows a lack of endurance strength.
  - c) Also compare the average score per arrow over the different ends.  
An average decreasing with longer holds shows a lack of strength or a too heavier bow.

\* Compound archers: implement the following pyramids:

5th end: 1 arrow / 20"  
4th end: 2 arrows / 16"    6th: 2 arrows / 16"  
3rd end: 3 arrows / 12"    7th end: 3 arrows / 12"  
2nd end: 4 arrows / 10"    8th end: 4 arrows / 10"  
1st end: 5 arrows / 6"    ← Start    End →    9th end: 5 arrows / 6"

5th end: 1 arrow / 25"  
4th end: 2 arrows / 20"    6th: 2 arrows / 20"  
3rd end: 3 arrows / 16"    7th end: 3 arrows / 16"  
2nd end: 4 arrows / 12"    8th end: 4 arrows / 12"  
1st end: 5 arrows / 8"    ← Start    End →    9th end: 5 arrows / 8"

Same instruction as for Recurve. Replace mechanical release instead of clicker in #3

Volume: 12 warm-up arrows + 38/Recurve & 58/Compound arrows over the pyramids + 33 arrows/Recurve & 13 arrows/Compound = **83** arrows.

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**TUESDAY**

**Session: Shooting**



## FITA Training SUGGESTIONS starting on **February 18, 2002.**

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of sessions: 1

General warm-up and shooting warm-up – **12 arrows.**

TUNING

Description: There are so many written and Audio-visual publications on this subject that we will not detail any tuning process here; it would be too long and repeat the information that you can easily find somewhere else. For instance you can use the tuning process described in the Easton catalog. If you have not yet this catalog, you can order it from the following website:

<http://www.eastonarchery.com/>

Several bow makers also provides good advises, like the PSE Compound BowUser's guide:

www.pse-archery.com

Two already published documents may help you:

- * “[French Test](#)” has been published with “[2002-3 Raise & Draw Start](#)”
- * “[Tiller Adjustment](#)” has been published with “[2002-13 Stable Aiming](#)”

Volume: 12 warm-up arrows + 115 arrows for tuning = **127 arrows.**

Note: The above number of arrows can vary a lot pending your need of tuning and adjustment. Strive to complete the session up to **127 arrows**, for instance by matching your back-up equipment to the equipment #1, or by scoring rounds, match simulations, skill development...

Session: **Yoga.**

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

You can include a Zazen session. See the attached document entitled: “[Zazen](#)”

WEDNESDAY

Session: **Shooting.**

of sessions: 1 including to exercises

General warm-up and shooting warm-up – **12 arrows.**

Burst arrow exercise.

Preparation:

- Pre-identify an accuracy zone.
- Number your arrows, to facilitate the scoring process.
- Get the assistance of a scorer



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### • Sight in – **8 arrows**

#### *Description:*

#### 1. Shoot 8 arrows in 2'30".

Your assistant – using binoculars or a scope - will score each arrow in their order of shooting. It is recommended to score as follow: 9/4 for a 9 at 4 o'clock, so you will be able to identify any grouping deviation of your arrows along the exercise.

Your assistant should give you some timing reference, for instance by announcing every 30 seconds and every 10 seconds during the last 30 seconds.

#### 2. Go to the target to collect your arrows and return back to the shooting line in no more than 1'30".

#### 3. Shoot another end of 8 arrows in 2'30"

#### 4. And so on ... Shoot at least 8 ends = **64 arrows**.

#### *Recommendations:*

- Shooting distance: 18 meters or more (25 m, or 30 m maximum).
- You can adjust your sight at any time.
- Ensure a high quality & control of your action to get your clicker/trigger and follow-through, but do quickly between arrows, and during the preliminaries (loading the arrow, ...).
- Strive to maintain your arrows in the pre-determined accuracy zone.
- Keep track of your results for observing your progress along the sessions.

#### *Analyze:*

#### d) Compare the scores and impacts of the first 4 arrows with the 4 last arrows of each end

In case of a lower score over the 4 last arrows of each end, you should consider to shoot more arrows per end during your practice sessions.

#### e) also compare the score and impact of the 4 first end with the 4 last ends.

In case of a lower score over the 4 ends, you should consider to shoot more ends during your practice sessions (hence a greater total number of arrows).

#### 5. Have a rest and complete the session by rehearsing some parts of the tournament format to be held in 3 weeks – **101 arrows**. Use these arrows to identify the mindset providing the best results.

*Volume:* 12 warm-up arrows + 8 sighting arrows + 64 arrows over the exercise + 101 arrows for rehearsing the coming tournament = **185 arrows** over the session.

### Session: **Cardio Maintenance.**

*# of session:* 1

*Duration:* 1:00 hour (see the important note below)

*Description:* **Medium Duration – Medium Intensity**

*Note:* It is difficult to provide accurate suggestions in this matter, because pending:

- \* your current Cardio development,
  - \* the activity you have chosen,
  - \* your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|        | Low | Medium | High | Intensity |
|--------|-----|--------|------|-----------|
| Short  |     |        |      |           |
| Medium |     | X      |      |           |
| Long   |     |        |      |           |



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Duration

Today we propose a Cardio session made of “**Medium Duration – Medium Intensity**” exercises. Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

THURSDAY

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- * *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- * *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

FRIDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **12 arrows** .

Heavier (Tension) Bow

Description: Shoot with a heavier bow - between 2# and 10% extra bow weight. You can either change the weight adjustment, or use heavier limbs, or use an elastic strip attach to your string elbow and passing through your bow fingers. Use the extra bow weight during 80% of the session, but at least 40-min.. RIGHT AFTER the last end with the extra weight, shoot 3 more ends without the extra weight.

Always shoot at least 3 arrows per end, and one line of archers only. Shoot without any rush, but take no break during the exercise.

If you chose an elastic band (strongly suggested), you need a 2 meter long band:

- Women - ¾” wide
- Men – 1” wide
- Chose a high quality elastic band usually used by dressmaker for tightening round the waist, you can buy it at a notion store. Make a loop, pas the loop around your string elbow and fix it with 1 or 2 safety pins. Make a knot at a length that provides the proper stiffness to your need.

[See the attached picture.](#)

Volume: 12 arrows of warm-up, before the exercise. If you shoot at 18 meters, you will certainly shoot at a rhythm of one arrow per minute, e.g. 13 ends of 3 arrows - **39 arrows** - over the 40 minutes, let say. Therefore adjust your sight during the 3 first ends, then score the 10 last ends.



FITA Training SUGGESTIONS starting on **February 18**, 2002.

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*Scoring method:* It is recommended to score as follow 9/4 to indicate an arrow in the 9 at 4 o'clock. Also score the arrows in their shooting order (not the highest value first as at tournament). For instance if you use a tri-spot, always shoot the first arrow in the spot #1 and score it in the first box of your scoring card, and so on...

### *Analyze:*

- a) Compare the score of the first 5 ends, with the 5 last ends.  
In case of a lower score over the 5 last ends, you should consider to shoot more ends during your practice sessions.
- b) Compare the score of the first and last (third) arrows of each end.  
In case of a lower score over the last arrows, you should consider to shoot more arrows per end during your practice sessions.

Have a rest and complete the session by rehearsing some parts of the tournament format to be held in 3 weeks – **134 arrows**. Use these arrows to identify the mindset providing the best results.

*Volume:* 12 warm-up arrows + 39 arrows over the exercise + 134 arrows for rehearsing the coming tournament = **185 arrows** over the session.

Session: **Cardio Maintenance.**

# of session: 1

Description: As the Wednesday session

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## **SATURDAY**

Session: **Yoga.**

# of sessions: 1

Description: as the Tuesday session

Session: **Mimics / Visualization.**

# of sessions: at least 6 reps at each "session". Repeat at least 3 sets per day.

Description: as the Thursday session

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## **SUNDAY**

Session: **Shooting**

# of sessions: 1

General warm-up and shooting warm-up – at least **12 arrows**.

COMPETITION, or TEST

*Volume:*

- if tournament - pending the format.
- if test: 7 warm-up arrows + 120 arrows over the test (4 scoring round) = **127 arrows** over the session.





FITA Training SUGGESTIONS starting on **February 25, 2002.**

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** -** COMMENTS and NEWS ****

This is our 19th week of practice with a the similar schedule as last week:

Time-sharing: 2/3 Shooting and 1/3 for other developments (5 hours).
Total volume: **15 hours** per week
Shooting: 5 sessions per week of **2 hours** each (*see note below*)
including 3 sessions of SHOOTING STRENGTH 10 hours
Shooting Strength: Means strengthening exercises while shooting.
Cardio: 2 sessions per week of **1 hour** each = 2 hours
Yoga: 2 sessions per week of **1:30 min.** each = 3 hours
During Yoga sessions, emphasize flexibility of the lower body, to recover the flexibility level as before strengthening, and Cardio (running).

The above schedule will last until the end of March.

Note:

The training plan shows 5 shooting sessions of 2 hours each. In fact each session does not last 2 hours, since some sessions are:

- *light and shorter than 2 hours, for instance the one from Monday*
- *heavy and longer than 2 hours, like the ones from Wednesday and Friday.*

Hence the duration of 2 hours should be considered as an average. Nevertheless we will not exceed the total of 10 hours of shooting per week (equivalent to 5 sessions of 2 hours).

This week we will:

- Pursuit the development of the **shooting strength**;
- **Tune our back-up equipment**;

Next week we will:

- continue to develop our **specific strength** (while shooting);
- have a 2nd equipment **tuning session for our backup equipment** (we had one last week – this one is for fine-tuning).

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

Pascal COLMAIRE

FITA Development Manager



FITA Training SUGGESTIONS starting on February 25, 2002.

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***The week at a glance:***

| Days      | #      | Session Type             | Subject / Skill                            | Volume                               |
|-----------|--------|--------------------------|--------------------------------------------|--------------------------------------|
| Monday    | 1      | Shooting                 | Strength                                   | 84 arrows - 1:10 hour                |
| Tuesday   | 1<br>1 | Shooting<br>Yoga – Zazen | Back-Up Equipment Tuning<br>As per Teacher | 130 arrows – 1:45 hour<br>1:30 hour  |
| Wednesday | 1<br>1 | Shooting<br>Cardio       | Strength<br>Aerobic Capacity               | 192 arrows – 2:35 hour<br>1:00 hour  |
| Thursday  |        | Visualisation            |                                            | 3 times a day                        |
| Friday    | 1<br>1 | Shooting<br>Cardio       | Strength<br>Aerobic Capacity               | 192 arrows – 2:35 hours<br>1:00 hour |
| Saturday  | 1      | Yoga<br>Visualisation    | As per Teacher                             | 1:30 hour<br>3 times a day           |
| Sunday    | 1      | Shooting                 | Full Draw Action                           | 130 arrows – 1:45 hours              |

**Note #1:**

As anticipated the shooting rhythm is still increased, we have now reached +/- 75 arrows per hour, an average shooting rhythm.

Be aware that the shooting rhythm will again increase in the future, because our objective is to shoot at least 300 arrows per session, twice a week. It would take 5 hours per session at this slow rhythm; hence we will progressively increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

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**MONDAY**

**Session: Shooting.**

# of sessions: 1

General Warm-up.

**Shooting Strength.**

# of sessions: 1 of 1:45 hour.

Warm-up including at least **12** arrows.

**Description:** Long full draw duration (Pyramid) with heavier bow.

1. Pre-determine an accuracy zone on a regular target face for your shooting distance.
2. To make your bow heavier: add a weight-band on BOTH wrists, or on your string wrist and attach one wrist weight around the bottom part of your riser. Recommended additional weight:
  - Recurve girls = ½ #
  - Recurve women & boys, and Compound girls = ¾ #
  - Recurve men and Compound women & boys = 1 #
  - Compound men = 1.5 #
3. Adjust your sight while completing your warm-up – **12** arrows.

**Legend:** For reading the exercise below, **4 arrows / 5"** means that you have to shoot 4 arrows and "hold" each one 5 seconds before release



**FITA Training SUGGESTIONS starting on February 25, 2002.**

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* Olympic archers: implement the following pyramids. Compound archers: read the instruction and use the 2 pyramids that are further down:

4th end: 1 arrow / 25"
3rd end: 2 arrows / 18" 5th end: 2 arrows / 18"
2nd end: 3 arrows / 12" 6th end: 3 arrows / 12"
1st end: 4 arrows / 8" ← Start End → 7th end: 4 arrows / 8"

4th end: 1 arrow / 30"
3rd end: 2 arrows / 20" 5th end: 2 arrows / 20"
2nd end: 3 arrows / 15" 6th end: 3 arrows / 15"
1st end: 4 arrows / 10" ← Start End → 7th end: 4 arrows / 10"

4. Try to get your clicker and release as close as possible of the allocated time.
5. Each arrow should hit your pre-determined accuracy zone (#1), whatever the time you hold the draw.
Note on a scorecard the score of each arrow as follow: 9/4 for a 9 at 4 o'clock, so you will be able to identify any grouping deviation of your arrows along the exercise.
6. Tips: During the hold you can breath regularly. Maintain your energy in the bottom body and the top body as relaxed as you can.
7. At the conclusion of the exercise, keep the weight-bands on your wrists for collecting your arrows. Once back to the shooting line, remove the weight-bands and shoot right away and continue to shoot.
8. Complete the session by rehearsing a part of the tournament format to be held in 2 weeks.
9. Analyze:
 - a) Calculate the total score per pyramid (or average per arrow since there are pyramids starting with 4 or 5 arrows), and then compare your adaptation to the different pyramids.
 - b) Compare the scores between the uphill ends and downhill ends.
A lower score during the downhill ends shows a lack of endurance strength.
 - c) Also compare the average score per arrow over the different ends.
An average decreasing with longer holds shows a lack of strength or a too heavier bow.

* Compound archers: implement the following pyramids:

5th end: 1 arrow / 25"
4th end: 2 arrows / 20" 6th end: 2 arrows / 20"
3rd end: 3 arrows / 16" 7th end: 3 arrows / 16"
2nd end: 4 arrows / 12" 8th end: 4 arrows / 12"
1st end: 5 arrows / 8" ← Start End → 9th end: 5 arrows / 8"

5th end: 1 arrow / 30"
4th end: 2 arrows / 25" 6th end: 2 arrows / 25"
3rd end: 3 arrows / 18" 7th end: 3 arrows / 18"
2nd end: 4 arrows / 15" 8th end: 4 arrows / 15"
1st end: 5 arrows / 10" ← Start End → 9th end: 5 arrows / 10"



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Same instruction as for Recurve. Replace mechanical release instead of clicker in #4

**Volume:** 12 warm-up arrows + 38/Recurve & 58/Compound arrows over the pyramids + 34 arrows/Recurve & 14 arrows/Compound = **84** arrows.

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## **TUESDAY**

### **Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **12 arrows** .

*Description:* PREPARATION of your BACK-UP BOW for INDOOR

*Objectives:* Get 2 equipment sets shooting identically.

*Process:*

1. Set your back-up equipment as close as possible as your tackle #1.
2. Adjust your back-up set-up to get the same shooting feeling as your tackle #1 – **20 arrows**
3. Pre-tune your back-up bow as you did for your bow #1 (see last week) – **38 arrows**
4. Shoot alternatively with your back-up and your first bow. Identify the difference of impacts achieved with each bow. You can identify which bow you are using with different ink color on the scorecard, or you can use 2 scorecards, ... - **20 arrows** .
5. See if you can adjust your back-up bow tuning to get the same sighting as your bow #1 – **20 arrows**
6. When you cannot reduce the sighting difference anymore. Re-implement step #4, identify and record the remaining difference – **20 arrows**

**Volume** 12 warm-up arrows + 118 arrows over the tuning exercises = **130 arrows** over the entire session.

**Note:** The above number of arrows can vary a lot pending your need of tuning and adjustment. Strive to complete the session up to **130** arrows, for instance with scoring rounds, match simulations, skill development...

### **Session: Yoga.**

# of sessions: 1

*Description:* We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

You can include a Zazen session. See the document entitled: "[Zazen](#)" attached to "[2002-18 Specific Strength 1](#)"



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WEDNESDAY

Session: Shooting.

of sessions: 1 including to exercises

General warm-up and shooting warm-up – **12 arrows** .

Burst arrow exercise.

Preparation:

- Pre-identify an accuracy zone.
- Number your arrows, to facilitate the scoring process.
- Get the assistance of a scorer
- Sight in – **8 arrows**

Description:

1. Shoot 8 arrows in 2'30".

Your assistant – using binoculars or a scope - will score each arrow in their order of shooting. It is recommended to score as follow: 9/4 for a 9 at 4 o'clock, so you will be able to identify any grouping deviation of your arrows along the exercise.

Your assistant should give you some timing reference, for instance by announcing every 30 seconds and every 10 seconds during the last 30 seconds.

2. Go to the target to collect your arrows and return back to the shooting line in no more than 1'30".
3. Shoot another end of 8 arrows in 2'30"
4. And so on ... Shoot at least 8 ends = **64 arrows** .

Recommendations:

- Shooting distance: 18 meters or more (25 m, or 30 m maximum).
- You can adjust your sight at any time.
- Ensure a high quality & control of your action to get your clicker/trigger and follow-through, but do quickly between arrows, and during the preliminaries (loading the arrow, ...).
- Strive to maintain your arrows in the pre-determined accuracy zone.
- Keep track of your results for observing your progress along the sessions.

Analyze:

- a) Compare the scores and impacts of the first 4 arrows with the 4 last arrows of each end
In case of a lower score over the 4 last arrows of each end, you should consider to shoot more arrows per end during your practice sessions.
 - b) also compare the score and impact of the 4 first end with the 4 last ends.
In case of a lower score over the 4 ends, you should consider to shoot more ends during your practice sessions (hence a greater total number of arrows).
5. Have a rest and complete the session by rehearsing some parts of the tournament format to be held in 2 weeks – **101 arrows** . Use these arrows to identify the mindset providing the best results.

Volume: 12 warm-up arrows + 8 sighting arrows + 64 arrows over the exercise + 101 arrows for rehearsing the coming tournament = **185 arrows** over the session.

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour (see the important note below)

Description: **Medium Duration – Medium Intensity**



FITA Training SUGGESTIONS starting on February 25, 2002.

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*Note:* It is difficult to provide accurate suggestions in this matter, because pending:

- \* your current Cardio development,
  - \* the activity you have chosen,
  - \* your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   |     | X      |      |           |
| Long     |     |        |      |           |
| Duration |     |        |      |           |

Today we propose a Cardio session made of “**Medium Duration – Medium Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

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### THURSDAY

#### Session: Mimics / Visualization.

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

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### FRIDAY

#### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – **12 arrows** .

#### Heavier (Tension) Bow

Description: Shoot with a heavier bow - between 2# and 10% extra bow weight. You can either change the weight adjustment, or use heavier limbs, or use an elastic strip attach to your string elbow and passing through your bow fingers. Use the extra bow weight during 80% of the session, but at least **45-min**.

RIGHT AFTER the last end with the extra weight, shoot 3 more ends without the extra weight.

Always shoot at least 3 arrows per end and one line of archers only. Shoot without any rush, but take no break during the exercise.

If you chose an elastic band (strongly suggested), you need a 2 meter long band:



**FITA Training SUGGESTIONS starting on February 25, 2002.**

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- Women - ¾ wide
- Men – 1” wide
- Chose a high quality elastic band usually used by dressmaker for tightening round the waist, you can buy it at a notion store. Make a loop, pas the loop around your string elbow and fix it with 1 or 2 safety pins. Make a knot at a length that provides the proper stiffness to your need.

[See the picture attached to “2002-18 Specific Strength 1”](#)

Volume: 12 arrows of warm-up, before the exercise. If you shoot at 18 meters, you will certainly shoot at a rhythm of one arrow per minute, e.g. 15 ends of 3 arrows - **45 arrows** - over the 45 minutes. Therefore adjust your sight during the 3 first ends, and then score the 12 last ends.

Scoring method: It is recommended to score as follow 9/4 to indicate an arrow in the 9 at 4 o'clock. Also score the arrows in their shooting order (not the highest value first as at tournament). For instance if you use a tri-spot, always shoot the first arrow in the spot #1 and score it in the first box of your scoring card, and so on...

Analyse:

- a) Compare the score of the first 6 ends, with the 6 last ends.
In case of a lower score over the 6 last ends, you should consider to shoot more ends during your practice sessions.
- b) Compare the score of the first and last (third) arrow of each end.
In case of a lower score over the last arrow, you should consider to shoot more arrows per end during your practice sessions.

Is there an obvious deviation of your impacts (hits) along the exercise? If so, strive to identify its origin.

Have a rest and complete the session by rehearsing some parts of the tournament format to be held in 2 weeks – **135 arrows**. Use these arrows to identify the mindset providing the best results.

Volume: 12 warm-up arrows + 45 arrows over the exercise + 135 arrows for rehearsing the coming tournament = **192 arrows** over the session.

Session: Cardio Maintenance.

of session: 1

Description: As the Wednesday session

SATURDAY

Session: Yoga.

of sessions: 1

Description: as the Tuesday session

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: as the Thursday session



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## SUNDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – at least **12 arrows**.

COMPLETE FULL DRAW ACTION.

*Objective:* Combine the:

- Push action (bow part of the archer);
- and
- Draw combined action (string part of the archer).

*Description:*

#### A. Push action – Revision:

1. Simulate the action of your bow shoulder on a doorframe or any other pillar... as per picture entitled [“Push in shooting plan- Simulation on a pillar”](#) published in [“2002-7 Full Draw Action 1”](#). Try to move your body in the shooting plane ONLY - **12 reps**.
2. In front of a mirror, simulate your push action with an elastic band attached to your string elbow and held by your bow hand, watch the constant distance between your elastic band and bow shoulder/arm – see illustrations entitled [“Before push with elastic band”](#), [“After push with elastic band”](#) (both illustrations published in [“2002-7 Full Draw Action 1”](#)) and [“Constant distance line of forces-Bow shoulder while pushing”](#) published in [“2002-8 Full Draw Action 2”](#) – **12 repetitions**
3. While shooting, an assistant applies an arrow flat across your top back just above your shoulder blades. At FULL DRAW (not during the draw), the assistant aims along the shaft while you are pushing to:
  - extend your draw length for getting your clicker;
  - or, extend slightly your draw length for getting your trigger
  - or, extend slightly your draw length for cancelling the spring effect of the bow (no clicker).The arrow should keep the same orientation (whatever this orientation) – see picture entitled [“Assistant controlling the push axis”](#) and published in [“2002-7 Full Draw Action 1”](#) – **9 arrows**.

#### B. Combined Draw action – Revision:

4. With your string elbow against a wall, combined the simulations of the *Basic Draw* and of *Back Tension* actions. Your body should move 45 degrees, e.g. a bit toward the imaginary target and toward your toes - **12 repetitions**.  
**Special attention:** Your string blade should be moved away from the spine, and the humerus (arm), should turn clockwise viewed from the top in the horizontal plan. Your string elbow should NOT move down.
5. In front of a mirror, simulate the combined Draw actions with an elastic band attached to your string elbow and held by your bow hand – **12 repetitions**.
6. While shooting, an assistant applies an arrow flat cross your top back just above your shoulder blades. At FULL DRAW (not during the draw), the assistant aims along the shaft while you are pulling to:
  - extend your draw length for getting your clicker;
  - or, extend slightly your draw length for getting your trigger
  - or, extend slightly your draw length for cancelling the spring effect of the bow (no clicker).



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The arrow should keep the same orientation (whatever this orientation) – similar as shown on picture entitled “[Assistant controlling the push axis](#)” and published in “[2002-7 Full Draw Action 1](#)” – **9 arrows** .

Complete Full Draw Action: A + B

7. In front of a mirror, simulate the Complete Full Draw Actions with an elastic band attached to your string elbow and held by your bow hand – **12 repetitions**.
8. While shooting, at full draw, watch your top body and the arrow, while you are:
 - extending your draw length to get your clicker;
 - or, extending slightly your draw length to get your trigger;
 - or, extending slightly your draw length to cancel the spring effect of the bow (no clicker).No twisting or deformation should be observed at the following levels - **10 arrows** :
 - bow shoulder
 - waist
 - neck
9. Repeat #8 with eyes closed, feeling the perfect maintenance of all the axis of your physical form - **12 arrows**.
10. Same, but with eyes up & blurred - **12 arrows** .
11. Same but watching and shooting at a blank butt - **12 arrows** .
12. Pursuit on cut-out spots or faces - 9 arrows per cut-out spot (6 situations) - **54 arrows** .

Note: For steps #3, 6 & 8 we suggest an extra step using a “[Laser-head control device \(PC\)](#)” as suggested in “[2002-7 Full Draw Action 1](#)”.

Volume: 12 arrows of warm-up + 118 arrows over the exercises = about **130 arrows** over the entire session.



FITA Training SUGGESTIONS starting on **March 4**, 2002.

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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* -\*\* COMMENTS and NEWS \*\***

This is our 20th week of practice with a the similar schedule as last week:

Time-sharing: 2/3 Shooting and 1/3 for other developments (5 hours).  
Total volume: **15 hours** per week  
Shooting: 5 sessions per week of **2 hours** each (*see note below*)  
including 3 sessions of SHOOTING STRENGTH 10 hours  
Shooting Strength: Means strengthening exercises while shooting.  
Cardio: 2 sessions per week of **1 hour** each = 2 hours  
Yoga: 2 sessions per week of **1:30 min.** each = 3 hours  
During Yoga sessions, emphasize flexibility of the lower body, to recover the flexibility level as before strengthening, and Cardio (running).

The above schedule will last until the end of March.

*Note:*

*The training plan shows shooting sessions of 2 hours each. In fact each session does not last 2 hours, since some sessions are:*

- *light and shorter than 2 hours, for instance the one from Monday*
- *heavy and longer than 2 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2 hours should be considered as an **average**. Nevertheless we will not exceed the total of 10 hours of shooting per week (equivalent to 5 sessions of 2 hours).*

This week we will:

- Pursuit the development of the **shooting strength**;
- Fine **tune** our **first equipment**;
- Revisit our **follow-through**.
- Almost reach **200 arrows** during the “heavy” shooting sessions

Next week we will:

- Prepare and attend our Indoor **competition-objective**;
- continue to develop our **shooting strength** (just one session early in the week);
- **Select** our **arrows**;
- Make our shooting sequence as fluid and effortless as possible.

Be aware that FITA is re-designing its Website. The training tips should be accessible from a button on the Home page entitled “**Coaching**”.

Have a good week of practice!

On behalf of the **FITA Coaches Committee**:

**Pascal COLMAIRE**

*FITA Development Manager*



**FITA Training SUGGESTIONS starting on **March 4**, 2002.**

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The week at a glance:

Days	#	Session Type	Subject / Skill	Volume
Monday	1	Shooting	Strength	85 arrows - 1:10 hour
Tuesday	1	Shooting	1 st Equipment Tuning	133 arrows – 1:45 hour
	1	Yoga – Zazen	As per Teacher	1:30 hour
Wednesday	1	Shooting	Strength - Positiveness	199 arrows – 2:40 hour
	1	Cardio	Aerobic Power	1:00 hour
Thursday		Visualisation		3 times a day
		Media	Interview preparation	1 session
Friday	1	Shooting	Strength - Positiveness	199 arrows – 2:40 hours
	1	Cardio	Aerobic Power	1:00 hour
Saturday	1	Yoga	As per Teacher	1:30 hour
		Visualisation		3 times a day
Sunday	1	Shooting	Follow-through	133 arrows – 1:45 hours

Note #1:

As anticipated the shooting rhythm is still increased, we have now reached +/- 75 arrows per hour, an average shooting rhythm.

Be aware that the shooting rhythm will again increase in the future, because our objective is to shoot at least 300 arrows per session, twice a week. It would take 5 hours per session at this slow rhythm; hence we will progressively increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase.

Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.

MONDAY

Session: Shooting.

of sessions: 1

Warm-up including at least **12** arrows.

Shooting Strength.

Description: Long full draw duration (Pyramid) with heavier bow.

1. Pre-determine an accuracy zone on a regular target face for your shooting distance.
2. To make your bow heavier: add a weight-band on BOTH wrists, or on your string wrist and attach one wrist weight around the bottom part of your riser. Recommended additional weight:
 - Recurve girls = ½ #
 - Recurve women & boys, and Compound girls = ¾ #
 - Recurve men and Compound women & boys = 1 #
 - Compound men = 1.5 #
3. Adjust your sight while completing your warm-up – **12** arrows.

Legend: For reading the exercise below, **5 arrows / 15"** means that you have to shoot 5 arrows and "hold" each one 15 seconds before release



FITA Training SUGGESTIONS starting on March 4, 2002.

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\* Olympic archers: implement the following pyramids (this week we move from a 4 end pyramid to a 5 end pyramid). . Compound archers: read the instruction and use the 2 pyramids that are further down:

:

5th end: 1 arrow / 15"  
4th end: 2 arrows / 11"      6th: 2 arrows / 11"  
3rd end: 3 arrows / 9"      7th end: 3 arrows / 9"  
2nd end: 4 arrows / 7"      8th end: 4 arrows / 7"  
1st end: 5 arrows / 5"    ← Start      End →      9th end: 5 arrows / 5"

5th end: 1 arrow / 20"  
4th end: 2 arrows / 16"      6th: 2 arrows / 16"  
3rd end: 3 arrows / 12"      7th end: 3 arrows / 12"  
2nd end: 4 arrows / 10"      8th end: 4 arrows / 10"  
1st end: 5 arrows / 6"    ← Start      End →      9th end: 5 arrows / 6"

4. Try to get your clicker and release as close as possible of the allocated time.
5. Each arrow should hit your pre-determined accuracy zone (#1), whatever the time you hold the draw. Note on a scorecard the score of each arrow as follow: 9/4 for a 9 at 4 o'clock, so you will be able to identify any grouping deviation of your arrows along the exercise.
6. Tips: During the hold you can breath regularly. Maintain your energy in the bottom body and the top body as relaxed as you can.
7. At the conclusion of the exercise, keep the weight-bands on your wrists for collecting your arrows. Once back to the shooting line, remove the weight-bands and shoot right away and continue to shoot.
8. Complete the session by rehearsing a part of the tournament format to be held next week.
9. Analyze:
  - a) Calculate the total score per pyramid and compare your adaptation to the different pyramids.
  - b) Compare the scores between the uphill ends and downhill ends.  
A lower score during the downhill ends shows a lack of endurance strength.
  - c) Average the location of your impacts for each half (uphill ends and downhill ends).  
If your rounded-up impact of the second half is more than one hour different, get the assistance of an archery coach to figure out what do you do differently when you get tired  
Rational: If in a), b) or c) your second pyramid &/or your second half (downhill ends ) show a score decrease or a deviation of your impacts, you certainly have a lack of endurance/stamina. If so, you should consider to shooting more arrows per end and session, as well as to reduce your rest time between arrows and ends (meaning less talk and more shooting for most of us...)
  - d) Also compare the Scores and impacts from arrows that you shot after a "short" hold, versus scores and impacts from arrows that you shot after a long hold.  
Rationale: If you notice any obvious difference in score and/or impact location between these 2 sets of arrows, get the assistance of an archery coach to figure out what do you do differently when you get tired. It is highly possible that you are using a too heavy bow for your CURRENT shooting strength. The above advice is still valid here (more arrows per end &



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session and less rests), but you also can consider other or additional alternatives: bow weight reduction - return to the gym - emphasize of the shooting strength development program...

* Compound archers: implement the following pyramids with an heavier bow:

To shoot with an heavier bow - between 2# and 10% extra bow weight - you can either change the weight adjustment, or use heavier limbs, or use an elastic strip attach to your string elbow and passing through your bow fingers.

- Women - ¾" wide
- Men – 1" wide
- Chose a high quality elastic band usually used by dressmaker for tightening round the waist, you can buy it at a notion store. Make a loop, pas the loop around your string elbow and fix it with 1 or 2 safety pins. Make a knot at a length that provides the proper stiffness to your need.

Same instruction as for Recurve. Replace mechanical release instead of clicker in #4

	5th end: 1 arrow / 15"	
	4th end: 2 arrows / 11"	6th: 2 arrows / 11"
	3rd end: 3 arrows / 9"	7th end: 3 arrows / 9"
	2nd end: 4 arrows / 7"	8th end: 4 arrows / 7"
1st end: 5 arrows / 5"	← Start	End → 9th end: 5 arrows / 5"

	5th end: 1 arrow / 20"	
	4th end: 2 arrows / 16"	6th: 2 arrows / 16"
	3rd end: 3 arrows / 12"	7th end: 3 arrows / 12"
	2nd end: 4 arrows / 10"	8th end: 4 arrows / 10"
1st end: 5 arrows / 6"	← Start	End → 9th end: 5 arrows / 6"

Volume: 12 warm-up arrows + 58 arrows over the pyramids + 15 arrows*** = **85** arrows.

***: Complete your session with 15 arrows. If you complete this session by scoring, you should use – as close as possible - the format of one round of the coming Indoor Championship in order to make you used to the coming tournament.

TUESDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **18 arrows** .

TUNING

Description: There are so many written and Audio-visual publications on this subject that we will not detail any tuning process here; it would be too long and repeat the information that you can easily find somewhere else. For instance you can use the tuning process described in the Easton



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catalog. If you have not yet this catalog, you can order it from the following website:

<http://www.eastonarchery.com/>

Several bow makers also provides good advises, like the PSE Compound BowUser's guide:

[www.pse-archery.com](http://www.pse-archery.com)

Two already published documents may help you:

- \* "French Test" has been published with "2002-3 Raise & Draw Start"
- \* "Tiller Adjustment" has been published with "2002-13 Stable Aiming"

**Volume:** 18 warm-up arrows + up to 115 arrows for tuning = **133** arrows.

**Note:** The above number of arrows can vary a lot pending your need of tuning and adjustment. Strive to complete the session up to **133** arrows, for instance by better matching your back-up equipment to the equipment #1, or by scoring rounds, match simulations, skill development, ...

### **Session: Yoga.**

# of sessions: 1

**Description:** We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

You can include a Zazen session. See the document entitled: "Zazen" attached to "2002-18 Specific Strength 1"

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## **WEDNESDAY**

### **Session: Shooting.**

# of sessions: 1 including to exercises

General warm-up and shooting warm-up – **12 arrows** .

#### **Burst arrow exercise.**

**Preparation:**

- Pre-identify an accuracy zone.
- Number your arrows, to facilitate the scoring process.
- Get the assistance of a scorer
- Sight in – **8 arrows**

**Description:**

1. Shoot 8 arrows in 2'30".



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Your assistant – using binoculars or a scope - will score each arrow in their order of shooting. It is recommended to score as follow: 9/4 for a 9 at 4 o'clock, so you will be able to identify any grouping deviation of your arrows along the exercise.

Your assistant should give you some timing reference, for instance by announcing every 30 seconds and every 10 seconds during the last 30 seconds.

2. Go to the target to collect your arrows and return back to the shooting line in no more than 1'30".
3. Shoot another end of 8 arrows in 2'30"
4. And so on ... Shoot at least 10 ends = **80 arrows**.

Recommendations:

- Shooting distance: 18 meters or more (25 m, or 30 m maximum).
- You can adjust your sight at any time.
- Ensure a high quality & control of your action to get your clicker/trigger and follow-through, but do quickly between arrows, and during the preliminaries (loading the arrow, ...).
- Strive to maintain your arrows in the pre-determined accuracy zone.
- Keep track of your results for observing your progress along the sessions.

Analyze:

- a) Compare the scores and impacts of the first 4 arrows with the 4 last arrows of each end
In case of a lower score over the 4 last arrows of each end, you should consider to shoot more arrows per end during your practice sessions.
- b) also compare the scores and impacts of the 5 first end with the 5 last ends.
In case of a lower score over the last 5 ends, you should consider to shoot more ends during your practice sessions (hence a greater total number of arrows).

Have a rest and complete the session by rehearsing some parts of the tournament format to be held next week – **99 arrows**. Use these arrows to increase your positiveness.

POSITIVNESS through PERFORMANCE TEST

Objective: Strive to use positive self-talk and thought during any scoring round, or match simulation. For instance replace:

- ~~"I should avoid to struggle with my bow"~~ with "Be effortless and provide a smooth action."
- ~~"I should not get stressed"~~ with "Keep relax".
- ~~"I should not given any importance to my opponent score"~~ with "Only my process is important".

Volume: 12 warm-up arrows + 8 sighting arrows + 80 arrows over the exercise + 99 arrows for rehearsing the coming tournament = **199 arrows** over the session.

Session: **Cardio Maintenance.**

of session: 1

Duration: 1:00 hour (see the important note below)

Description: **Short Duration – High Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current Cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short			X	



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|                 |  |  |
|-----------------|--|--|
| Medium          |  |  |
| Long            |  |  |
| <b>Duration</b> |  |  |

Today we propose a Cardio session made of “**Short Duration – High Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

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### THURSDAY

#### Session: **Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back, ...*

### INTERVIEW PREPARATION

Despite that archery is getting a better media exposure, we still have few opportunities to be mediatized.

Hence it is indispensable to use the seldom media opportunities at their best. This is why you are advised to prepare potential interview opportunities: What is the message that you want to deliver? Is it appropriated to the public? What could be the best tone and attitude? ...

Your local media are perhaps not aware yet that you will shoot an important championship in a very near future. You could give them a call.

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### FRIDAY

#### Session: **Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **12 arrows** .

#### **Heavier (Tension) Bow**

Description: Shoot with a heavier bow - between 2# and 10% extra bow weight. You can either change the weight adjustment, or use heavier limbs, or use an elastic strip attach to your string elbow and passing through your bow fingers. Use the extra bow weight during 80% of the session, but at least **50-min**.

RIGHT AFTER the last end with the extra weight, shoot 3 more ends without the extra weight.

Always shoot at least 3 arrows per end and one line of archers only. Shoot without any rush, but take no break during the exercise.

If you chose an elastic band (strongly suggested), you need a 2 meter long band:

- Women -  $\frac{3}{4}$  wide



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- Men – 1” wide
- Chose a high quality elastic band usually used by dressmaker for tightening round the waist, you can buy it at a notion store. Make a loop, pas the loop around your string elbow and fix it with 1 or 2 safety pins. Make a knot at a length that provides the proper stiffness to your need.

See the picture attached to [“2002-18 Specific Strength 1”](#)

Volume: 12 arrows of warm-up, before the exercise. If you shoot at 18 meters, you will certainly shoot at a rhythm of +/- one arrow per 50” (this average includes the arrow recuperation time), e.g. 20 ends of 3 arrows - **60 arrows** - over the 50 minutes. Therefore adjust your sight during the 2 first ends, and then score the 18 last ends.

Scoring method: It is recommended to score as follow 9/4 to indicate an arrow in the 9 at 4 o’clock. Also score the arrows in their shooting order (not the highest value first as at tournament). For instance if you use a tri-spot, always shoot the first arrow in the spot #1 and score it in the first box of your scoring card, and so on...

Analyse:

- a) Compare the score of the first 9 ends, with the 9 last ends.
In case of a lower score over the 9 last ends, you should consider to shoot more ends during your practice sessions.
- b) Compare the score of the first and last (third) arrow of each end.
In case of a lower score over the last arrow, you should consider to shoot more arrows per end during your practice sessions.

Is there an obvious deviation of your impacts (hits) along the exercise? If so, strive to identify its origin.

Have a rest and complete the session by rehearsing some parts of the tournament format to be held next week – **127 arrows**. Use these arrows to increase your positiveness.

POSITIVNESS through PERFORMANCE TEST

Objective: Strive to use positive self-talk and thought during any scoring round, or match simulation. For instance replace:

- ~~“I should avoid to struggle with my bow”~~ with “Be effortless and provide a smooth action.”
- ~~“I should not get stressed”~~ with “Keep relax”.
- ~~“I should not given any importance to my opponent score”~~ with “Only my process is important”.

Volume: 12 warm-up arrows + 60 arrows over the exercise + 127 arrows for rehearsing the coming tournament = **199 arrows** over the session.

Session: **Cardio Maintenance.**

of session: 1

Description: As the Wednesday session

SATURDAY

Session: **Yoga.**




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# of sessions: 1

Description: as the Tuesday session

**Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: as the Thursday session

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## SUNDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – at least **13 arrows**.

### FOLLOW-THROUGH

#### \* **Recurve archers:** *Double clicker method*

Preparation: Affix a second clicker under your usual one. If it is a Beiter one, remove the plastic part at the bottom (it is too big), and replace it with a piece of tape. The additional clicker should be 1mm further (closer to the target) – see picture entitled: [“Double clicker”](#) in [“2002-12 Follow-through”](#), pay attention to the Grey clicker under the top one.

1. Shoot at least **12** arrows with the 2 clickers. Strive to continue all your physical and mental activities between the 2 clickers as they were before the first one. Start by shooting at a blank butt from a very short distance (recommended). If comfortable you can use a target face and increase the shooting distance.
2. Shoot every second arrow with the 2 clickers as previously. While shooting with one clicker only, shoot like if there is also a second clicker to get. In other words, even when you use one clicker only, you must continue all your physical and mental activities during about 2 mm after the sound of the clicker – **12** arrows. Shooting at a blank butt is still recommended.
3. Shoot with your eyes closed **9** arrows with one clicker only, but as above (see #2 – arrows shot with one single clicker).
4. Shoot **9** arrows with one clicker only, but as above (see #2 – arrows shot with one single clicker) at a blank butt. If possible from an official shooting distance (18 meters / Indoor - 70 meters / Outdoor.
5. Shoot with one clicker only, but as above (see #2 – arrows shot with one single clicker) at a cut-out target face **6** arrows.
6. Shoot with one clicker only, but as above (see #2 – arrows shot with one single clicker) and alternatively as follow: 1 arrow at a blank butt – 1 arrow at a cut-out target face – 1 arrow at a regular target face - ... **6** arrows.
7. Shoot **6** arrows with one clicker only, but as above (see #2 – arrows shot with one single clicker) at a regular face.
8. Implement the exercises for compound archers – see below. Divide the number of arrows by 2 for each exercise – **60** arrows

**Volume:** 13 arrows of warm-up + 60 arrows over the “Double Clicker” exercises + 60 arrows over the Compound exercises = about **133** arrows over the session.



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*** Compound archers (Recurve archers will implement these exercises with ½ of the number of arrows)**

Follow Through

Objective: Keep the same mental activity from full draw until the end of the shot.

Simulations.

- a) While gripping your pointed down middle bow finger (Recurve archers), or a stick (Compound archers), simulate your position at full draw – make a load and continuous sound from your throat like “Hhhhhuuuuuummmm...” simulate a release while keeping the exact sound until two seconds after the release.

Avoid any : “Hhhhhuu uuuuummmm...” (interruption on release)

Or

“HhhhhuuuUuummmm...” (higher intensity on release).

The continuity and intensity of the sound should be exactly the same – **8 to 10 repetitions**

Suggestion: Avoid to start the sound too early, you could become short in air in your lungs.

- b) Same but with an elastic band - **8 to 10 repetitions**

Now while shooting.

- 1 Same while shooting eyes closed at a short distance, 10 meters – **15 arrows**
- 2 Same while watching yourself in a mirror. Watch yourself in the bottom of your eyes, no trouble should occur during the release, whilst a continuous sound from your throat is maintained:
“Hhhhhuuuuuummmm...” – **18 arrows**
- 3 Same while shooting and watching at a blank butt (no mirror anymore) at the regular distance, 18 or 25 meters – **18 arrows**
- 4 Same shooting at cut-out faces; 3 cut out faces; 6 arrows per cut-out face – **18 arrows total**
- 5 Same while shooting at a regular face from the regular distance – **18 arrows**
- 6 Same but with no sound every second arrows – **18 arrows**
- 7 Same without any sound – **15 arrows**

Volume for Compound : 13 warm-up arrows + 120 arrows over the exercises = **133** arrows over the session.

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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* -\*\* COMMENTS and NEWS \*\***

This is our 21st week of practice. For those living in the North hemisphere, this is the period of Indoor championships. The training plan that we use for developing these training tips (see: [http://www.archery.org/fita\\_committees/coaches/trainings\\_plan2002/2002\\_English&French\\_Trainingplans](http://www.archery.org/fita_committees/coaches/trainings_plan2002/2002_English&French_Trainingplans)) shows an Indoor championship the coming weekend.

The schedule for this week is similar as last week:

|               |                                                                                                                                                |                                               |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Time-sharing: | 2/3 Shooting and 1/3 for other developments (5 hours).                                                                                         |                                               |
| Total volume: | <b>15 hours</b> per week                                                                                                                       |                                               |
| Shooting:     | 3 sessions per week of <b>2 hours</b> each ( <i>see note below</i> )                                                                           |                                               |
|               | including 1 session of SHOOTING STRENGTH                                                                                                       |                                               |
|               | Shooting Strength:                                                                                                                             | Means strengthening exercises while shooting. |
|               | And <b>1 tournament</b> of +/- <b>4 hours</b>                                                                                                  | Shooting total= 10 hours                      |
| Cardio:       | 2 sessions per week of <b>1 hour</b> each                                                                                                      | = 2 hours                                     |
| Yoga:         | 2 sessions per week of <b>1:30 min.</b> each                                                                                                   | = 3 hours                                     |
|               | During Yoga sessions, emphasize flexibility of the lower body, to recover the flexibility level as before strengthening, and Cardio (running). |                                               |

The above schedule will last until the end of March.

*Note:*

*The training plan shows shooting sessions of 2 hours each. In fact each session does not last 2 hours, since some sessions are:*

- *light and shorter than 2 hours, for instance the one from Monday*
- *heavy and longer than 2 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2 hours should be considered as an **average**. Nevertheless we will not exceed the total of 10 hours of shooting per week (equivalent to 5 sessions of 2 hours).*

This week we will:

- Pursuit the development of the **shooting strength**, but just at the beginning of the week to keep ourselves fresh for the Indoor championship;
- **Select the arrows;**
- Improve our **fluidity** while ease (**effortless**)
- Use any shooting session to better identify our IPS, its nature, introduction, maintenance and recovery.

Next week we will have a REST! It will be our second one since mid-October 2001.

Next training tips will posted on the FITA Website on March 22.

Be aware that FITA is re-designing its Website. The training tips should be accessible from a button on the Home page entitled "**Coaching**".

Have a good week of practice!

On behalf of the **FITA Coaches Committee**:



**FITA** Training SUGGESTIONS starting on **March 11**, 2002.

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Pascal COLMAIRE
FITA Development Manager



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***The week at a glance:***

| <b>Days</b>      | <b>#</b> | <b>Session Type</b>      | <b>Subject / Skill</b>                           | <b>Volume</b>                        |
|------------------|----------|--------------------------|--------------------------------------------------|--------------------------------------|
| <b>Monday</b>    | 1<br>1   | Cardio<br>Goal setting   | Aerobic Power                                    | 1:00 hour                            |
| <b>Tuesday</b>   | 1        | Shooting                 | Effortless & Relaxation                          | 136 arrows – 1:45 hour               |
| <b>Wednesday</b> | 1<br>1   | Shooting<br>Cardio       | Strength & Stress Resistance<br>Aerobic Capacity | 206 arrows – 2:40 hour<br>1:00 hour  |
| <b>Thursday</b>  |          | Visualisation<br>Media   | Interviews and contacts                          | 3 times a day<br>1 session           |
| <b>Friday</b>    | 1<br>1   | Shooting<br>Yoga – Zazen | Arrows selection<br>As per Teacher               | 206 arrows – 2:40 hours<br>1:30 hour |
| <b>Saturday</b>  | 1        | Yoga<br>Visualisation    | As per Teacher                                   | 1:30 hour<br>3 times a day           |
| <b>Sunday</b>    | 1        | Shooting                 | Indoor Championship                              | 134 arrows – 1:45 hours              |

**Note #1:**

As anticipated the shooting rhythm is still increased, we have now reached +/- 75 arrows per hour, an average shooting rhythm.

Be aware that the shooting rhythm will again increase in the future, because our objective is to shoot at least 300 arrows per session, twice a week. It would take 5 hours per session at this slow rhythm; hence we will progressively increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

**MONDAY**

Session: **Cardio Maintenance.**

# of session: 1

Duration: 1:00 hour (see the important note below)

Description: **Short Duration – High Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- \* your current Cardio development,
  - \* the activity you have chosen,
  - \* your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|        | Low | Medium | High     | Intensity |
|--------|-----|--------|----------|-----------|
| Short  |     |        | <b>X</b> |           |
| Medium |     |        |          |           |
| Long   |     |        |          |           |



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Duration

Today we propose a Cardio session made of “**Short Duration – High Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

Session: **Goal setting.**

of session: 1

Duration: Negligible

Description: based on your past Indoor performances and your current progression, set out your objectives for the championship to be held this weekend.

TUESDAY

Session: **Shooting**

of sessions: 1

General warm-up and shooting warm-up – **12 arrows** .

EFFORTLESS

Objective: Implement a fluid sequence with a minimum of tensing of any sort. Balanced efforts will help a lot. Stay in control. You can simulate some parts/matches of the coming Indoor Championship in order to make you used to the format of this tournament.

ALTERNATION TENSED SHOT / RELAXED SHOT

Alternate one arrow with one tensed part of your body, and one arrow with this part of your body relaxed. You can score on one card all the arrows shot with tension and on another card those shot relaxed.

Suggested (7) different parts of your body:

- face and neck – **18** arrows, shot by alternating 1 tensed shot / 1 relaxed shot;
- string arm – **18** arrows, shot by alternating 1 tensed shot / 1 relaxed shot;
- bow arm – **18** arrows, shot by alternating 1 tensed shot / 1 relaxed shot;
- chest & stomach – **18** arrows, shot by alternating 1 tensed shot / 1 relaxed shot;
- back – **18** arrows, shot by alternating 1 tensed shot / 1 relaxed shot;
- hips, low belly & buttock – **12** arrows, shot by alternating 1 tensed shot / 1 relaxed shot;
- thighs, calves and feet – **12** arrows, shot by alternating 1 tensed shot / 1 relaxed shot;
- Now strive to experiment an overall tension feeling and a general relaxed/effortless feeling. During this exercise take more attention to the easiness and fluidity of your motion, especially the transition between two shooting steps. Use shoot-off arrows for the exercise – **10** arrows, shot by alternating 1 tensed shot / 1 relaxed shot;

Volume: about 12 warm-up arrows + 124 arrows over the exercises = **136** arrows total.

WEDNESDAY



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**Session: Shooting.**

# of sessions: 1 including 2 developments

General warm-up and shooting warm-up – **12 arrows** .

**SHOOTING STRENGTH - Heavier (Tension) Bow**

*Description:* Shoot with a heavier bow - between 2# and 10% extra bow weight. You can either change the weight adjustment, or use heavier limbs, or use an elastic strip attach to your string elbow and passing through your bow fingers. Use the extra bow weight during 80% of the session, but at least **55 min**.

RIGHT AFTER the last end with the extra weight, shoot 3 more ends without the extra weight.

Always shoot at least 3 arrows per end and one line of archers only. Shoot without any rush, but take no break during the exercise.

If you chose an elastic band (strongly suggested), you need a 2 meter long band:

- Women - ¾" wide
- Men – 1" wide
- Chose a high quality elastic band usually used by dressmaker for tightening round the waist, you can buy it at a notion store. Make a loop, pas the loop around your string elbow and fix it with 1 or 2 safety pins. Make a knot at a length that provides the proper stiffness to your need.

See the picture entitled "[Heavier bow with elastic before and after release](#)" attached to "[2002-18 Specific Strength 1](#)"

*Volume:* 12 arrows of warm-up, before the exercise. If you shoot at 18 meters, you will certainly shoot at a rhythm of +/- one arrow per 50" (this average includes the arrow recuperation time), e.g. 22 ends of 3 arrows - **66 arrows** - over the 55 minutes. Therefore adjust your sight during the 2 first ends, and then score the 20 last ends.

*Scoring method:* It is recommended to score as follow 9/4 to indicate an arrow in the 9 at 4 o'clock. Also score the arrows in their shooting order (not the highest value first as at tournament). For instance if you use a tri-spot, always shoot the first arrow in the spot #1 and score it in the first box of your scoring card, and so on...

*Analyse:*

- a) Compare the score of the first 10 ends, with the 10 last ends.  
In case of a lower score over the 10 last ends, you should consider to shoot more ends during your practice sessions.
- b) Compare the score of the first and last (third) arrow of each end.  
In case of a lower score over the last arrow, you should consider to shoot more arrows per end during your practice sessions.

Is there an obvious deviation of your impacts (hits) along the exercise? If so, strive to identify its origin.

Have a rest and complete the session up to **136 arrows** with Stress resistance exercises.

**STRESS RESISTANCE**

Most of the following suggestions come from South Korea; country that is the world leader in Olympic archery. Some suggestions may sounds shaky to you, if so, please don't reject them since they are efficient for the Korean archers; they are maybe not totally obsolete for us?

Anyway be sure that our goal is not to give you slit eyes, but just provide to you with of the most some of the best training method of the world.



## FITA Training SUGGESTIONS starting on **March 11**, 2002.

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The recommendations are in fact based on a simple thought process: to become used to shoot properly with each of the stress symptoms that we are used to experiment in competition. At practice it is even recommended to shoot with a very high degree of these stress symptoms (higher than in tournament).

Some examples:

1. Heart bits increase.

You have identified that your heart beats jump up when you are stressed.

Let suppose that your pulse at rest is 75 beats/min., but under stress it moves up until 110-120 beats/min.

Therefore after some arrows, remove your quiver, let it on the shooting line, run progressively faster, or do some exercise progressively tougher, until your pulse becomes very high, above 160 beats/min.

Then return as fast as possible on the shooting line and shoot.

When you will be able to shoot properly with your pulse so high, it will be no longer an issue (no anxiety any longer) to shoot with a pulse at only 110 beats/min.

2. Sweat hands.

You know that your hands sweat under stress.

Therefore after some arrows, drop some oil on your riser and trigger grip - for those who use a tab, try talcum powder as well as water, but both of them don't provide a perfect simulation - then shoot alike.

When you will be able to shoot with an "oiled" bow-hand on your riser, you will not be afraid to shoot with a wet bow-hand. Less fear = less stress.

3. Yawn.

You yawn a lot when you are stressed; this can be due to a lack of oxygen or a digestion problem (both due to the stress that you are experimenting).

a) If it is a digestion problem, you can play with 2 things:

- Schedule several training sessions during your digestion period
- Modify your eating habits during the tournament, for instance replace your lunch or heavy breakfast with lighter meals, but eat often small quantity of food during the day of the tournament.

b) If it is due to a lack of oxygen, after some arrows, retain your breath during a long period on the shooting line - more than 30 seconds (a Korean coach, Mister Woong LEE, recommends 40 seconds; try it, it is not easy!) - then shoot right away.

4. Vertigo / Dizzy

Pinch your nose (block your breath) and turn rapidly on spot 10 times, then shoot right away

Lets go your imagination for other training under stress.

Whatever the quality of the training exercises that you will choose to be prepared to stress effect, for a real efficiency these exercises must be associated with a goal for the training session as well as some challenges.

Total volume over the session: 18 arrows warm-up + 118 arrows over the exercises = **136 arrows**

Session: **Cardio Maintenance.**

of session: 1



FITA Training SUGGESTIONS starting on **March 11**, 2002.

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**Duration:** 1:00 hour (see the important note below)

**Description:** **Medium Duration – Medium Intensity**

**Note:** It is difficult to provide accurate suggestions in this matter, because pending:

- \* your current Cardio development,
  - \* the activity you have chosen,
  - \* your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|                 | Low | Medium | High | Intensity |
|-----------------|-----|--------|------|-----------|
| Short           |     |        |      |           |
| Medium          |     | X      |      |           |
| Long            |     |        |      |           |
| <b>Duration</b> |     |        |      |           |

Today we propose a Cardio session made of “**Medium Duration – Medium Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

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## THURSDAY

### Session: Mimics / Visualization.

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important than seeing it.

- \* *External visualization* = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.
- \* *Internal visualization* = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back...

### MEDIA / PRESS – INTERVIEWS AND CONTACTS

Last week you have prepared potential interviews. During this week, you will probably been contacted by some journalists:

- if so, schedule to meet them this day (for instance);
- if not, use this day to inform the media of your selection to the coming championship. You could run this task with your coach;

Draft a communication plan from/to the competition location:

- Inform them of the time difference;
- Give them a copy of the schedule of competition;
- Let them the hotel name, address, phone #, fax #, ...
- If someone on your team has a cellular phone, get the number and communicate it;
- ...



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FRIDAY

Session: Shooting

of sessions: 1

ARROWS SELECTION FOR INDOOR.

Take your time to warm-up and adjust your sight – at least **18 arrows**

Description: Number each arrow differently. Shoot them in any order; avoid shooting them in the same order.

Shoot them at target faces that are similar: same height, because it is not seldom to shoot higher on the top spot. Do not hesitate to move a little on the shooting line to always stand in front of the target face that you are shooting at. You can score and have some matches.

Record your impacts.

Analyze tool: Have a sheet of paper on a clipboard at the target level. On this paper there should be printed several small target faces, ideally one small target face per arrow. Allocate one of these small target face to each arrow with the same number; for instance report on the small (drawn) target face #1 that is on your form the impacts of your arrow #1, and so on...

If you have 10 or 12 arrows, but just want to shoot only 6 arrows per end, try to shoot at least 15 times each arrow over this session.

Analyze process:

- **Selection #1:**

Alternative #1.1: Rank your arrow per their size of grouping. Ignore the impacts related to bad shots (not bad impacts!).

Arrow #1 is the arrow with the smallest group size. For this test you must have a comparable number of impacts per arrow. Keep those with the smallest group size for the championship.

Alternative #2.1: Rank your arrow per score. Ignore the scores related to bad shots (not bad scores only!).

Pending the number of bad shots, you can have 10 scores for one arrow and only 7 for another one. Calculate the average score per shot for each arrow. Rank your arrows per this average score. Give the #1 to the arrow with the highest average, and so on.... Keep those with the highest average for the championship.

- **Selection #2:**

Verify if your sight was well adjusted; e.g. identify where is the center of each group of impacts in relation to the center of the printed targets, average them. From there, rank and number your arrow pending the distance from their grouping center and the target center. Keep those with the shortest distance from their grouping center and the target center for the championship.

- **Selection #3:**

If the second analysis proves that your sight was well adjusted, you can conduct the following third analyze: on each small printed target, check if there is a zone (around the center of the target face) with no or seldom impacts – for instance no or very few impact(s) high left. Keep the arrows that have made a grouping well balanced around the bull's-eye for the championship.

- Have a **Final Selection** by combining the results of the 3 above selections.



FITA Training SUGGESTIONS starting on **March 11**, 2002.

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**Volume:** about **206** arrows total, including 18 arrows of warm-up. During this session you can score as many arrows as you want.

### **Session: Yoga.**

# of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasised during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

You can include a Zazen session. See the document entitled: "[Zazen](#)" attached to "[2002-18 Specific Strength 1](#)"

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## **SATURDAY**

### **Session: Yoga.**

# of sessions: 1

Description: as yesterday. Instead of a Zazen session you can include a Relaxation exercise.

### **Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each "session". Repeat at least 3 sets per day.

Description: as the Thursday session

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## **SUNDAY**

### **Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – at least **14 arrows**.

COMPETITION, or TEST

**Volume:**

- if tournament - pending the format.
- if test: 14 warm-up arrows + 120 arrows over the test (4 scoring round) = **134 arrows** over the session.



**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\***

No FITA Training Suggestions will be issued this week, since it is a rest scheduled as per the Training Program that we follow - see:

[http://www.archery.org/fita\\_committees/coaches/trainings\\_plan2002/2002\\_English&French\\_Trainingplans-%231.xls](http://www.archery.org/fita_committees/coaches/trainings_plan2002/2002_English&French_Trainingplans-%231.xls)

and

[http://www.archery.org/fita\\_committees/coaches/trainings\\_plan2002/2001-2002\\_Overall\\_Training\\_Plan.pdf](http://www.archery.org/fita_committees/coaches/trainings_plan2002/2001-2002_Overall_Training_Plan.pdf)

We will be back by March 22, 2001 with new suggestions for the week starting on March 25, 2002.

Have a good rest!

On behalf of the **FITA Coaches Committee:**

**Pascal COLMAIRE**

FITA Development Manager.

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**\*\* COMMENTAIRES et NOUVELLES \*\* - \*\* COMMENTAIRES et NOUVELLES \*\***

Nous ne publions pas de suggestions d'entraînement cette semaine, car il s'agit d'une semaine de relâche prévue au plan d'entraînement que nous suivons – voir :

[http://www.archery.org/fita\\_committees/coaches/trainings\\_plan2002/2002\\_English&French\\_Trainingplans-%231.xls](http://www.archery.org/fita_committees/coaches/trainings_plan2002/2002_English&French_Trainingplans-%231.xls)

et

[http://www.archery.org/fita\\_committees/coaches/trainings\\_plan2002/Programme\\_general\\_d\\_entrainement\\_2001-2002.pdf](http://www.archery.org/fita_committees/coaches/trainings_plan2002/Programme_general_d_entrainement_2001-2002.pdf)

Nous serons de retour le 22 mars avec de nouvelles suggestions pour la semaine débutant le 25 mars 2002.

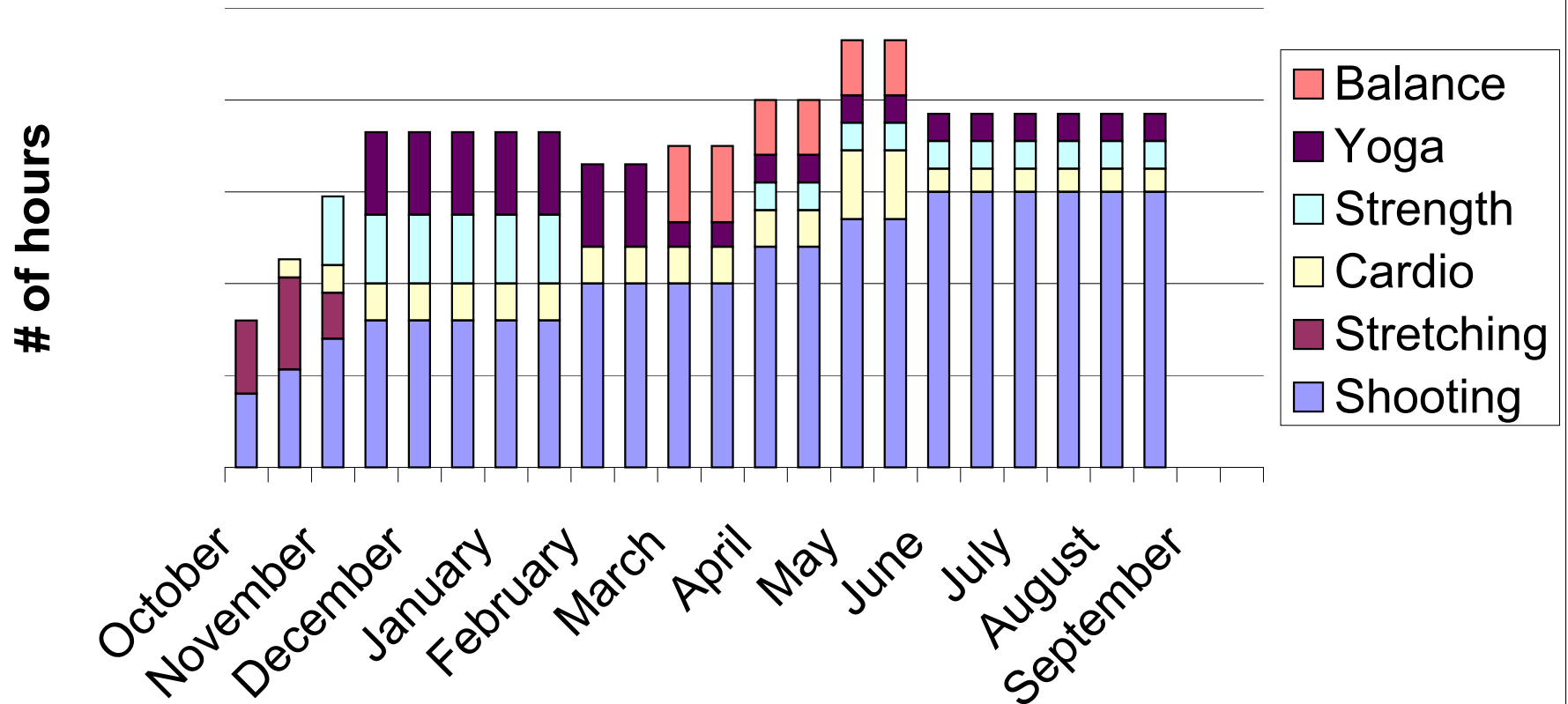
Bonne pause!

Au nom du **comité des entraîneurs de la FITA**

**Pascal COLMAIRE**

Directeur du développement FITA

## 2001-2002 Training Time sharing



Season per 15 days - Two columns per month

FITA Training SUGGESTIONS starting on **March 25, 2002.**

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** - ** COMMENTS and NEWS ****

This is our 23rd week of practice. For those living in the North hemisphere, you have probably recently shot an Indoor championship, according to the training plan that we use for developing these training tips - see: http://www.archery.org/fita_committees/coaches/trainings_plan2002/2002_English&French_Trainingplans
If so, you certainly had a rest week after this Indoor championship. Now back to training!

This is the last week with a similar schedule as the latest weeks:

Time-sharing:	2/3 shooting and 1/3 for other developments (5 hours).	
Total volume:	15 hours per week	
Shooting:	5 sessions per week of 2 hours each (<i>see note below</i>)	
	including 3 sessions of SHOOTING STRENGTH	10 hours
	Shooting Strength:	Means strengthening exercises while shooting.
Cardio:	2 sessions per week of 1 hour each	= 2 hours
Yoga:	2 sessions per week of 1:30 min. each	= 3 hours
	During Yoga sessions, emphasize flexibility of the lower body, to recover the flexibility level as before strengthening, and Cardio (running).	

Note:

The training plan shows shooting sessions of 2 hours each. In fact each session does not last 2 hours, since some sessions are:

- *light and shorter than 2 hours, for instance the one from Monday*
- *heavy and longer than 2 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2 hours should be considered as an **average**. Nevertheless we will not exceed the total of 10 hours of shooting per week (equivalent to 5 sessions of 2 hours).*

This week we will:

- Pursuit the development of the **shooting strength**;
- Start to prepare our **Outdoor equipment**;
- Assess the Indoor season to **identify the skills to be refined** and to **set objectives**.

Be aware that FITA is re-designing its Website. The training tips should be accessible from a button on the Home page entitled "**Coaching**".

Have a good week of practice!

On behalf of the **FITA Coaches Committee**:

Pascal COLMAIRE

FITA Development Manager



FITA Training SUGGESTIONS starting on March 25, 2002.

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***The week at a glance:***

| Days      | # | Session Type  | Subject / Skill               | Volume                  |
|-----------|---|---------------|-------------------------------|-------------------------|
| Monday    | 1 | Shooting      | Strength                      | 86 arrows - 1:10 hour   |
| Tuesday   | 1 | Shooting      | Outdoor Equipment Preparation | 136 arrows – 1:45 hour  |
|           | 1 | Yoga – Zazen  | As per Teacher                | 1:30 hour               |
| Wednesday | 1 | Shooting      | Strength                      | 206 arrows – 2:40 hour  |
|           | 1 | Cardio        | Aerobic Capacity              | 1:00 hour               |
| Thursday  |   | Visualization |                               | 3 times a day           |
| Friday    | 1 | Shooting      | Strength                      | 206 arrows – 2:40 hours |
|           | 1 | Cardio        | Aerobic Capacity              | 1:00 hour               |
| Saturday  | 1 | Yoga          | As per Teacher                | 1:30 hour               |
|           |   | Visualization |                               | 3 times a day           |
| Sunday    | 1 | Shooting      | Evaluation and choices        | 136 arrows – 1:45 hours |

**Note #1:**

We still have a shooting rhythm of +/- 75 arrows per hour. Keep in mind that the shooting rhythm will again increase in the future, because our objective is to shoot at least 300 arrows per session, twice a week. It would take 5 hours per session at this slow rhythm; hence we will progressively increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

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**MONDAY**

Warm-up including at least **12** arrows.

**Shooting Strength.**

**Description:** Long full draw duration (Pyramid) with heavier bow.

1. Pre-determine an accuracy zone on a regular target face for your shooting distance.
2. To make your bow heavier: add a weight-band on BOTH wrists, or on your string wrist and attach one wrist weight around the bottom part of your riser. Recommended additional weight:
  - Recurve girls = ½ #
  - Recurve women & boys, and Compound girls = ¾ #
  - Recurve men and Compound women & boys = 1 #
  - Compound men = 1.5 #
3. Adjust your sight while completing your warm-up – **12** arrows.

**Legend:** For reading the exercise below, **5 arrows / 8"** means that you have to shoot 5 arrows and "hold" each one 15 seconds before release

\* Olympic archers: implement the following pyramids (this week we move from a 4 end pyramid to a 5 end pyramid). . Compound archers: read the instruction and use the 2 pyramids that are further down:

:



**FITA Training SUGGESTIONS starting on March 25, 2002.**

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5th end: 1 arrow / 25"
4th end: 2 arrows / 20" 6th: 2 arrows / 20"
3rd end: 3 arrows / 16" 7th end: 3 arrows / 16"
2nd end: 4 arrows / 12" 8th end: 4 arrows / 12"
1st end: 5 arrows / 8" ← Start End → 9th end: 5 arrows / 8"

5th end: 1 arrow / 30"
4th end: 2 arrows / 25" 6th: 2 arrows / 25"
3rd end: 3 arrows / 18" 7th end: 3 arrows / 18"
2nd end: 4 arrows / 15" 8th end: 4 arrows / 15"
1st end: 5 arrows / 10" ← Start End → 9th end: 5 arrows / 10"

4. Try to get your clicker and release as close as possible of the allocated time.
5. Each arrow should hit your pre-determined accuracy zone (#1), whatever the time you hold the draw.
Note on a scorecard the score of each arrow as follow: 9/4 for a 9 at 4 o'clock, so you will be able to identify any grouping deviation of your arrows along the exercise.
6. Tips: During the hold you can breathe regularly. Maintain your energy in the bottom body and the top body as relaxed as you can.
7. At the conclusion of the exercise, keep the weight-bands on your wrists for collecting your arrows. Once back to the shooting line, remove the weight-bands and shoot right away and continue to shoot.
8. Complete the session by rehearsing a part of the tournament format to be held next week.
9. Analyze:
 - a) Calculate the total score per pyramid and compare your adaptation to the different pyramids.
 - b) Compare the scores between the uphill ends and downhill ends.
A lower score during the downhill ends shows a lack of endurance strength.
 - c) Average the location of your impacts for each half (uphill ends and downhill ends).
If your rounded-up impact of the second half is more than one hour different, get the assistance of an archery coach to figure out what do you do differently when you get tired
Rational: If in a), b) or c) your second pyramid &/or your second half (downhill ends) show a score decrease or a deviation of your impacts, you certainly have a lack of endurance/stamina. If so, you should consider to shooting more arrows per end and session, as well as to reduce your rest time between arrows and ends (meaning less talk and more shooting for most of us...)
 - d) Also compare the Scores and impacts from arrows that you shot after a "short" hold, versus scores and impacts from arrows that you shot after a long hold.
Rationale: If you notice any obvious difference in score and/or impact location between these 2 sets of arrows, get the assistance of an archery coach to figure out what do you do differently when you get tired. It is highly possible that you are using a too heavy bow for your CURRENT shooting strength. The above advice is still valid here (more arrows per end & session and less rests), but you also can consider other or additional alternatives: bow weight reduction - return to the gym - emphasize of the shooting strength development program...

* Compound archers: implement the following pyramids with a heavier bow:



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To shoot with an heavier bow - between 2# and 10% extra bow weight - you can either change the weight adjustment, or use heavier limbs, or use an elastic strip attach to your string elbow and passing through your bow fingers.

- Women - ¾" wide
- Men – 1" wide
- Chose a high quality elastic band usually used by dressmaker for tightening round the waist, you can buy it at a notion store. Make a loop, pas the loop around your string elbow and fix it with 1 or 2 safety pins. Make a knot at a length that provides the proper stiffness to your need.

Same instruction as for Recurve. Replace mechanical release instead of clicker in #4

|                                |                              |
|--------------------------------|------------------------------|
| 5th end: 1 arrow / 25"         |                              |
| 4th end: 2 arrows / 20"        | 6th: 2 arrows / 20"          |
| 3rd end: 3 arrows / 16"        | 7th end: 3 arrows / 16"      |
| 2nd end: 4 arrows / 12"        | 8th end: 4 arrows / 12"      |
| 1st end: 5 arrows / 8" ← Start | End → 9th end: 5 arrows / 8" |

|                                 |                               |
|---------------------------------|-------------------------------|
| 5th end: 1 arrow / 30"          |                               |
| 4th end: 2 arrows / 25"         | 6th: 2 arrows / 25"           |
| 3rd end: 3 arrows / 18"         | 7th end: 3 arrows / 18"       |
| 2nd end: 4 arrows / 15"         | 8th end: 4 arrows / 15"       |
| 1st end: 5 arrows / 10" ← Start | End → 9th end: 5 arrows / 10" |

**Volume:** 12 warm-up arrows + 58 arrows over the pyramids + 16 arrows\*\*\* = **85** arrows.

\*\*\*: Complete your session with 16 arrows that you can score.

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## TUESDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – **12 arrows** .

### OUTDOOR EQUIPMENT PREPARATION

Objective: Switch from Indoor Equipment to Outdoor equipment.

Description: usually the main change is the arrows, switching from thick aluminum arrows to thin carbon arrows; requiring some adaptations and preparations.

#### For Recurve:

- height of the arrow-rest;
- length or canting of the arrow-rest arm;
- exit of the plunger-button;
- stiffness of the plunger button.

#### For Compound:

- width of the launcher arm;
- check the exit of launcher;
- power of the scope-peep combination;



## FITA Training SUGGESTIONS starting on **March 25**, 2002.

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- scope cover preparation in case of rain.

For both, in addition of the arrows:

- nocking point adjustment;
- maybe a change of bow weight (to better match the carbon arrows, or for long distance s);
- seldom a string change to better match the arrows (different length, number of strands, serving thickness);
- preparation of a eye-shade;
- preparation and test of rain clothes;
-

Volume: about 12 warm-up arrows + 124 arrows over the exercises = **136** arrows total. Pending what you have to change and prepare you can shoot much less arrows, it does not matter. Only your Outdoor preparation is important.

Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasized during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

You can include a Zazen session. See the document entitled: "[Zazen](#)" attached to "[2002-18 Specific Strength 1](#)"

WEDNESDAY

Session: Shooting.

of sessions: 1

General warm-up and shooting warm-up – **12 arrows** .

Burst arrow exercise.

Preparation:

- Pre-identify an accuracy zone.
- Number your arrows, to facilitate the scoring process.
- Get the assistance of a scorer
- Sight in – **8 arrows**

Description:

1. Shoot 8 arrows in 2'30".



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Your assistant – using binoculars or a scope - will score each arrow in their order of shooting. It is recommended to score as follow: 9/4 for a 9 at 4 o'clock, so you will be able to identify any grouping deviation of your arrows along the exercise.

Your assistant should give you some timing reference, for instance by announcing every 30 seconds and every 10 seconds during the last 30 seconds.

2. Go to the target to collect your arrows and return back to the shooting line in no more than 1'30".
3. Shoot another end of 8 arrows in 2'30"
4. And so on ... Shoot at least 11 ends = **88 arrows**.

**Recommendations:**

- Shooting distance: 18 meters or more (25 m, or 30 m maximum).
- You can adjust your sight at any time.
- Ensure a high quality & control of your action to get your clicker/trigger and follow-through, but do quickly between arrows, and during the preliminaries (loading the arrow, ...).
- Strive to maintain your arrows in the pre-determined accuracy zone.
- Keep track of your results for observing your progress along the sessions.

**Analyze:**

- a) Compare the scores and impacts of the first 4 arrows with the 4 last arrows of each end  
In case of a lower score over the 4 last arrows of each end, you should consider to shoot more arrows per end during your practice sessions.
- b) also compare the scores and impacts of the 5 first ends with the 5 last ends.  
In case of a lower score over the last 5 ends, you should consider to shoot more ends during your practice sessions (hence a greater total number of arrows).

Have a rest and complete the session by sighting the different Outdoor shooting distances – **98 arrows**.

**Volume:** 12 warm-up arrows + 8 sighting arrows + 88 arrows over the exercise + 98 arrows for sighting the Outdoor distances = **206 arrows** over the session.

**Session: Cardio Maintenance.**

**# of session:** 1

**Duration:** 1:00 hour (see the important note below)

**Description:** **Long Duration - Low Intensity**

**Note:** It is difficult to provide accurate suggestions in this matter, because pending:

- \* your current Cardio development,
  - \* the activity you have chosen,
  - \* your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   |     |        |      |           |
| Long     | X   |        |      |           |
| Duration |     |        |      |           |

Today we propose a Cardio session made of “**Long Duration - Low Intensity**” exercises.



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Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

THURSDAY

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*

* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back...*

FRIDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **12 arrows** .

SHOOTING STRENGTH - Heavier (Tension) Bow

Description: Shoot with a heavier bow - between 2# and 10% extra bow weight. You can either change the weight adjustment, or use heavier limbs, or use an elastic strip attach to your string elbow and passing through your bow fingers. Use the extra bow weight during 80% of the session, but at least **1 hour**.

RIGHT AFTER the last end with the extra weight, shoot 3 more ends without the extra weight.

Always shoot at least 3 arrows per end and one line of archers only. Shoot without any rush, but take no break during the exercise.

If you chose an elastic band (strongly suggested), you need a 2 meter long band:

- Women - ¾” wide
- Men – 1” wide
- Chose a high quality elastic band usually used by dressmaker for tightening round the waist, you can buy it at a notion store. Make a loop, pas the loop around your string elbow and fix it with 1 or 2 safety pins. Make a knot at a length that provides the proper stiffness to your need.

See the picture entitled “[Heavier bow with elastic before and after release](#)” attached to “[2002-18 Specific Strength 1](#)”

Volume: 12 arrows of warm-up, before the exercise. If you shoot at 18 meters, you will certainly shoot at a rhythm of +/- one arrow per 50” (this average includes the arrow recuperation time), e.g. 24 ends of 3 arrows (or 12 ends of 6 arrows if you already can shoot outdoor) - **72 arrows** - over the hour. Therefore adjust your sight during the 6 first arrows, and then score the 66 remaining arrows.



FITA Training SUGGESTIONS starting on **March 25**, 2002.

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*Scoring method:* It is recommended to score as follow 9/4 to indicate an arrow in the 9 at 4 o'clock. Also score the arrows in their shooting order (not the highest value first as at tournament). For instance if you use a tri-spot, always shoot the first arrow in the spot #1 and score it in the first box of your scoring card, and so on...

### *Analyze:*

- a) Compare the score of the first 11 ends (of 3 arrows), with the 11 last ends.  
In case of a lower score over the 11 last ends, you should consider to shoot more ends during your practice sessions.
- b) Compare the score of the first and last (third) arrow of each end.  
In case of a lower score over the last arrow, you should consider to shoot more arrows per end during your practice sessions.

Is there an obvious deviation of your impacts (hits) along the exercise? If so, strive to identify its origin.

Have a rest and complete the session by simulating some competitive situations – **122 arrows**. If you can shoot Outdoor, you could shoot the following: *72 arrows at the long distances + 18 arrows at 50 meters + 18 arrows at 30 meters + a 12 arrow match + 2 shoot-off arrows*

*Volume:* 12 warm-up arrows + 72 arrows over the strengthening exercise + 122 arrows for sighting the Outdoor distances = **206 arrows** over the session.

Session: **Cardio Maintenance.**

*# of session:* 1

*Duration:* 1:00 hour

*Description:* as per Wednesday

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## SATURDAY

Session: **Yoga.**

*# of sessions:* 1

*Description:* as per Tuesday

Session: **Mimics / Visualization.**

*# of sessions:* at least 6 reps at each “session”. Repeat at least 3 sets per day.

*Description:* as the Thursday session

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## SUNDAY

Session: **Shooting**

*# of sessions:* 1

General warm-up and shooting warm-up – **12 arrows**.

Evaluation, Goal setting and plan



**FITA Training SUGGESTIONS starting on March 25, 2002.**

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Description: During this session you will probably not shoot a lot, since its purpose is to evaluate your progress during the Indoor season and to set new objectives for the Outdoor season: Finally you will be able to refine your training and competitions plan for the Outdoor season.

Coach assistance is recommended.

A video session is suggested.

Volume: 12 warm-up arrows + 124 arrows = **136 arrows** over the session.



FITA Training SUGGESTIONS starting on **April 1, 2002.**

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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* -\*\* COMMENTS and NEWS \*\***

This is our 24<sup>th</sup> week of practice.

According to the training plan that we use for developing these training tips - see: [http://www.archery.org/fita\\_committees/coaches/trainings\\_plan2002/2002\\_English&French\\_Trainingplans](http://www.archery.org/fita_committees/coaches/trainings_plan2002/2002_English&French_Trainingplans), we have to start a 7 week program to develop our Body Balance. The 2 first weeks we will only implement some generic exercises, while we will add some archery specific exercises during the 5 last weeks.

As every time that we introduce the development of a new skill, our training schedule is changed; more details at:

[http://www.archery.org/fita\\_committees/coaches/trainings\\_plan2002/2001-2002\\_Overall\\_Training\\_Plan.pdf](http://www.archery.org/fita_committees/coaches/trainings_plan2002/2001-2002_Overall_Training_Plan.pdf)

The new suggested schedule is as follow (until mid April):

|                              |                                                                |              |
|------------------------------|----------------------------------------------------------------|--------------|
| Time sharing:                | 52-53 % Shooting and 48-47 % for other developments (9 hours). |              |
| Total volume:                | 19 hours                                                       | per week     |
| Shooting:                    | 5 sessions per week of 2 hours each                            | 10 hours     |
| Cardio:                      | 2 sessions per week of 1 hour each                             | = 2 hours    |
| Yoga :                       | 1 session per week of 1:20 hour each                           | = 1:20 hours |
| Strength:                    | 1 maintenance session per week of 1:30 hour                    | = 1:30 hours |
| <b>General Body balance:</b> | 5 sessions per week of 50 min.                                 | = 4:10 hours |

**General Body Balance:** Exercises aiming the improvement of the upright position.

During Yoga sessions, emphasize flexibility of the top body, to recover the flexibility level as before strengthening.

*Note:*

*The training plan shows shooting sessions of 2 hours each. In fact each session does not last 2 hours, since some sessions are:*

- *light and shorter than 2 hours, for instance the one from Monday*
- *heavy and longer than 2 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2 hours should be considered as an **average**. Nevertheless we will not exceed the total of 10 hours of shooting per week (equivalent to 5 sessions of 2 hours).*

This week we will:

- Introduce the development of our **General Body Balance**;
- Revise our **Body Pre -setting**;
- Start to revisit our **Shooting adjustment Center** (continuation next week)
- Have one equipment tuning session to be adapted for Outdoor.

Next week we will have at our program:

- Strengthening of our **Shooting adjustment Center** (also called Body Aiming adjustment),
- Revise the way to **raise and draw** the bow,
- Have a test

Be aware that FITA is re-designing its Website. In the future (I still do not know exactly when) the training tips should be accessible from a button on the Home page entitled "**Coaching**".

Have a good week of practice!



**FITA Training SUGGESTIONS starting on April 1, 2002.**

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On behalf of the **FITA Coaches Committee:**

Pascal COLMAIRE

FITA Development Manager



FITA Training SUGGESTIONS starting on April 1, 2002.

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***The week at a glance:***

| <b>Days</b>      | <b>#</b> | <b>Session Type</b>                            | <b>Subject / Skill</b>     | <b>Volume</b>           |
|------------------|----------|------------------------------------------------|----------------------------|-------------------------|
| <b>Monday</b>    | 1        | Shooting                                       | Body Pre-setting           | 87 arrows - 1:05 hour   |
|                  | 1        | Body Balance                                   | General                    | 0:50 hour               |
| <b>Tuesday</b>   | 1        | Shooting                                       | Body-Presetting            | 139 arrows – 1:45 hour  |
|                  | 1        | Yoga                                           | As per Teacher             | 1:20 hour               |
| <b>Wednesday</b> | 1        | Shooting                                       | Equipment Tuning           | 213 arrows – 2:30 hour  |
|                  | 1        | Cardio                                         | Aerobic Capacity           | 1:00 hour               |
|                  | 1        | Body Balance                                   | General                    | 0:50 hour               |
| <b>Thursday</b>  |          | Visualization<br>Job or school<br>arrangements |                            | 3 times a day           |
| <b>Friday</b>    | 1        | Shooting                                       | Body Pre-setting           | 213 arrows – 2:30 hours |
|                  | 1        | Strengthening                                  | Maintenance - Endurance    | 1:30 hour               |
|                  | 1        | Body Balance                                   | General                    | 0:50 hour               |
| <b>Saturday</b>  | 1        | Visualization                                  |                            | 3 times a day           |
|                  | 1        | Cardio                                         | Aerobic Capacity           | 1:00 hour               |
|                  | 1        | Body Balance                                   | General                    | 0:50 hour               |
| <b>Sunday</b>    | 1        | Shooting                                       | Shooting adjustment center | 139 arrows – 1:45 hours |
|                  | 1        | Body Balance                                   | General                    | 0:50 hour               |

**Note #1:**

The shooting rhythm is increased, reaching +/- 80 arrows per hour. Keep in mind that the shooting rhythm will again increase in the future, because our objective is to shoot at least 300 arrows per session, twice a week. It would take 3:45 hours per session at this rhythm; hence we will progressively increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase. Nevertheless you should consider to:

- reduce your rest time between arrows;
- speed up the recuperation process of the arrows that you have shot;
- shoot more arrows per end, to reduce the number of travels for recuperating your arrows. 8 or 9 arrows per end are suggested.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

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**MONDAY**

General warm-up and shooting warm-up – **15 arrows**.

**Body Presetting**

1. Close your eyes as soon as you grip your string, at this moment you are little bent down. Pursuit your sequence with eyes closed until you are straight up and at full draw, then continue your sequence with your eye(s) opened - **16 arrows**. While you have your eyes closed, be concentrated on:
  - a) when and how you preset your body (main pyramid = the geometrical form between your aiming eye and your feet base). It could be before raising your bow, or after a pre-draw in direction of the floor or the target. For Compound archers who deform their posture for getting the peak, it could even be after the peak.



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- b) the following points and feelings

Straight Body (vertical spine + body weight equally spread over the 2 feet)

Fixation of your body on your hips (especially in your low back)

Low center of gravity (heavy & powerful belly, low shoulders & blades, flat chest, and stretch feeling in your trapezius)

Erected spine (flat nape)

Entire body in the shooting plan (shoulders above your hips & feet)

Head orientation (chin & nose pointed toward the target).

- c) maintenance of this preset posture while raising and drawing your bow.

2. Repeat at a blank butt, again during another **16 arrows**.

3. Alternate during **40 arrows** one arrow in the first situation (eyes closed), one arrow in the second situation (blank butt) and one arrow at a target

Volume: 15 warm-up arrows + 72 arrows total over the exercises = **87 arrows** over the session.

Session: General Body Balance.

of session: 1 of +/- 50 minutes.

Objective: Reduce natural body swinging and make faster the permanent body re-equilibration.

Description: Described in document entitled "[General Body Balance Program](#)". When appropriate implement each exercise during 30 seconds each.

TUESDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **13 arrows**.

Body Presetting

1. Close your eyes as soon as you grip your string, at this moment you are little bent down. Pursuit your sequence with eyes closed until you are straight up and at full draw, then continue your sequence with your eye(s) opened - **24 arrows**. While you have your eyes closed, be concentrated on:

- a) when and how you preset your body (main pyramid = the geometrical form between your aiming eye and your feet base). It could be before raising your bow, or after a pre-draw in direction of the floor or the target. For Compound archers who deform their posture for getting the peak, it could even be after the peak.

- b) the following points and feelings

Straight Body (vertical spine + body weight equally spread over the 2 feet)

Fixation of your body on your hips (especially in your low back)

Low center of gravity (heavy & powerful belly, low shoulders & blades, flat chest, and stretch feeling in your trapezius)

Erected spine (flat nape)

Entire body in the shooting plan (shoulders above your hips & feet)

Head orientation (chin & nose pointed toward the target).

- c) maintenance of this preset posture while raising and drawing your bow.

2. Same as above, with a stick (or arrow) pressing on your belly; the other end of the stick can be pressed against a wall or a partner – see picture "[Belly power](#)", or even the ground (you need a one meter long stick) – see picture "[Center of gravity with a stick](#)" – **20 arrows**



FITA Training SUGGESTIONS starting on **April 1, 2002.**

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3. Same as 1) but with eyes opened, shooting at a blank butt, with a Haki ball (slightly flattened) on the top of your head- see picture “[Motionless Head control](#)” – **24 arrows**

4. Same as 1) but watching yourself in a mirror, instead of having your eyes closed – see picture “[Working with a mirror](#)” – **24 arrows**

Note: All these picture are included in “[2002-1 Body Presetting](#)”

5. Same as 1) but with eyes opened, shooting at a blank butt – **16 arrows**

6. Same as above, but shooting at a target face – **18 arrows** .

Note: *for all the exercises with a mirror, the mirror should be at a place such that the archer has not to move his/her head to watch oneself. Therefore the mirror should be at the archer's face level, and very close from the aiming plan – about 10” space between the arrow axis and the edge of the mirror. A mirror on a tripod (or any type of stand) is perfect, otherwise you need an assistant.*

Volume: 13 Warm-up arrows + 126 arrows over the exercises = **139 arrows** over the session.

### **Session: Yoga.**

# of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasized during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

You can include a Zazen session. See the document entitled: “[Zazen](#)” attached to “[2002-18 Specific Strength 1](#)”

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## **WEDNESDAY**

### **Session: Shooting.**

# of sessions: 1

General warm-up and shooting warm-up – **16 arrows** .

### **TUNING**

Description: There are so many written and Audio-visual publications on this subject that we will not detail any tuning process here; it would be too long and repeat the information that you can easily find somewhere else. For instance you can use the tuning process described in the Easton catalog. If you have not yet this catalog, you can order it from the following website:  
<http://www.eastonarchery.com/>



## FITA Training SUGGESTIONS starting on **April 1**, 2002.

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Several bow makers also provides good advises, like the PSE Compound BowUser's guide:
www.pse-archery.com

Two already published documents may help you:

- * “[French Test](#)” has been published with “[2002-3 Raise & Draw Start](#)”
- * “[Tiller Adjustment](#)” has been published with “[2002-13 Stable Aiming](#)”

Volume: 16 warm-up arrows + up to 197 arrows for tuning = **213** arrows.

Note: The above number of arrows can vary a lot pending your need of tuning and adjustment. Strive to complete the session up to **213** arrows, for instance by better matching your back-up equipment to the equipment #1, or by scoring rounds, match simulations, skill development, ...

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour (see the important note below)

Description: **Long Duration - Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current Cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium				
Long	X			
Duration				

Today we propose a Cardio session made of “**Long Duration - Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

Session: General Body Balance.

of session: 1 of +/- 50 minutes.

As per Monday.

THURSDAY

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization,



FITA Training SUGGESTIONS starting on **April 1**, 2002.

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Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- \* *External visualization* = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.
- \* *Internal visualization* = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back...

### **Session: Job (or school) arrangements.**

Contact your boss to:

- inform him/her of your needs for your 2002 training and competition availability;
- give a copy of the tournament that you will attend;
- draft your main goals;
- Arrange any files/tasks that would need your follow-up and/or expertise while you will be away.

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## **FRIDAY**

### **Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **13 arrows** .

### **BODY PRESETTING**

Same as Tuesday – Please adapt the number of arrows per step for a total of **213** over the session.

### **Session: Strengthening.**

# of sessions: 1

Description: Implement 4 sets of 10 or more repetitions, according to the Endurance strength method with 40 to 60% of 1 MR (adapted from Letzelter in 1978) as follow:

- |                                                                             |                   |
|-----------------------------------------------------------------------------|-------------------|
| * 40% for the first set with weight “A”                                     | 14-20 repetitions |
| * 50-55% at the 2 <sup>nd</sup> set with weight “B” > “A”                   | 12-15 repetition  |
| * 45-50% at the 3 <sup>rd</sup> set with weight “C” such as “B” > “C” > “A” | 13-17 repetition  |
| * 55-60% at the 4 <sup>th</sup> set with weight “D” > “B”                   | 10-12 repetition  |

Rest between sets: 30 to 90 seconds.

Rest between exercises: 60 to 90 seconds.

Tempo (ratio of time for concentric & eccentric efforts): 3 / 3 sec.

For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce variations in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,



## FITA Training SUGGESTIONS starting on **April 1, 2002.**

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- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

We have not attached is a list of strengthening exercises since this is a period of general/overall strength development. Hence you can implement any of the common exercises for strengthening.

Since you have 3 strengthening sessions per week, you can target 3 groups of muscles, for instance :

Group # 1 : back, pectorals and neck

Group # 2 : Arms and shoulders

Group # 3 : Belt and legs

Do not hesitate in modifying these groups, nevertheless it is suggested to alternate one exercise for the agonist and one for the antagonists, for instance pectorals and back.

Recommendations:

- To priorities:
 - . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
 - . the stand-up position (apart from some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
 - . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
 - . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
 - . breathing out during the effort (concentric part) – for physiological reason;
- To avoid:
 - . the machines, which guide your motions - in archery we have to control and direct our action;
 - . positions that reduce body's involvement, like seating, lying .. – in archery all the body participates to the body stability during the effort (draw and full draw);
 - . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance,...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

Session: General Body Balance.

of session: 1 of +/- 50 minutes.

As per Monday.

SATURDAY



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**Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each "session". Repeat at least 3 sets per day.

Description: as the Thursday session

**Session: Cardio Maintenance.**

# of session: 1

Duration: 1:00 hour

Description: as per Wednesday

**Session: General Body Balance.**

# of session: 1 of +/- 50 minutes.

As per Monday.

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**SUNDAY**

**Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **11 arrows.**

**Body Aiming Adjustment #1.**

The following exercise is an adaptation for archery of a pistol shooting exercise.

1. Display a horizontal line across the butt (1" wide masking tape is OK).
  - a) Draw your bow back toward the left end on the line. At full draw move to get your sight moving SLOWLY along the horizontal line toward the right while getting your clicker/trigger & releasing - **8 arrows.**  
*Special attention:* Identify which part of your body allows your sight to follow the line
  - b) Same as a) but from right to left - **8 arrows.**  
*Special attention:* Identify which part of your body allows your sight to follow the line  
You should have realized that it is not your top body that allows this displacement.
2. Same with a vertical strip
  - a) from up to down - **8 arrows**
  - b) reverse - **8 arrows**  
*Special attention:* Identify which part of your body allows your sight to follow the line  
You should have identified that it comes from your waist or belly. Keep this in mind, especially for Field archers, also when it is windy (how to re-centre your sight after a gust of wind). If you think that your hips are involved in the body orientation adjustment, repeat the previous exercises sitting on a chair.
3. Same with the 2 diagonals
  - a) from high left to low right - **8 arrows**
  - b) reverse on one diagonal - **8 arrows**
  - c) from high right to low left - **8 arrows**
  - d) reverse on the other diagonal - **8 arrows**



**FITA Training SUGGESTIONS starting on April 1, 2002.**

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Let your relaxed top body “floating” on your powerful belly.

4. Same on a circle, you can use a target face and follow a line between 2 colors;

a) Clockwise - **16 arrows**

b) reverse - **16 arrows**

Let your relaxed top body “floating” on your powerful belly.

5. Same on a sinuous/doodled line; the length of each segment of the sinuous line should make you changing of direction at least once while at full draw

a) from one way - **16 arrows**

b) reverse - **16 arrows**

Let your relaxed top body “floating” on your powerful belly. Now you should have understood the meaning of the aiming method described as “*Let your sight floating over the aiming zone*”.

Volume: 11 warm-up arrows + 128 arrows over the exercises = **139 arrows** over the session.

Session: General Body Balance.

of session: 1 of +/- 50 minutes.

As per Monday



General Body Balance Program.

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The following program aims to improve your body stability in a standing position. So, your aiming eye will move less in the space, and you will get a more stable aiming picture, therefore your action to get the clicker/trigger will be more progressive/fluid.

Because this program is related to physiological changes, we recommend a MINIMUM of 3 sessions per week, during 4 weeks at least. Use the following duration for the majority of the exercises: 30 seconds / first session - 35 seconds / second session - 40 seconds / third session - 45 seconds / fourth session - 50 seconds / fifth session - 55 seconds / sixth session - 1 minute for the following sessions.

### **1. One foot in front of the other.**

Have your right heel just against your left toes, with your 2 feet flat on the floor, in a perfect alignment, like if you were walking on a string (but don't walk!). Straighten your back, lower your belly and your shoulders, keep relaxed hands/arms, find a stable balance on your 2 feet, then close your eyes. Stay alike during 30 seconds / first session - 35 seconds / second session - etc. ... Start over with the left heel in front of the right toes.

### **2. One foot stand-up.**

Have your right sole on your internal left knee. Straighten your back, lower your belly and your shoulders, keep relaxed hands/arms, find a stable balance on your left foot, then close your eyes. Stay alike during 30 seconds / first session - 35 seconds / second session - etc. ... Start over with the left sole on your internal right knee.

### **3. One foot plane.**

Stay on your left foot, lean your entire body forward until you are in one parallel plan to the floor from your head to your right foot, stretch out your arm at the sides, then close your eyes. Stay alike during 30 seconds / first session - 35 seconds / second session - etc. ... Start over on your right foot.

### **4. One foot reverse plane.**

Stay on your left foot, lean your entire body backward as far as you can while keeping your entire body in the same plan from your head to your right foot, stretch out your arm at the sides, then close your eyes. Stay alike during 30 seconds / first session - 35 seconds / second session - etc. ... Start over on your right foot.

### **5. One foot slow pivoting.**

Stay on your left foot, raise a bit your right foot by folding your right knee. Lower your shoulders and belly, then twist slowly and progressively your entire body from far on the left to far on the right, maintain all your body as a unit. During the allocated time, you can implement this exercise on a folded left knee, a stretched left knee, while moving your right foot in any direction, tottering your top body. Start over on your right foot.

### **6. Slow squats on toes**

## ***General Body Balance Program.***

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Get on your toes, implement very slow and progressive squats, with relaxed belly and shoulders. Your arms are very heavy, and will be lowered almost vertically until they touch your toes. Finish each raising by re-positioning your shoulders down and straightening your back.

General Body Balance Program.

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### **7. Ankles Twist**

Dance a bit! Move toward your left by twisting your ankles, just your ankle, don't twist from your hips. Your hips should be maintained above and parallel to your axis of displacement. When you twist from your ankles, raise alternatively your both heels and toes high. Move along a 4 meter line (or longer) back and forth, during 50 seconds / first session - 55 seconds / second session - etc. ...

The length of displacement, and the duration are indications only, select them until you feel a high burning effect in your ankle muscles.

### **8. One Ankle Twist**

Dance again! Same thing but on one foot, during 30 seconds / first session - 35 seconds / second session - etc. ...

Here too, the length of displacement, and the duration are indications only, select them until you feel a high burning effect in your ankle muscles.

Change for the other foot.

### **9. Isometric Front Squat**

Have a long step. Lower your body, until you get your front leg vertical, and your rear knee close from the floor. Lower your shoulders and belly, have your arms relaxed and your back straight, watch ahead, then close your eyes. Maintain the posture during 30 seconds / first session - 35 seconds / second session - etc. ...

Change for the other leg.

### **10. Balance on your toes**

On the edge of one step, stay on your toes with eyes closed during 30 seconds / first session - 35 seconds / second session - etc. ... Your calves must be stretched, i.e. your body should be maintain raised.

### **11. Balance on your heels**

On the edge of one step, stay on your heels. If you can, close your eyes during 30 seconds / first session - 35 seconds / second session - etc. ..

### **12. Balance on the toes of one foot**

On the edge of one step, stay on your left foot toes. If you can, close your eyes during 30 seconds / first session - 35 seconds / second session - etc. ... Your calves must be stretched, i.e. your body should be maintain raised.

Change for the other foot.

### **13. Balance on your heels**

On the edge of one step, stay on your left foot heel. If you can, close your eyes during 30 seconds / first session - 35 seconds / second session - etc. ..

Change for the other foot.

### **14. Balance on the external part of one foot**

## ***General Body Balance Program.***

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On the edge of one step, stay on your left foot. Only the external “half” of your left foot should be on the step, the internal “half” is out of the step. If you can, close your eyes, maintain the balance during 30 seconds / first session - 35 seconds / second session - etc. ...
Change for the right foot.

General Body Balance Program.

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### **15. Balance on the internal part of one foot**

On the edge of one step, stay on your left foot. Only the internal “half” of your left foot should be on the step, the external “half” is out of the step. If you can, close your eyes, maintain the balance during 30 seconds / first session - 35 seconds / second session - etc. ...

Change for the right foot.

### **16. Slow and continuous walking**

Very slowly - no more than 2 meters in one minutes - with your eyes closed, walk along a line on a CONTINUOUS motion, especially when you transfer your body weight from one foot to the other. Walk during at least 2 minutes during the first session, add 10 second per additional session.

### **17. Balance on one foot, the other one against a wall.**

Stance at about 20 cm from a wall, your back facing the wall.

Rise your right leg and put your right sole against the wall (not your back), with your right foreleg almost horizontal. Straighten your body if necessary, then close your eyes and maintain the balance during 30 seconds / first session - 35 seconds / second session - etc. ...

Change for the left foot.

### **18. Balance on an unbalanced platform**

Step on an unbalanced platform as follow:

- \* Diameter = 55 to 60 cm

- \* In the middle of this board, affixed under it a part (half) of a 20 cm ball (made of wood, plastic, ..)

- \* Stick anti-slipping strips on the top.

Maintain the balance during 2 minutes / first session - + 10 seconds / second session - + 10 seconds / third session - etc. ...

### **19. Trampoline**

If you have access to such a device, use it, Doctor Pavel JURAK (Czechoslovakia) shown the benefits of such exercise on the body balance of some National Elite Archers.

Due to our poor knowledge of that exercise, we cannot suggest any duration and any implementation. Any suggestion will be welcome.

### ***IMPORTANT:***

*As any training, we suggest to implement this program at least 3 times a week, during a minimum of 4 weeks for getting notable improvements.*

FITA Training SUGGESTIONS starting on **April 8**, 2002.

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** -** COMMENTS and NEWS ****

This is our 25th week of practice, also the second and last week with the following schedule :

Time sharing:	52-53% Shooting and 48-47% for other developments (9 hours).	
Total volume:	19 hours	per week
Shooting:	5 sessions per week of 2 hours each	10 hours
Cardio:	2 sessions per week of 1 hour each	= 2 hours
Yoga :	1 session per week of 1:20 hour each	= 1:20 hours
Strength:	1 maintenance session per week of 1:30 hour	= 1:30 hours
General Body balance:	5 sessions per week of 50 min.	= 4:10 hours
General Body Balance:	Exercises aiming the improvement of the upright position. During Yoga sessions, emphasize flexibility of the top body, to recover the flexibility level as before strengthening.	

Note:

The training plan shows shooting sessions of 2 hours each. In fact each session does not last 2 hours, since some sessions are:

- *light and shorter than 2 hours, for instance the one from Monday*
- *heavy and longer than 2 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2 hours should be considered as an **average**. Nevertheless we will not exceed the total of 10 hours of shooting per week (equivalent to 5 sessions of 2 hours).*

This week we will:

- Keep on developing our **General Body Balance** and our **Shooting adjustment Center**;
- Revise the way to raise and introduce the draw of the bow;

Next week we will have at our program:

- Strengthening the way to **raise and to start the draw** of the bow ;
- Revisit our sighting;
- Have a test;
- Start to improve our Body Balance while shooting. For this development you can prepare the wobbling board tubes and boards as per attached documents and illustrations: "[Material for Shooting Body Balance Development.doc](#)" – "[Wobbling board Heels-Toes.tif](#)" – "[Wobbling board Left-Right.tif](#)" – "[Cutting out the wobbling parts.tif](#)"

The first Outdoor tournament is schedule on April 29, 2002.

Be aware that FITA is re-designing its Website. In the future (I still do not know exactly when) the training tips should be accessible from a button on the Home page entitled "**Coaching**".

Have a good week of practice!

On behalf of the **FITA Coaches Committee**:



FITA Training SUGGESTIONS starting on **April 15, 2002.**

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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* -\*\* COMMENTS and NEWS \*\***

This is our 26<sup>th</sup> week of practice, also the first according to the following schedule. That schedule will last one month (until mid-May):

|                       |                                                                                                                                  |             |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------|
| Time sharing:         | Shooting <b>60 %</b> and <b>40 %</b> for other developments (8 hours).                                                           |             |
| Total volume:         | <b>20 hours</b> per week                                                                                                         |             |
| Shooting:             | 5 sessions per week of <b>2 hour</b> each (including 3 SHOOTING BODY BALANCE sessions), <u>and</u> <b>one</b> test or tournament | = 12 hours  |
| Cardio:               | 2 sessions per week of <b>1 hour</b> each                                                                                        | = 2 hours   |
| Yoga :                | 1 session per week of <b>1:30 hour</b> each                                                                                      | = 1:30 hour |
| Strength:             | 1 maintenance session per week of <b>1:30 hour</b>                                                                               | = 1:30 hour |
| General Body balance: | 3 sessions per week of <b>1 hour</b> (out of shooting)                                                                           | = 3 hours   |

**Shooting Body Balance:** *Mainly made of shots from an unstable platforms.*

*Note:*

*The training plan shows shooting sessions of 2 hours each. In fact each session does not last 2 hours, since some sessions are:*

- *light and shorter than 2 hours, for instance the one from Monday*
- *heavy and longer than 2 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2 hours should be considered as an **average**. Nevertheless we will not exceed the total of 12 hours of shooting per week (equivalent to 6 sessions of 2 hours).*

This week we will:

- Start the development of our **Body Balance** while shooting;
- Pursuit the revision of the way to raise and introduce the draw of the bow;

Next week we will :

- Have a similar program ;
- Strengthen our draw technique with hands synchronization.
- Have a test

The first Outdoor tournament is schedule on April 29, 2002.

Be aware that FITA is re-designing its Website. In the future (I still do not know exactly when) the training tips should be accessible from a button on the Home page entitled "**Coaching**".

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

**Pascal COLMAIRE**

*FITA Development Manager*



FITA Training SUGGESTIONS starting on **April 22, 2002.**

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** -** COMMENTS and NEWS ****

This is our 27th week of practice. Currently we are following the schedule below that will last until mid-May:

Time sharing:	Shooting 60 % and 40 % for other developments (8 hours).	
Total volume:	20 hours per week	
Shooting:	5 sessions per week of 2 hour each (including 3 SHOOTING BODY BALANCE sessions), <u>and one</u> test or tournament	= 12 hours
Cardio:	2 sessions per week of 1 hour each	= 2 hours
Yoga :	1 session per week of 1:30 hour each	= 1:30 hour
Strength:	1 maintenance session per week of 1:30 hour	= 1:30 hour
General Body balance:	3 sessions per week of 1 hour (out of shooting)	= 3 hours
<i>Shooting Body Balance: Mainly made of shots from unstable platforms.</i>		

Note:

The training plan shows shooting sessions of 2 hours each. In fact each session does not last 2 hours, since some sessions are:

- *light and shorter than 2 hours, for instance the one from Monday*
- *heavy and longer than 2 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2 hours should be considered as an **average**. Nevertheless we will not exceed the total of 12 hours of shooting per week (equivalent to 6 sessions of 2 hours).*

This week we will:

- Pursuit the development of our **Body Balance** while shooting;
- Revise our draw.

Next week we will :

- Have a similar program ;
- Attend our first Outdoor tournament of the year /Reminder: this is a training plan for archers from North Hemisphere).

Be aware that FITA is re-designing its Website. In the future (I still do not know exactly when) the training tips should be accessible from a button on the Home page entitled "**Coaching**".

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

Pascal COLMAIRE

FITA Development Manager



FITA Training SUGGESTIONS starting on April 22, 2002.

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***The week at a glance:***

| <b>Days</b>      | <b>#</b> | <b>Session Type</b> | <b>Subject / Skill</b>       | <b>Volume</b>           |
|------------------|----------|---------------------|------------------------------|-------------------------|
| <b>Monday</b>    | 1        | Shooting            | Body Balance                 | 90 arrows - 1:05 hour   |
| <b>Tuesday</b>   | 1        | Shooting            | Body Balance                 | 148 arrows – 1:45 hour  |
|                  | 1        | Yoga                | As per Teacher               | 1:30 hour               |
| <b>Wednesday</b> | 1        | Shooting            | Draw & Hands Synchronization | 234 arrows – 2:50 hour  |
|                  | 1        | Cardio              | Aerobic Capacity             | 1:00 hour               |
|                  | 1        | Body Balance        | General                      | 1:00 hour               |
| <b>Thursday</b>  |          | Visualization       |                              | 3 times a day           |
| <b>Friday</b>    | 1        | Shooting            | Sight adjustment             | 234 arrows – 2:50 hours |
|                  | 1        | Strengthening       | Maintenance – Maximal        | 1:30 hour               |
|                  | 1        | Body Balance        | General                      | 1:00 hour               |
| <b>Saturday</b>  | 1        | Shooting            | Body Balance                 | 90 arrows – 1:05 hour   |
|                  | 1        | Cardio              | Aerobic Capacity             | 1:00 hour               |
| <b>Sunday</b>    | 1        | Shooting            | Test                         | 148 arrows – 1:45 hours |
|                  | 1        | Body Balance        | General                      | 1:00 hour               |

**Note:**

The shooting rhythm is now up to 83 arrows per hour. If you cannot follow this rhythm, just extend the duration of your sessions. **DO NOT LOWER THE QUALITY OF YOUR SHOOT** for reaching this shooting rhythm! Nevertheless keep in mind that our objective is to shoot at least 300 arrows per session, twice a week; it would take 3:45 hours per session at a rhythm of 80 arrows per hour! Hence we will progressively increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase. Nevertheless you should consider to:

- reduce your rest time between arrows;
- speed up the recuperation process of the arrows that you have shot;
- shoot more arrows per end, to reduce the number of travels for recuperating your arrows. 9 arrows per end are suggested.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

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**MONDAY**

**Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **18 arrows.**

**BODY STABILITY**

*Description:* Shoot from an unstable platform during one hour. Examples of platforms:

- \* wobble boards: one wobbling from toes to heels, the other one from left to right,
- \* a board on one tube (your 2 feet on that board), use different sizes of tubes.
- \* 2 boards, each one on a tube (and 1 foot on each board)

Note 1: the tubes should be soft, not fully inflated.

Note 2: if you shoot Outdoor, put the wobble boards on a flat board laid down on the ground



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Material for Shooting Body Balance Development (the design of the wobble boards is attached to the training tips of last week "2002-25 Body Balance 2") :

1. One direction unbalanced platform - from heels to toes.
 - Board size = 40 x 70 cm
 - At 50 cm apart from each other, affix a part of a 56cm (22") wooden disk
 - Use a non-slipping board
2. One direction unbalanced platform – from left to right.
 - Board size = 40 x 70 cm
 - At 25 cm apart from each other, affix a part a 86 cm (34") wooden disk
 - Use a non-slipping board
3. Balance on an inflated tube.

Pending your current body stability, use one of the following tube sizes, or better organize a circuit with these 3 sizes.

 - 8, 10 and 12 inches (this is the second number that you can read on a regular tire reference, for instance: 145 - 12;
 - Use a non-slipping board

And an air pomp!

Volume: 18 Warm-up arrows + 72 arrows shot from the wobble boards and tubes = **90 arrows** over the session.

TUESDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **18 arrows** .

BODY STABILITY

Description: Same as yesterday

Volume: 18 Warm-up arrows + 130 arrows shot from the wobble board and the tubes = **148 arrows** over the session.

Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasized during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...



FITA Training SUGGESTIONS starting on **April 22, 2002.**

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You can include a Zazen session. See the document entitled: “Zazen” attached to “2002-18 Specific Strength 1”

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**WEDNESDAY**

**Session: Shooting.**

# of sessions: 1

General warm-up and shooting warm-up – **18 arrows.**

**HANDS SYNCHRONIZATION**

1 At different shooting distances, strive to finish your draw with the sight in the middle of the target.

2 Change the shooting distance very often, every end, maximal 2 ends.

**Volume:** 18 warm-up arrows + 216 arrows over the exercises = **234 arrows** over the session.

**Session: Cardio Maintenance.**

# of session: 1

**Duration:** 1:00 hour (see the important note below)

**Description:** *Long Duration - Low Intensity*

**Note:** It is difficult to provide accurate suggestions in this matter, because pending:

- \* your current Cardio development,
  - \* the activity you have chosen,
  - \* your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|                 | Low | Medium | High | Intensity |
|-----------------|-----|--------|------|-----------|
| Short           |     |        |      |           |
| Medium          |     |        |      |           |
| Long            | X   |        |      |           |
| <b>Duration</b> |     |        |      |           |

Today we propose a Cardio session made of “*Long Duration - Low Intensity*” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

**Session: General Body Balance.**

# of session: 1 of +/- 1 hour.

**Objective:** Reduce natural body swinging and make faster the permanent body re-equilibration.

**Description:** Described in document entitled “General Body Balance Program” included in “2002-24 Body Balance 1.doc”. When appropriate implement each exercise during **45 seconds** each.



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THURSDAY

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- * *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- * *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*

FRIDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **18 arrows.**

ADJUSTMENT OF THE SIGHT BAR

Objective: Get the same windage whatever the height of the sight pin.

1. Shoot and adjust your sight at the longest official shooting distance (90 or 70 meters). Take note of this sight position.
2. Move to the shorter shooting distance (30 meters for target archers and 10 meters for Field archers). Change the height of your sight accordingly, but NOT the windage. Take note of the new sight height.
3. From this step, alternate shots from the longest distance and from the shortest distance. During these shots do not change the windage of your sight. but change the vertical canting of your sight bar until your arrows hit the vertical axis of the target whatever the shooting distance.
For instance if you shoot left at the shortest distance, cant the top of the sight bar to the left, and start over the shots from the longest and the shortest distance.

ADJUSTMENT OF THE EXTENSION SIGHT BAR.

Objective: Get the same windage regardless the position of the extension sight bar.

1. Shoot and adjust your sight at the longest official shooting distance (90 or 70 meters). Strive to find the “best” position of your sight extension bar. If you like a much extended sight, keep **at least** 4 cm between the bottom of your sight ring and the top of your arrow, so in case of rain you will be able to lower your sight. Take note of this sight position (height and extension).
2. Draw a vertical line passing through the centre of the target face that you were aiming at the long distance
3. Move your sight out at the maximum extension for the shortest shooting distance (30 meters for target archers and 10 meters for Field archers). Do not change the height and windage of your sight.
4. Move very close to the target (+/- 5 meters) and shoot while aiming at the vertical line (a little lower than the regular height for the center of the target, i.e. lower than 1.3 meter).
5. Move back, as close as possible of the shortest shooting distance (30 meters for target archers and 10 meters for Field archers), but while aiming at the bottom of the vertical line and still hitting the top of the target butt (with a safety zone of +/- 0.3 m, i.e. your arrows should not hit an horizontal band of 30 cm located to the top of the buttress).



FITA Training SUGGESTIONS starting on **April 22, 2002.**

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6. From this step, alternate shots:

- from the longest distance with your extension bar moved in
- and from the “shortest distance” (the one you reach at the step #5) with your extension sight bar moved out.

During these shots do not change the height and windage of your sight. Add a thickness between the front or the back of the base of your sight and your bow riser until your arrows hit the vertical axis of the target whatever the shooting distance and the position of the sight bar extension.

For instance if you shoot left at shortest distance, add a thickness under the back part of the sight base, and start over the shots from the longest distance and the shortest distances.

*Volume:* 18 warm-up arrows + 216 arrows over the exercises = **234 arrows** over the session.

*Note:* if you do not need 216 arrows to adjust your sight, complete the session with the sight adjustment exercises from last week or with scoring rounds or simulated phases of a competition.

### **Session: Strengthening (maintenance).**

# of sessions: 1

Duration : about 1:30 hour

#### **Maximal Eccentric Contractions Method**

*Goal:* to maintain your maximal strength (neural adaptation with little muscular mass development).

*Description:*

- \* # of sets: 3
- \* of repetitions : 3 to 6 (5 is a good number)
- \* Intensity: As heavy as you can, up to 150 % of your maximal R.M. You can ask the help of an assistant for the concentric motions, but should implement the eccentric part of the effort (at least most of it) by yourself;
- \* Rest between sets and repetitions : 3 minutes
- \* Tempo: natural

For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

Recommendations:

To prioritize:

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (except some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;



## FITA Training SUGGESTIONS starting on **April 22, 2002.**

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- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;
- . it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back

To avoid:

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying.. – in archery all the body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

Session: General Body Balance.

of session: 1 of +/- 1 hour.

As per Wednesday.

SATURDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **18 arrows.**

BODY STABILITY

Description: Same as Monday

Volume: 18 warm-up arrows + 72 arrows shot from the wobble board and tubes = **90 arrows** over the session.

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour

Description: as per Wednesday



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## SUNDAY

### Session: Shooting

# of sessions: 1

TEST (or TOURNAMENT)

- *if test:* 27 warm-up arrows + 121 arrows over the test :
  - half a FITA round = 72 arrows;
  - 1 x 18 arrow match;
  - 2 x 12 arrow match
  - 7 shoot-off arrows= about **148 arrows** over the session.
- *if tournament* - pending the format.

### Session: General Body Balance.

# of session: 1 of +/- 1 hour.

*As per Wednesday*



**FITA Training SUGGESTIONS starting on April 15, 2002.**

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The week at a glance:

Days	#	Session Type	Subject / Skill	Volume
Monday	1	Shooting	Body Balance	89 arrows - 1:05 hour
Tuesday	1	Shooting	Body Balance	145 arrows – 1:45 hour
	1	Yoga	As per Teacher	1:30 hour
Wednesday	1	Shooting	Raise & Draw start	227 arrows – 2:45 hour
	1	Cardio	Aerobic Capacity	1:00 hour
	1	Body Balance	General	1:00 hour
Thursday		Visualization		3 times a day
Friday	1	Shooting	Sight adjustment	227 arrows – 2:45 hours
	1	Strengthening	Maintenance – Endurance	1:30 hour
	1	Body Balance	General	1:00 hour
Saturday	1	Shooting	Body Balance	89 arrows – 1:05 hour
	1	Cardio	Aerobic Capacity	1:00 hour
Sunday	1	Shooting	Test	145 arrows – 1:45 hours
	1	Body Balance	General	1:00 hour

Note #1:

The shooting rhythm is now up to 82-83 arrows per hour. If you cannot follow this rhythm, just extend the duration of your sessions. **DO NOT LOWER THE QUALITY OF YOUR SHOOT** for reaching this shooting rhythm! Nevertheless keep in mind that our objective is to shoot at least 300 arrows per session, twice a week; it would take 3:45 hours per session at a rhythm of 80 arrows per hour! Hence we will progressively increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase. Nevertheless you should consider to:

- reduce your rest time between arrows;
- speed up the recuperation process of the arrows that you have shot;
- shoot more arrows per end, to reduce the number of travels for recuperating your arrows. 9 arrows per end are suggested.

Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.

MONDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **18 arrows.**

BODY STABILITY

Description: Shoot from an unstable platform during one hour. Examples of platforms:

- * wobble boards: one wobbling from toes to heels, the other one from left to right,
- * a board on one tube (your 2 feet on that board), use different sizes of tubes.
- * 2 boards, each one on a tube (and 1 foot on each board)

Note 1: the tubes should be soft, not fully inflated.

Note 2: if you shoot Outdoor, put the wobble boards on a flat board laid down on the ground




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**Material for Shooting Body Balance Development** (the design of the wobble boards is attached to the training tips of last week "2002-25 Body Balance 2") :

**1. One direction unbalanced platform - from heels to toes.**

- Board size = 40 x 70 cm
- At 50 cm apart from each other, affix a part of a 56cm (22") wooden disk
- Use a non-slipping board

**2. One direction unbalanced platform – from left to right.**

- Board size = 40 x 70 cm
- At 25 cm apart from each other, affix a part a 86 cm (34") wooden disk
- Use a non-slipping board

**3. Balance on an inflated tube.**

Pending your current body stability, use one of the following tube sizes, or better organise a circuit with these 3 sizes.

- 8, 10 and 12 inches (this is the second number that you can read on a regular tire reference, for instance: 145 - 12;
- Use a non-slipping board

And an air pomp!

**Volume:** 18 Warm-up arrows + 71 arrows shot from the wobble boards and tubes = **89 arrows** over the session.

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## **TUESDAY**

### **Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **18 arrows** .

#### **BODY STABILITY**

*Description:* Same as yesterday

**Volume:** 18 Warm-up arrows + 127 arrows shot from the wobble board and the tubes = **145 arrows** over the session.

### **Session: Yoga.**

# of sessions: 1

*Description:* We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasized during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...



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You can include a Zazen session. See the document entitled: “Zazen” attached to “2002-18 Specific Strength 1”

WEDNESDAY

Session: Shooting.

of sessions: 1

General warm-up and shooting warm-up – **18 arrows.**

RAISING AND DRAW BEGINNING

1. Through the following simulations strive to implement a SMOOTH SEQUENCE of your raising and drawing. All the illustrations of this session are in “[2002-25 Body Balance 2.doc](#)”
 - 1.1. Have your hand/fingers interlaced: palms up, arms against the front of your thighs, your arms are slightly curved at the elbow level. Lower your shoulders by using your pectorals, feel your trapezius stretched. Raise your arm up in front of you as high as you can maintain your shoulders DOWN. You should finish with your arms (the arm part, not the forearm) raised at an angle of about 45 degrees with your body (vertical). See illustration entitled “[Maxi height mimics.bmp](#)”. This means that we can raise our arms up to +/- 45 degrees, without raising our shoulders up. Now separate your hands, and move your arms down and laterally, WITHOUT changing the curve of your arms. Feel that you open your arms as a fan. Feel that the opening notion comes from your shoulders, which move down and apart, also feel the “opening” of your rib cage, a kind of thorax expansion – **12 repetitions**
 - 1.2. Simulate the bow rising, while maintaining your shoulders as low as possible. Once raised up, notice that your string-arm (just the arm, not the forearm) makes an angle of about 45 degrees with your body.). See illustration entitled “[Raise mimics in mirror.bmp](#)”. At this step, your forearm is at about your eyes level, as well as your 2 hands and the imaginary arrow, this unit almost parallel to the floor. Continue by simulating a draw, changing the curve of your arms as less as possible to avoid to use them for the draw action. Feel that the opening notion comes from your shoulders, which move own and apart, also feel the “opening” of your rib cage, a kind of thorax expansion. Focus on the BEGINNING of the draw – **15 repetitions**
 - 1.3. Repeat the previous simulation with an elastic band passing around your string elbow, and in your bow hand. See illustration entitled “[Raise mimic with band and a mirror.doc](#)” – **20 repetitions**
2. From now, the exercises are while shooting. Implement your raising & drawing sequence with eyes closed. Open your eyes toward the end of the draw, or even at full draw - **27 arrows.**
 - * Start the draw effort by lowering & spreading apart the shoulders
 - * Continue to take care to the previous work, i.e. your attention should follow the following path:
 - start by lowering your center of Gravity (heavy belt), and feel a “good” balance on your feet
 - lower your shoulders
 - stretch up your head, while watching at the targetAt this step your top triangle (aiming eye, shoulders) is PRE-SET
 - Raise your arms & bow by maintaining this pre-set form
 - Refine the pre-set form, especially the top pyramid
3. Implement your raising & drawing sequence while watching yourself in a mirror. Watch at the butt toward the end of the draw, or even at full draw - **27 arrows.** See picture entitled “[Rise watching bow shoulder.jpg](#)”



FITA Training SUGGESTIONS starting on April 15, 2002.

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4. Implement your raising & drawing sequence with eyes up and blurred. . Watch at the butt toward the end of the draw, or even at full draw - **36 arrows**.
5. Implement your raising & drawing sequence while watching at a blank butt. Do not focus on one area of the butt, be like a spectator of the motions of your sight on the butt - **36 arrows**.
6. Implement your raising & drawing sequence while shooting at a face - **36 arrows**.

*Volume:* 18 warm-up arrows + 47 simulations + 162 arrows over the exercises = **227 arrows** over the session.

**Session: Cardio Maintenance.**

*# of session:* 1

*Duration:* 1:00 hour (see the important note below)

*Description:* **Long Duration - Low Intensity**

*Note:* It is difficult to provide accurate suggestions in this matter, because pending:

- \* your current Cardio development,
  - \* the activity you have chosen,
  - \* your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   |     |        |      |           |
| Long     | X   |        |      |           |
| Duration |     |        |      |           |

Today we propose a Cardio session made of “**Long Duration - Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

**Session: General Body Balance.**

*# of session:* 1 of +/- 1 hour.

*Objective:* Reduce natural body swinging and make faster the permanent body re-equilibration.

*Description:* Described in document entitled “[General Body Balance Program](#)” included in “[2002-24 Body Balance 1.doc](#)”. When appropriate implement each exercise during **40 seconds** each.

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**THURSDAY**

**Session: Mimics / Visualization.**



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of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*

* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back...*

FRIDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **11 arrows.**

SIGHT ADJUSTMENT IN HEIGHT

Description: Refinement of the sight adjustment knowledge.

At one official distance, 30 m for instance:

- adjust your sight to group your arrows around the center of the face – **9 arrows.** Record the sight position.
- move your sight in one way (up for example), until you group your arrows roughly in the 5 zone (at 6 o’ clock in our example) – **9 arrows.** Record how much you have moved (up) your sight.
- divide the length of the above distance (how much you have moved your sight up) by 5, and you get a rough guess of how much you will have to move your sight (in height in our example) per zone. This average per zone is valid for correcting any height deviation below the centre of the target face.
- Start over in the opposite direction (down) to confirm – 3 arrows to verify the sighting + 6 arrows to hit in the 5 zone (at 12 o’ clock) - **9 arrows.**
- Start over at another official distance, 50 m for instance – **27 arrows.**
- Start over at another official distance, 60/70 m for instance – **27 arrows**
- Start over at another official distance, 90/70 m for instance – **27 arrows**

WINDAGE SIGHT ADJUSTMENT

Description: Refinement of the sight adjustment knowledge.

At one official distance, 30 m for instance:

- adjust your sight to group your arrows around the center of the face – **9 arrows.** Record the sight position.
- move your sight in one way (left for example), until you group your arrows roughly in the 5 zone (at 3 o’ clock in our example) – **9 arrows.** Record how much you have moved (left) your sight.
- divide the length of the above distance (how much you have moved your sight left) by 5, and you get a rough guess of how much you will have to move your sight (in windage in our example) per zone. This average per zone is valid for correcting any windage deviation off the center of the target face.
- Start over in the opposite direction (right) to confirm – 3arrows to verify the sighting + 6 arrows to hit in the 5 zone (at 9 o’ clock) - **9 arrows.**
- Start over at another official distance, 50 m for instance – **27 arrows.**
- Start over at another official distance, 60/70 m for instance – **27 arrows**



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l) Start over at another official distance, 90/70 m for instance – **27** arrows

*Volume:* 11 warm-up arrows + 216 arrows over the exercises = **227 arrows** over the session.

### **Session: Strengthening (maintenance).**

# of sessions: 1

Duration : about 1:30 hour

*Description:* At least 3 sets of 10-12 reps. of each exercise. Since there is a maintenance purpose it is recommended to:

- changes these exercises very often, for instance at each session;
- select “complex” exercises, e.g. involving more than one join.

For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

Recommendations:

To prioritize:

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (excepted some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;
- . it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back

To avoid:

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying .. – in archery all the body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;



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Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance,...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

Session: General Body Balance.

of session: 1 of +/- 1 hour.

As per Wednesday.

SATURDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **18 arrows** .

BODY STABILITY

Description: Same as Monday

Volume: 18 warm-up arrows + 71 arrows shot from the wobble board and tubes = **89 arrows** over the session.

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour

Description: as per Wednesday

SUNDAY

Session: Shooting

of sessions: 1

TEST (or TOURNAMENT)

- *if test:* 27 warm-up arrows + 118 arrows over the test :
 - half a FITA round = 72 arrows;
 - 1 x 18 arrow match;
 - 2 x 12 arrow match
 - 4 shoot-off arrows= about **145 arrows** over the session.
- *if tournament* - pending the format.

Session: General Body Balance.

of session: 1 of +/- 1 hour.

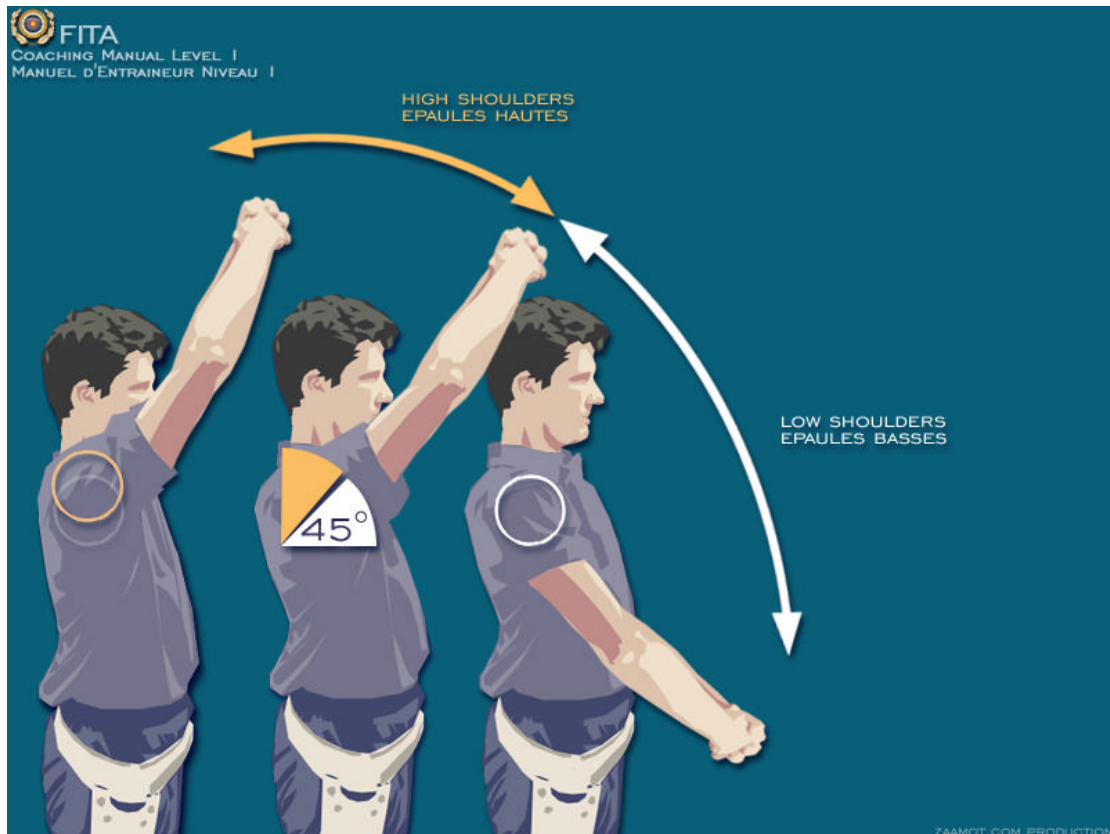


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*As per Wednesday*



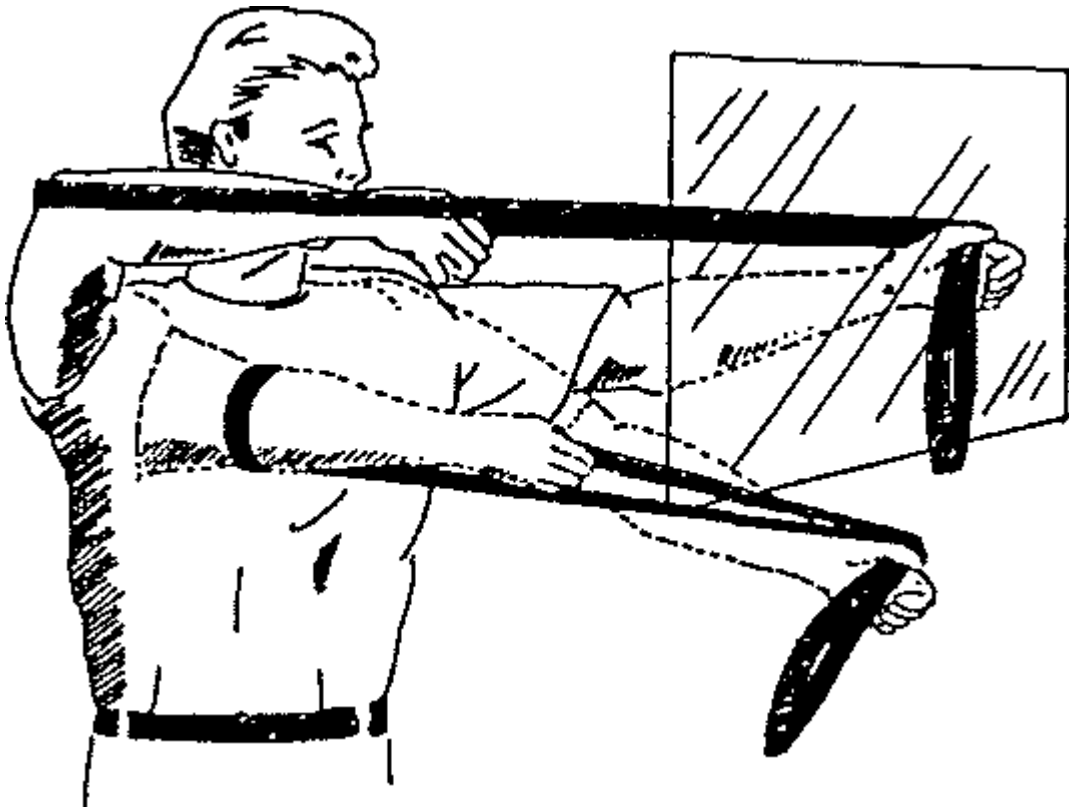


Maxi height mimics



Raise mimics in mirror.bmp





[Raise mimic with band and a mirror.doc](#)



[Rise watching bow shoulder.jpg](#)

**FITA** Training SUGGESTIONS starting on **April 8**, 2002.

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Pascal COLMAIRE

FITA Development Manager



FITA Training SUGGESTIONS starting on April 8, 2002.

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***The week at a glance:***

| <b>Days</b>      | <b>#</b>    | <b>Session Type</b>                       | <b>Subject / Skill</b>                           | <b>Volume</b>                                     |
|------------------|-------------|-------------------------------------------|--------------------------------------------------|---------------------------------------------------|
| <b>Monday</b>    | 1<br>1      | Shooting<br>Body Balance                  | Shooting adjustment center<br>General            | 88 arrows - 1:05 hour<br>0:50 hour                |
| <b>Tuesday</b>   | 1<br>1      | Shooting<br>Yoga                          | Raising the bow<br>As per Teacher                | 142 arrows – 1:45 hour<br>1:20 hour               |
| <b>Wednesday</b> | 1<br>1<br>1 | Shooting<br>Cardio<br>Body Balance        | Moving center<br>Aerobic Capacity<br>General     | 220 arrows – 2:45 hour<br>1:00 hour<br>0:50 hour  |
| <b>Thursday</b>  |             | Visualization<br>Club arrangements        |                                                  | 3 times a day                                     |
| <b>Friday</b>    | 1<br>1<br>1 | Shooting<br>Strengthening<br>Body Balance | Draw start<br>Maintenance - Endurance<br>General | 220 arrows – 2:45 hours<br>1:30 hour<br>0:50 hour |
| <b>Saturday</b>  | 1<br>1<br>1 | Visualization<br>Cardio<br>Body Balance   | Aerobic Capacity<br>General                      | 3 times a day<br>1:00 hour<br>0:50 hour           |
| <b>Sunday</b>    | 1<br>1      | Shooting<br>Body Balance                  | Test<br>General                                  | 142 arrows – 1:45 hours<br>0:50 hour              |

**Note #1:**

The shooting rhythm is increased, reaching +/- 80 arrows per hour. Keep in mind that the shooting rhythm will again increase in the future, because our objective is to shoot at least 300 arrows per session, twice a week. It would take 3:45 hours per session at this rhythm; hence we will progressively increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase. Nevertheless you should consider to:

- reduce your rest time between arrows;
- speed up the recuperation process of the arrows that you have shot;
- shoot more arrows per end, to reduce the number of travels for recuperating your arrows. 8 or 9 arrows per end are suggested.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

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**MONDAY**

**Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **12 arrows.**

**Moving Center – Eyes closed**

For the following exercise you need an assistant. This assistant could be a coach, or another archer with whom you agree to shoot alternatively. Since the following exercises are implemented eyes closed, the assistant is in charge to check if you do not deviate too much to ensure that the arrow will hit the butt.

At 2 or 3 meters from a blank butt draw your bow back toward 20 cm from the left edge of the butt. At full draw, close your eyes and move SLIGHTLY and SLOWLY your top body to get your sight (that you do not see since you have your eyes closed) moving along:



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1. an imaginary horizontal line toward:
 - a) the **right** while getting your clicker/trigger & releasing - **5 arrows** .
Special attention: Feel that your hips and legs do not move. Only your waist should allow this slight drifting of your body.
 If you feel that your hips moving, implement this exercise sitting on a chair.
 - b) Same as 1) but from right to **left** - **5 arrows** .
Special attention: Same. Feel your top body “floating” on your belly.
2. an imaginary vertical line
 - a) from up to down - **5 arrows** .
 - b) reverse - **5 arrows** .
Special attention: Same . Relax your top body as much as you can
3. two imaginary diagonals
 - a) from high left to low right - **5 arrows** .
 - b) reverse on one diagonal - **5 arrows** .
 - c) from high right to low left - **5 arrows** .
 - d) reverse on the other diagonal - **5 arrows** .
4. around an imaginary circle:
 - a) Clockwise - **5 arrows** .
 - b) reverse - **5 arrows** .
5. in any direction, like along an imaginary sinuous line:
 - a) from one way - **8 arrows** .
 - b) reverse - **8 arrows** .
6. Finish your session by shooting **10 arrows** at a blank butt with your eyes open.

Volume: 12 warm-up arrows + 66 over the exercises = **88 arrows** over the session

Session: General Body Balance.

of session: 1 of +/- 50 minutes.

Objective: Reduce natural body swinging and make faster the permanent body re-equilibration.

Description: Described in document entitled “[General Body Balance Program](#)”. When appropriate implement each exercise during **35 seconds** each.

TUESDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **16 arrows**.

RAISING.

Pictures of this sessions have already been published with “[2002-3 Raise & Draw Start.doc](#)”

1. Simulations:



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- 1.1. Have your hand/fingers interlaced: palms up, arms against the front of your thighs, your arms are slightly curved at the elbow level. Lower your shoulders by using your pectorals, feel your trapezius stretched. Raise your arm up in front of you as high as you can maintain your shoulders DOWN. You should finish with your arms (the arm part, not the forearm) raised at an angle of about 45 degrees with your body (vertical). See illustration entitled "[Maxi height mimics.bmp](#)". This means that we can raise our arms up to +/- 45 degrees, without raising our shoulders up – **10 repetitions**
- 1.2. Simulate the bow rising, while maintaining your shoulders as low as possible. Once raised up, notice that your string-arm (just the arm, not the forearm) makes an angle of about 45 degrees with your body. ). See illustration entitled "[Raise mimics in mirror.bmp](#)". At this step, your forearm is at about your eyes level, as well as your 2 hands and the imaginary arrow, this unit almost parallel to the floor – **10 repetitions**
- 1.3. Repeat the previous simulation with an elastic band passing around your string elbow, and in your bow hand – **10 repetitions** . See illustration entitled "[Raise mimic with band and a mirror.doc](#)"

Note: All this session long, continue to take care to the previous work, i.e. your attention should follow the following path:

*Straight Body* (vertical spine + body weight equally spread over the 2 feet)

*Fixation of your body on your hips* (especially in your low back)

*Low center of gravity* (heavy & powerful belly, low shoulders & blades, flat chest, and stretch feeling in your trapezius)

*Erected spine* (flat nape)

*Entire body in the shooting plan* (shoulders above your hips & feet)

*Head orientation* (chin & nose pointed toward the target).

All these steps pre-set your entire body, including your top triangle (triangle between your aiming eye and your 2 shoulders) that you will strive to maintain as it is during the rising and the draw of your bow.

## 2. While shooting

- 2.1. While shooting, watch the top part of your bow-arm while raising your bow; watch your bow shoulder if you can, feel your bow shoulder and blade maintained as low as possible. Once raised watch at the butt and draw – **16 arrows**. See picture entitled "[Rise watching bow shoulder.jpg](#)"
- 2.2. Same, but watch yourself raising your bow shoulder in a mirror – **16 arrows**. See picture entitled "[Raising bow with mirror.doc](#)"
- 2.3. Same as #1 but close your eyes instead of watching your bow shoulder. Focus on the feeling of a low bow shoulder and blade – **16 arrows**.
- 2.4. Same, but now with eyes up - blurred watching – **16 arrows**.
- 2.5. Same, but watching at a blank butt – **16 arrows**
- 2.6. Same, but shooting at a target face – **16 arrows**.

Volume: 16 Warm-up arrows + 30 simulations + 96 arrows over the exercises = **142 arrows** (& simulations) over the session.

## Session: Yoga.

# of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;



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- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasized during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

You can include a Zazen session. See the document entitled: “Zazen” attached to “2002-18 Specific Strength 1”

WEDNESDAY

Session: Shooting.

of sessions: 1

General warm-up and shooting warm-up – **12 arrows**.

MOVING CENTER WITH WEIGHTS

Description: Similar as “**Moving Centre for aiming #1**” that we have implemented last Sunday but with one weight on each of your wrists.

1. Display a horizontal line across the butt (1” wide masking tape will do).
 - a) Draw your bow back toward the left end on the line. At full draw move to get your sight moving SLOWLY along the horizontal line toward the right while getting your clicker/trigger & releasing - **16 arrows**.
Special attention: Identify which part of your body allows your sight to follow the line
 - b) Same as a) but from right to left - **16 arrows**.
Special attention: Identify which part of your body allows your sight to follow the line
You should have realized that it is not your top body that allows this displacement.
2. Same with a vertical strip
 - c) from up to down - **16 arrows**
 - d) reverse - **16 arrows**
Special attention: Identify which part of your body allows your sight to follow the line
You should have identified that it comes from your waist or belly. Keep this in mind, especially for Field archers, also when it is windy (how to re-centre your sight after a gust of wind). If you think that your hips are involved in the body orientation adjustment, repeat the previous exercises sitting on a chair.
3. Same with the 2 diagonals
 - e) from high left to low right - **16 arrows**
 - f) reverse on one diagonal - **16 arrows**
 - g) from high right to low left - **16 arrows**
 - h) reverse on the other diagonal - **16 arrows**



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Let your relaxed top body “floating” on your powerful belly.

4. Same on a circle, you can use a target face and follow a line between 2 colors;

i) Clockwise - **20 arrows**

j) reverse - **20 arrows**

Let your relaxed top body “floating” on your powerful belly.

5. Same on a sinuous/doodled line; the length of each segment of the sinuous line should make you changing of direction at least once while at full draw

k) from one way - **20 arrows**

l) reverse - **20 arrows**

Let your relaxed top body “floating” on your powerful belly. Now you should have understood the meaning of the aiming method described as “*Let your sight floating over the aiming zone*”.

Volume: 12 warm-up arrows + 208 arrows over the exercises = **220 arrows** over the session.

**Session: Cardio Maintenance.**

# of session: 1

Duration: 1:00 hour (see the important note below)

Description: **Long Duration - Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- \* your current Cardio development,
  - \* the activity you have chosen,
  - \* your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   |     |        |      |           |
| Long     | X   |        |      |           |
| Duration |     |        |      |           |

Today we propose a Cardio session made of “**Long Duration - Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

**Session: General Body Balance.**

# of session: 1 of +/- 50 minutes.

As per Monday.

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**THURSDAY**



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Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- * *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- * *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, ... but not your face, back...*

Session: Club arrangements.

Below are some subjects to be discussed with the leaders of your club:

- the Outdoor competitions program of your club and your own one ;
- the tournaments at which your club needs you for team competition;
- your practice schedule in the club;
- the camps that you will attend as member of the Regional / Provincial / State or National Team;
- the tournament where you will not wear the Club uniform, because you will shoot them as member of the Regional / Provincial / State or National Team;
- the collaboration with the club coach and the coach(es) of the Regional / Provincial / State or National Team;
- the financial assistance from your club, the Regional / Provincial / State or National Team.
- the social and promotion events of the club that you will be able to attend.

FRIDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **10 arrows.**

DRAW START

1. Simulations:

- 1.1. Have your hand/fingers interlaced: palms up, arms against the front of your body, your arms are slightly curved at the elbow level. Lower your shoulders by using your pectorals, feel a stretching feeling in your trapezius. Raise your arm up in front of you as high as you can maintaining your shoulders DOWN. You should finish your arms raising with an angle of about 45 degrees between your body (vertical) and your arms. Which means that we can raise our arms up to 45 degrees, without raising our shoulders up.

Now separate your hands, and move your arms down and laterally, WITHOUT changing the curve of your arms. Feel that you open your arms as a fan. Feel that the opening motion comes from your shoulders, which move down and apart, also feel the “opening” of your rib cage, a kind of thorax expansion – **10 repetitions**




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- 1.2. Simulate the bow raising, with this feeling of maintaining your shoulders as low as possible, once raised notice that your arm string (just the arm, not the forearm) makes an angle of about 45 degrees with your body (verticality) once again. At this step, your forearm is at about your eyes level, as well as your 2 hands and the imaginary arrow.

Continue by simulating a draw, changing as less as possible the shape of your arms to avoid to use them for the draw action. Feel that the START of the opening notion comes from your shoulders, which move down and apart. Also feel some sort of “opening” of your rib cage, a kind of thorax expansion especially at the BEGINNING of the draw.

Focus mainly on the BEGINNING of the draw – **10 repetitions**

- 1.3. Repeat the previous simulation with an elastic band passing around your string elbow, and in your bow hand – **10 repetitions**

Note: All this session long, continue to take care to the previous work, i.e. your attention should follow the following path:

*Straight Body* (vertical spine + body weight equally spread over the 2 feet)

*Fixation of your body on your hips* (especially in your low back)

*Low center of gravity* (heavy & powerful belly, low shoulders & blades, flat chest, and stretch feeling in your trapezius)

*Erected spine* (flat nape)

*Entire body in the shooting plan* (shoulders above your hips & feet)

*Head orientation* (chin & nose pointed toward the target).

All these steps pre-set your entire body, including your top triangle (triangle between your aiming eye and your 2 shoulders) that you will strive to maintain as it is during the rising and the draw of your bow.

## 2. While shooting

- 2.1. From now, the exercises are while shooting. Implement (your raising &) BEGINNING of your draw with eyes closed. Open your eyes toward the end of the draw, or even at full draw - **18 arrows**.
- 2.2. Implement your (raising &) draw while watching yourself in a mirror. Watch at the butt toward the end of the draw, or even at full draw - **18 arrows**.
- 2.3. Implement your (raising &) draw with eyes up and blurred. . Watch at the butt toward the end of the draw, or even at full draw - **18 arrows**.
- 2.4. Implement your (raising &) draw while watching at a blank butt. Do not focus on one area of the butt, be like a spectator of the motions of your sight on the butt - **18 arrows**.
- 2.5. Implement your (raising &) draw while shooting at a face - **18 arrows**.
- 2.6. Start over from steps #2.1.

Volume: 10 Warm-up arrows + 30 simulations + 180 arrows over the exercises = **220 arrows** (& simulations) over the session.

### Session: Strengthening.

# of sessions: 1

Description: According to a maximal strength method.

\* Intensity / load: > 75% of your 1 Maximal Repetition, for instance:



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- if A is the load for the 1st set,
- at the 2nd set B should be higher than A
- at the 3rd set C should be between A & B
- at the 4th set D should be higher than B
- at the 5th set E should be between B & C
- at the 6th set F should be the highest load.
- * # of sets: 6
- * # of repetitions: no more than 8, for instance:
 - 7/8 at the 1st set,
 - 5/6 / 2nd
 - 6/7 / 3rd
 - 3/4 / 4th
 - 4/5 / 5th
 - 2/3 / 6th
- * Rest between sets: 2 min..
- * Rest between exercise: 3 min.
- * Tempo: natural, always in control, no jerk

For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

We have not attached is a list of strengthening exercises since this is a period of general/overall strength development. Hence you can implement any of the common exercises for strengthening.

Since you have 3 strengthening sessions per week, you can target 3 groups of muscles, for instance :

Group # 1 : back, pectorals and neck

Group # 2 : Arms and shoulders

Group # 3 : Belt and legs

Do not hesitate in modifying these groups, nevertheless it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back.

Recommendations:

To prioritize:

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (excepted some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;



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- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;

To avoid:

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying .. – in archery all the body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance,...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

**Session: General Body Balance.**

*# of session: 1 of +/- 50 minutes.*

*As per Monday.*

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**SATURDAY**

**Session: Mimics / Visualization.**

*# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.*

*Description: as the Thursday session*

**Session: Cardio Maintenance.**

*# of session: 1*

*Duration: 1:00 hour*

*Description: as per Wednesday*

**Session: General Body Balance.**

*# of session: 1 of +/- 50 minutes.*

*As per Monday.*

---

**SUNDAY**



**FITA Training SUGGESTIONS starting on April 8, 2002.**

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Session: Shooting

of sessions: 1

TEST (or TOURNAMENT)

- *if test:* 22 warm-up arrows + 120 arrows over the test :
 - half a FITA round = 72 arrows;
 - 2x 18 arrow match;
 - 1 x 12 arrow match= about **142 arrows** over the session.
- *if tournament* - pending the format.

Session: General Body Balance.

of session: 1 of +/- 50 minutes.

As per Monday



Disk for Wobble board

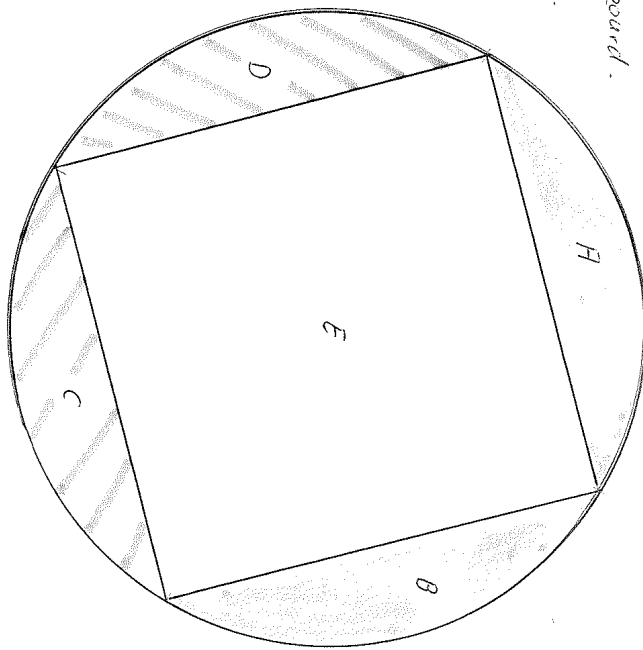
Minimum thickness = 15 mm

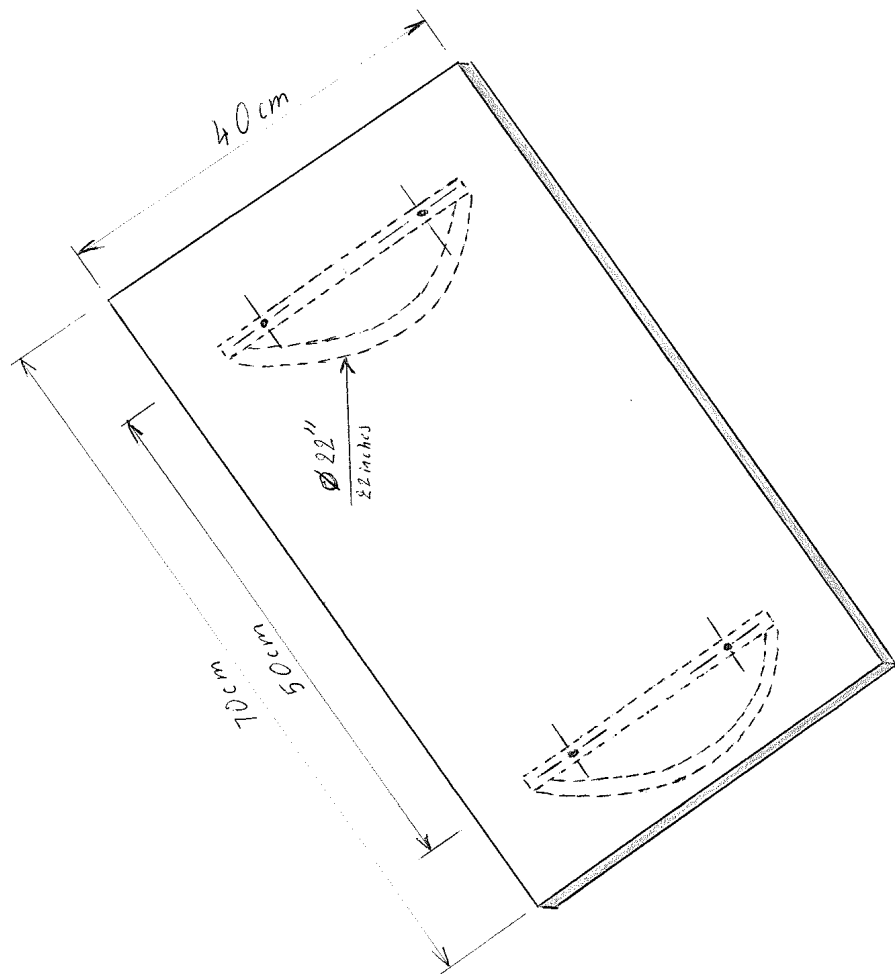
For instance A and B for one board

Part E is not used for the board.

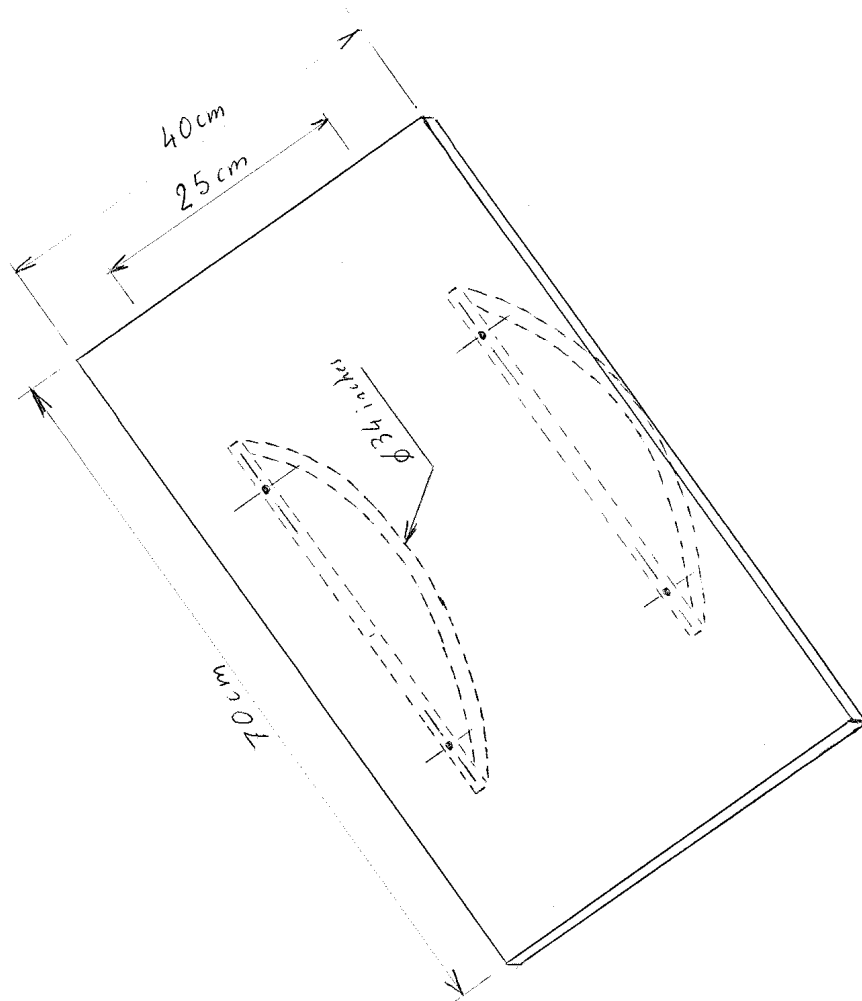
Cut 4 parts out of the same disk

C and D for another board





Wobbling board Left-Right.tif



FITA Training SUGGESTIONS starting on **April 29, 2002.**

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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* -\*\* COMMENTS and NEWS \*\***

This is our 28<sup>th</sup> week of practice. Currently we are following the schedule below that will last until mid-May:

|                                                                             |                                                                                                                                  |             |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------|
| Time sharing:                                                               | Shooting <b>60%</b> and <b>40%</b> for other developments (8 hours).                                                             |             |
| Total volume:                                                               | <b>20 hours</b> per week                                                                                                         |             |
| Shooting:                                                                   | 5 sessions per week of <b>2 hour</b> each (including 3 SHOOTING BODY BALANCE sessions), <u>and</u> <b>one</b> test or tournament | = 12 hours  |
| Cardio:                                                                     | 2 sessions per week of <b>1 hour</b> each                                                                                        | = 2 hours   |
| Yoga :                                                                      | <b>1</b> session per week of <b>1:30 hour</b> each                                                                               | = 1:30 hour |
| Strength:                                                                   | <b>1</b> maintenance session per week of <b>1:30 hour</b>                                                                        | = 1:30 hour |
| General Body balance:                                                       | <b>3 sessions per week of 1 hour</b> (out of shooting)                                                                           | = 3 hours   |
| <i>Shooting Body Balance: Mainly made of shots from unstable platforms.</i> |                                                                                                                                  |             |

*Note:*

*The training plan shows shooting sessions of 2 hours each. In fact each session does not last 2 hours, since some sessions are:*

- *light and shorter than 2 hours, for instance the one from Monday*
- *heavy and longer than 2 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2 hours should be considered as an **average**. Nevertheless we will not exceed the total of 12 hours of shooting per week (equivalent to 6 sessions of 2 hours).*

This week we will:

- Pursuit the development of our **Body Balance** while shooting and of our sighting skill;
- Attend our first Outdoor tournament of the year /Reminder: this is a training plan for archers from North Hemisphere).

Next week we will:

- Have a similar program ;
- Revisit our facial marks.

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

**Pascal COLMAIRE**

*FITA Development Manager*





FITA Training SUGGESTIONS starting on **May 6, 2002.**

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** -** COMMENTS and NEWS ****

This is our 29th week of practice. This is the second last week with following the schedule :

Time sharing:	Shooting 60 % and 40 % for other developments (8 hours).	
Total volume:	20 hours per week	
Shooting:	5 sessions per week of 2 hour each (including 3 SHOOTING BODY BALANCE sessions), <u>and one</u> test or tournament	= 12 hours
Cardio:	2 sessions per week of 1 hour each	= 2 hours
Yoga :	1 session per week of 1:30 hour each	= 1:30 hour
Strength:	1 maintenance session per week of 1:30 hour	= 1:30 hour
General Body balance:	3 sessions per week of 1 hour (out of shooting)	= 3 hours
<i>Shooting Body Balance: Mainly made of shots from unstable platforms.</i>		

Note:

The training plan shows shooting sessions of 2 hours each. In fact each session does not last 2 hours, since some sessions are:

- *light and shorter than 2 hours, for instance the one from Monday*
- *heavy and longer than 2 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2 hours should be considered as an **average**. Nevertheless we will not exceed the total of 12 hours of shooting per week (equivalent to 6 sessions of 2 hours), except when there is a tournament.*

We hope that you had a good first Outdoor Target Tournament (we were not lucky in Lausanne area, we got rain, wind and even snow!).

This week we will:

- Pursuit the development of our **Body Balance** while shooting;
- Refine our facial marks.
- Have a test.

Next week we will:

- Have a similar program ;
- Revisit our string alignment and clearance.

In 2 weeks we will have a new training schedule focusing on Cardio development and Shooting perceptions development.

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

Pascal COLMAIRE

FITA Development Manager



FITA Training SUGGESTIONS starting on **May 6, 2002.**

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### *The week at a glance:*

| Days             | # | Session Type  | Subject / Skill         | Volume                  |
|------------------|---|---------------|-------------------------|-------------------------|
| <b>Monday</b>    | 1 | Shooting      | Body Balance            | 92 arrows - 1:05 hour   |
| <b>Tuesday</b>   | 1 | Shooting      | Body Balance            | 105 arrows – 1:15 hour  |
|                  | 1 | Yoga          | As per Teacher          | 1:30 hour               |
| <b>Wednesday</b> | 1 | Shooting      | Facial Marks            | 248 arrows – 2:55 hour  |
|                  | 1 | Cardio        | Aerobic Capacity        | 1:00 hour               |
|                  | 1 | Body Balance  | General                 | 1:00 hour               |
| <b>Thursday</b>  |   | Visualization |                         | 3 times a day           |
| <b>Friday</b>    | 1 | Shooting      | Body Balance            | 248 arrows – 2:55 hours |
|                  | 1 | Strengthening | Maintenance – Endurance | 1:30 hour               |
|                  | 1 | Body Balance  | General                 | 1:00 hour               |
| <b>Saturday</b>  | 1 | Cardio        | Aerobic Capacity        | 1:00 hour               |
| <b>Sunday</b>    | 1 | Shooting      | Tournament or test      | 154 arrows – 1:50 hours |
|                  | 1 | Body Balance  | General                 | 1:00 hour               |

### **Note:**

The shooting rhythm is now up to 84 arrows per hour. If you cannot follow this rhythm, just extend the duration of your sessions. **DO NOT LOWER THE QUALITY OF YOUR SHOOT** for reaching this shooting rhythm! Nevertheless keep in mind that our objective is to shoot at least 300 arrows per session, twice a week; it would take 3:45 hours per session at a rhythm of 80 arrows per hour! Hence we will progressively increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase. Nevertheless you should consider to:

- reduce your rest time between arrows;
- speed up the recuperation process of the arrows that you have shot;
- shoot more arrows per end, to reduce the number of travels for recuperating your arrows. 9 arrows per end are suggested.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

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### **MONDAY**

#### **Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **18 arrows.**

#### **BODY STABILITY**

*Description:* Shoot from an unstable platform during one hour. Examples of platforms:

- \* wobble boards: one wobbling from toes to heels, the other one from left to right,
- \* a board on one tube (your 2 feet on that board), use different sizes of tubes.
- \* 2 boards, each one on a tube (and 1 foot on each board)

Note 1: the tubes should be soft, not fully inflated.

Note 2: if you shoot Outdoor, put the wobble boards on a flat board laid down on the ground



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Material for Shooting Body Balance Development (the design of the wobble boards is attached to the training tips of last week “2002-25 Body Balance 2”) :

1. One direction unbalanced platform - from heels to toes.
 - Board size = 40 x 70 cm
 - At 50 cm apart from each other, affix a part of a 56cm (22”) wooden disk
 - Use a non-slipping board
2. One direction unbalanced platform – from left to right.
 - Board size = 40 x 70 cm
 - At 25 cm apart from each other, affix a part a 86 cm (34”) wooden disk
 - Use a non-slipping board
3. Balance on an inflated tube.

Pending your current body stability, use one of the following tube sizes, or better organize a circuit with these 3 sizes.

 - 8, 10 and 12 inches (this is the second number that you can read on a regular tire reference, for instance: 145 - 12;
 - Use a non-slipping board

And an air pomp!

Volume: 18 Warm-up arrows + 74 arrows shot from the wobble boards and tubes = **92 arrows** over the session.

TUESDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **18 arrows** .

BODY STABILITY

Description: Same as yesterday

Volume: 18 Warm-up arrows + 87 arrows shot from the wobble board and the tubes = **105 arrows** over the session.

Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

You can include a Relaxation session.



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## WEDNESDAY

### Session: Shooting.

# of sessions: 1

General warm-up and shooting warm-up – **9 arrows.**

### Exercise A

#### FACIAL MARKS & STRING ALIGNMENT – SHOOTING AT A MIRROR

1. Affixed a mirror flat at a target butt. The top edge of the mirror should be at a height such that at full draw, the archer can aim at his/her aiming eye at about 3” from the top edge. To achieve this view, you can play with the inclination and height of the mirror.
2. Draw a line on the butt where is the top edge of the mirror (you can use some masking tape). Take the mirror away.
3. Draw another line on the butt at about 3” below the first one. See picture entitled “[Preparation to shoot at a mirror](#)” published in “[2002-5 Face marks & Alignment](#)”.
4. Now grab your bow and take stance at a distance such that the end of your long stabilizer is at about 3 feet from the mirror. Move your sight down:  
Olympic men at about 90 meters  
Olympic women at about 75-80 meters  
Compound men at about 100 meters  
Compound women at about 85-90 meters.
5. Aim at the lower line, and shoot. Adjust your sight to be sure that your arrow hits ABOVE the top line, let say 2” above it – See picture entitled “[Sighting to shoot at a mirror](#)” published in “[2002-5 Face marks & Alignment](#)”. – **5 arrows.**
6. When your sight is adjusted, re-affix the mirror at the butt.
7. Draw and shoot while watching yourself in the mirror, pay a special attention to the end of the draw; keep your face impassive when the string lands on your face – **9 arrows**  
It is recommended to shoot one arrow, then retrieve it, to avoid any arrow breakage, if you shoot more than one arrow at a time, move a little your body on the left or right at each arrow.
8. Remove the mirror from the target butt . Repeat #7 but close your eyes instead of watching yourself in the mirror - **9 arrows .**
9. Same but watching blurred and up (as when you are in the clouds) instead of watching yourself in the mirror - **9 arrows .**
10. Same but shooting at a blank butt. Now you can move back to a further distance of your choice - **9 arrows.**
11. Same but shooting at a cut-out target face, only showing scoring zones 1 to 6 - **9 arrows.**
12. Same but shooting at a cut-out target face, only showing scoring zones 1 to 7 - **9 arrows .**
13. Same but shooting at a cut-out target face, only showing scoring zones 1 to 8 - **9 arrows.**
14. Same but shooting at a cut-out target face, only showing scoring zones 1 to middle of the 9 - **9 arrows .**
15. Same but shooting at a cut-out target face, only showing scoring zones 1 to 9 - **9 arrows.**
16. Same but shooting at a complete target face - **9 arrows.**

Volume: 9 arrows of warm-up + 95 arrows over the exercise = about **104 arrows** over the entire session.

### Exercise B

#### FACIAL MARKS through VARIOUS DISTANCES and SPEED of PRELIMINARIES



**FITA Training SUGGESTIONS starting on May 6, 2002.**

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Description: At different shooting distances; shoot while implementing your sequence of preliminaries with a special care to the string landing/facial mark step, at the following speed (of preliminaries):

For instance, start at 30 meters:

1. slow – 9 arrows
2. regular / usual – 9 arrows
3. fast – 9 arrows
4. regular / usual – 9 arrows

5. start over at another distance (50 meters for instance) – 36 arrows
6. start over at another distance (70/60 meters for instance) – 36 arrows
7. start over at another distance (90/70 meters for instance) – 36 arrows

Volume: 144 arrows

Total volume for the session: 9 warm-up arrows + 95 arrows over exercise A + 144 arrows over the exercises B = **248 arrows** over the session.

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour (see the important note below)

Description: **Long Duration - Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current Cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium				
Long	X			
Duration				

Today we propose a Cardio session made of “**Long Duration - Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

Session: General Body Balance.

of session: 1 of +/- 1 hour.

Objective: Reduce natural body swinging and make faster the permanent body re-equilibration.

Description: Described in document entitled “[General Body Balance Program](#)” included in “[2002-24 Body Balance 1](#)”. When appropriate implement each exercise during **55 seconds** each.



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## THURSDAY

### Session: **Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- \* *External visualization* = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.
- \* *Internal visualization* = You just see what you can see while shooting, i.e. your hands, feet, but not your face, back...

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## FRIDAY

### Session: **Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **18 arrows**.

#### BODY STABILITY

Same as Monday and Tuesday

Volume: 18 warm-up arrows + 230 arrows over the exercises = **248 arrows** over the session.

Note: while shooting from the unstable platforms you can score some rounds, matches and simulate some shoot-offs.

### Session: **Strengthening (maintenance).**

# of sessions: 1

*Neural Adaptation (maximal strength)*

Description: Neural adaptation is a way to increase your strength with few muscular mass development.

- \* # of sets: 3 to 5 in theory, I recommend at least 4 with a preference for 5.
- \* of repetitions : 1 to 5.
- \* Intensity: As heavy as you can, no less than :
  - 90% of your Maximal R.M. if you are a beginner in strengthening
  - 85% of your Maximal R.M. if you have 1 to 4 year(s) of experience in strengthening
  - 75% of your Maximal R.M. if you have 5 years or more of experience in strengthening
- \* Rest between sets: 3:30 minutes to 5 minutes.
- \* Rest between exercise: 3 min.
- \* Tempo: natural, always in control, no jerk

For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,



## FITA Training SUGGESTIONS starting on **May 6**, 2002.

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- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

Recommendations:

To prioritize:

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (except some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;
- . it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back

To avoid:

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying.. – in archery all the body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

Session: General Body Balance.

of session: 1 of +/- 1 hour.

As per Wednesday.

SATURDAY

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour

Description: as per Wednesday



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## SUNDAY

### Session: Shooting

# of sessions: 1

#### TEST (or TOURNAMENT)

- *if test*: 18 warm-up arrows + 136 arrows over the test :
  - half a FITA round = 72 arrows;
  - 2 x 18 arrow match;
  - 2 x 12 arrow match
  - 6 shoot-off arrows= about **154 arrows** over the session.
- *if tournament* - pending the format.

### Session: General Body Balance.

# of session: 1 of +/- 1 hour.

*As per Wednesday*





**FITA Training SUGGESTIONS starting on April 29, 2002.**

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The week at a glance:

Days	#	Session Type	Subject / Skill	Volume
Monday	1	Shooting	Body Balance	91 arrows - 1:05 hour
Tuesday	1	Shooting	Body Balance	91 arrows – 1:05 hour
	1	Yoga	As per Teacher	1:30 hour
Wednesday	1	Shooting	Sight adjustment	241 arrows – 2:55 hour
	1	Cardio	Aerobic Capacity	1:00 hour
	1	Body Balance	General	1:00 hour
Thursday		Visualization		3 times a day
Friday	1	Shooting	Body Balance	241 arrows – 2:55 hours
	1	Strengthening	Maintenance – Endurance	1:30 hour
	1	Body Balance	General	1:00 hour
Saturday	1	Cardio	Aerobic Capacity	1:00 hour
Sunday	1	Shooting	Tournament or test	151 arrows – 4 hours
	1	Body Balance	General	1:00 hour

Note:

The shooting rhythm is now up to 83 arrows per hour. If you cannot follow this rhythm, just extend the duration of your sessions. **DO NOT LOWER THE QUALITY OF YOUR SHOOT** for reaching this shooting rhythm! Nevertheless keep in mind that our objective is to shoot at least 300 arrows per session, twice a week; it would take 3:45 hours per session at a rhythm of 80 arrows per hour! Hence we will progressively increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase. Nevertheless you should consider to:

- reduce your rest time between arrows;
- speed up the recuperation process of the arrows that you have shot;
- shoot more arrows per end, to reduce the number of travels for recuperating your arrows. 9 arrows per end are suggested.

Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.

MONDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **18 arrows**.

BODY STABILITY

Description: Shoot from an unstable platform during one hour. Examples of platforms:

- * wobble boards: one wobbling from toes to heels, the other one from left to right,
- * a board on one tube (your 2 feet on that board), use different sizes of tubes.
- * 2 boards, each one on a tube (and 1 foot on each board)

Note 1: the tubes should be soft, not fully inflated.

Note 2: if you shoot Outdoor, put the wobble boards on a flat board laid down on the ground



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**Material for Shooting Body Balance Development** (the design of the wobble boards is attached to the training tips of last week "2002-25 Body Balance 2") :

1. One direction unbalanced platform - from heels to toes.
  - Board size = 40 x 70 cm
  - At 50 cm apart from each other, affix a part of a 56cm (22") wooden disk
  - Use a non-slipping board
2. One direction unbalanced platform – from left to right.
  - Board size = 40 x 70 cm
  - At 25 cm apart from each other, affix a part a 86 cm (34") wooden disk
  - Use a non-slipping board
3. Balance on an inflated tube.

Pending your current body stability, use one of the following tube sizes, or better organize a circuit with these 3 sizes.

  - 8, 10 and 12 inches (this is the second number that you can read on a regular tire reference, for instance: 145 - 12;
  - Use a non-slipping board

And an air pomp!

Volume: 18 Warm-up arrows + 73 arrows shot from the wobble boards and tubes = **91 arrows** over the session.

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## TUESDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – **18 arrows** .

#### BODY STABILITY

Description: Same as yesterday

Volume: 18 Warm-up arrows + 73 arrows shot from the wobble board and the tubes = **91 arrows** over the session.

### Session: Yoga.

# of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions. This skill should be emphasized during this week.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...



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You can include a Relaxation session.

WEDNESDAY

Session: Shooting.

of sessions: 1

General warm-up and shooting warm-up – **18 arrows.**

CONTROL EXERCISE OF THE SIGHTING SKILL

1. Adjust your sight to hit the center of the target face – **9 arrows**
2. Decide which part of the target face your arrow should hit, while aiming the center, and move your sight accordingly.
3. Shoot **18 arrows** to check if you have sighted properly to achieve your project from step #2.
4. Re-position your sight as 1). Shoot **9** or less **arrows** to confirm this sight position.
5. Decide another part of the target face that your arrow should hit, while aiming the center, and move your sight accordingly..
6. Shoot **18 arrows** to check if you have sighted properly to achieve your project from step #5.
7. Start over to step #4 and so on, over and over.

Strive to cover all the target face round (from 1 to 12 o'clock), but not in a progressive order, and at different distances from the center (these distances depend on your level of accuracy).

Volume: 18 warm-up arrows + 223 arrows over the exercises = **241 arrows** over the session.

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour (see the important note below)

Description: **Long Duration - Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current Cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium				
Long	X			
Duration				

Today we propose a Cardio session made of “**Long Duration - Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

Session: General Body Balance.



FITA Training SUGGESTIONS starting on **April 29, 2002.**

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**# of session:** 1 of +/- 1 hour.

**Objective:** Reduce natural body swinging and make faster the permanent body re-equilibration.

**Description:** Described in document entitled “[General Body Balance Program](#)” included in “[2002-24 Body Balance 1.doc](#)”. When appropriate implement each exercise during **50 seconds** each.

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### THURSDAY

#### **Session: Mimics / Visualization.**

**# of sessions:** at least 6 reps at each “session”. Repeat at least 3 sets per day.

**Description:** Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*

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### FRIDAY

#### **Session: Shooting**

**# of sessions:** 1

General warm-up and shooting warm-up – **18 arrows.**

**BODY STABILITY**

Same as Monday and Tuesday

**Volume:** 18 warm-up arrows + 223 arrows over the exercises = **241 arrows** over the session.

**Note:** while shooting from the unstable platforms you can score some rounds, matches and simulate some shoot-offs.

#### **Session: Strengthening (maintenance).**

**# of sessions:** 1

“STRIPPING IN A ROW” METHOD.

**Description:**

For this method you can use the machines, or prepare 3 sets of barbells or dumbbells of 3 different weights.

\* **# of sets:** 3

1. Start the exercise with 70% or more of your Single Maximal Repetition, the weight should allow you to implement 7-8 reps
2. Rapidly take off some weight (from the machine) or change for a lighter barbell or dumbbells, continue the exercise with less time as possible for the change, strive to achieve at least 7 or 8 more repetitions, giving a minimum total of 14 reps.



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3. Still rapidly take off some weight (from the machine) or change for a lighter barbell or dumbbells, continue the exercise with less time as possible for the change, strive to achieve at least 6 or 7 more repetitions, giving a minimum total of 20 reps.
 - 4.. Start over the 3 previous steps for the second and third set - you can change the weight for any of the steps, but try to respect the number of reps.
- * Tempo: natural, always in control, no jerk
 - * Rest between sets: 45 seconds to 1 min.
 - * Rest between the exercises : 1 min. to 1:30 min.

For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

Recommendations:

To prioritize:

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (except some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
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To avoid:

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Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.



FITA Training SUGGESTIONS starting on **April 29, 2002.**

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**Session: General Body Balance.**

*# of session:* 1 of +/- 1 hour.

*As per Wednesday.*

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**SATURDAY**

**Session: Cardio Maintenance.**

*# of session:* 1

*Duration:* 1:00 hour

*Description:* as per Wednesday

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**SUNDAY**

**Session: Shooting**

*# of sessions:* 1

General warm-up and shooting warm-up – at least **12 arrows** .  
COMPETITION, or TEST

*Volume:*

- if tournament - pending the format.
- if test: 7 warm-up arrows + 144 arrows over the test (4 scoring round) = **151 arrows** over the session.

**Session: General Body Balance.**

*# of session:* 1 of +/- 1 hour.

*As per Wednesday*

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FITA Training SUGGESTIONS starting on **May 6, 2002.**

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** -** COMMENTS and NEWS ****

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Yoga :	1 session per week of 1:30 hour each	= 1:30 hour
Strength:	1 maintenance session per week of 1:30 hour	= 1:30 hour
General Body balance:	3 sessions per week of 1 hour (out of shooting)	= 3 hours
<i>Shooting Body Balance: Mainly made of shots from unstable platforms.</i>		

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The training plan shows shooting sessions of 2 hours each. In fact each session does not last 2 hours, since some sessions are:

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*Hence the duration of 2 hours should be considered as an **average**. Nevertheless we will not exceed the total of 12 hours of shooting per week (equivalent to 6 sessions of 2 hours), except when there is a tournament.*

We hope that you had a good first Outdoor Target Tournament (we were not lucky in Lausanne area, we got rain, wind and even snow!).

This week we will:

- Pursuit the development of our **Body Balance** while shooting;
- Refine our facial marks.
- Have a test.

Next week we will:

- Have a similar program ;
- Revisit our string alignment and clearance.

In 2 weeks we will have a new training schedule focusing on Cardio development and Shooting perceptions development.

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

Pascal COLMAIRE

FITA Development Manager



FITA Training SUGGESTIONS starting on **May 6**, 2002.

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|------------------|---|---------------|-------------------------|-------------------------|
| <b>Monday</b>    | 1 | Shooting      | Body Balance            | 92 arrows - 1:05 hour   |
| <b>Tuesday</b>   | 1 | Shooting      | Body Balance            | 105 arrows – 1:15 hour  |
|                  | 1 | Yoga          | As per Teacher          | 1:30 hour               |
| <b>Wednesday</b> | 1 | Shooting      | Facial Marks            | 248 arrows – 2:55 hour  |
|                  | 1 | Cardio        | Aerobic Capacity        | 1:00 hour               |
|                  | 1 | Body Balance  | General                 | 1:00 hour               |
| <b>Thursday</b>  |   | Visualization |                         | 3 times a day           |
| <b>Friday</b>    | 1 | Shooting      | Body Balance            | 248 arrows – 2:55 hours |
|                  | 1 | Strengthening | Maintenance – Endurance | 1:30 hour               |
|                  | 1 | Body Balance  | General                 | 1:00 hour               |
| <b>Saturday</b>  | 1 | Cardio        | Aerobic Capacity        | 1:00 hour               |
| <b>Sunday</b>    | 1 | Shooting      | Tournament or test      | 154 arrows – 1:50 hours |
|                  | 1 | Body Balance  | General                 | 1:00 hour               |

### **Note:**

The shooting rhythm is now up to 84 arrows per hour. If you cannot follow this rhythm, just extend the duration of your sessions. **DO NOT LOWER THE QUALITY OF YOUR SHOOT** for reaching this shooting rhythm! Nevertheless keep in mind that our objective is to shoot at least 300 arrows per session, twice a week; it would take 3:45 hours per session at a rhythm of 80 arrows per hour! Hence we will progressively increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase. Nevertheless you should consider to:

- reduce your rest time between arrows;
- speed up the recuperation process of the arrows that you have shot;
- shoot more arrows per end, to reduce the number of travels for recuperating your arrows. 9 arrows per end are suggested.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

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### **MONDAY**

#### **Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **18 arrows**.

#### **BODY STABILITY**

*Description:* Shoot from an unstable platform during one hour. Examples of platforms:

- \* wobble boards: one wobbling from toes to heels, the other one from left to right,
- \* a board on one tube (your 2 feet on that board), use different sizes of tubes.
- \* 2 boards, each one on a tube (and 1 foot on each board)

Note 1: the tubes should be soft, not fully inflated.

Note 2: if you shoot Outdoor, put the wobble boards on a flat board laid down on the ground





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Material for Shooting Body Balance Development (the design of the wobble boards is attached to the training tips of last week “2002-25 Body Balance 2”) :

1. One direction unbalanced platform - from heels to toes.
 - Board size = 40 x 70 cm
 - At 50 cm apart from each other, affix a part of a 56cm (22”) wooden disk
 - Use a non-slipping board
2. One direction unbalanced platform – from left to right.
 - Board size = 40 x 70 cm
 - At 25 cm apart from each other, affix a part a 86 cm (34”) wooden disk
 - Use a non-slipping board
3. Balance on an inflated tube.

Pending your current body stability, use one of the following tube sizes, or better organize a circuit with these 3 sizes.

 - 8, 10 and 12 inches (this is the second number that you can read on a regular tire reference, for instance: 145 - 12;
 - Use a non-slipping board

And an air pomp!

Volume: 18 Warm-up arrows + 74 arrows shot from the wobble boards and tubes = **92 arrows** over the session.

TUESDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **18 arrows** .

BODY STABILITY

Description: Same as yesterday

Volume: 18 Warm-up arrows + 87 arrows shot from the wobble board and the tubes = **105 arrows** over the session.

Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

You can include a Relaxation session.



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## WEDNESDAY

### Session: Shooting.

# of sessions: 1

General warm-up and shooting warm-up – **9 arrows.**

### Exercise A

#### FACIAL MARKS & STRING ALIGNMENT – SHOOTING AT A MIRROR

1. Affixed a mirror flat at a target butt. The top edge of the mirror should be at a height such that at full draw, the archer can aim at his/her aiming eye at about 3” from the top edge. To achieve this view, you can play with the inclination and height of the mirror.
2. Draw a line on the butt where is the top edge of the mirror (you can use some masking tape). Take the mirror away.
3. Draw another line on the butt at about 3” below the first one. See picture entitled “[Preparation to shoot at a mirror](#)” published in “[2002-5 Face marks & Alignment](#)”.
4. Now grab your bow and take stance at a distance such that the end of your long stabilizer is at about 3 feet from the mirror. Move your sight down:  
Olympic men at about 90 meters  
Olympic women at about 75-80 meters  
Compound men at about 100 meters  
Compound women at about 85-90 meters.
5. Aim at the lower line, and shoot. Adjust your sight to be sure that your arrow hits ABOVE the top line, let say 2” above it – See picture entitled “[Sighting to shoot at a mirror](#)” published in “[2002-5 Face marks & Alignment](#)”. – **5 arrows.**
6. When your sight is adjusted, re-affix the mirror at the butt.
7. Draw and shoot while watching yourself in the mirror, pay a special attention to the end of the draw; keep your face impassive when the string lands on your face – **9 arrows**  
It is recommended to shoot one arrow, then retrieve it, to avoid any arrow breakage, if you shoot more than one arrow at a time, move a little your body on the left or right at each arrow.
8. Remove the mirror from the target butt . Repeat #7 but close your eyes instead of watching yourself in the mirror - **9 arrows .**
9. Same but watching blurred and up (as when you are in the clouds) instead of watching yourself in the mirror - **9 arrows .**
10. Same but shooting at a blank butt. Now you can move back to a further distance of your choice - **9 arrows.**
11. Same but shooting at a cut-out target face, only showing scoring zones 1 to 6 - **9 arrows.**
12. Same but shooting at a cut-out target face, only showing scoring zones 1 to 7 - **9 arrows .**
13. Same but shooting at a cut-out target face, only showing scoring zones 1 to 8 - **9 arrows.**
14. Same but shooting at a cut-out target face, only showing scoring zones 1 to middle of the 9 - **9 arrows .**
15. Same but shooting at a cut-out target face, only showing scoring zones 1 to 9 - **9 arrows.**
16. Same but shooting at a complete target face - **9 arrows.**

Volume: 9 arrows of warm-up + 95 arrows over the exercise = about **104 arrows** over the entire session.

### Exercise B

#### FACIAL MARKS through VARIOUS DISTANCES and SPEED of PRELIMINARIES



**FITA Training SUGGESTIONS starting on May 6, 2002.**

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Description: At different shooting distances; shoot while implementing your sequence of preliminaries with a special care to the string landing/facial mark step, at the following speed (of preliminaries):

For instance, start at 30 meters:

1. slow – 9 arrows
 2. regular / usual – 9 arrows
 3. fast – 9 arrows
 4. regular / usual – 9 arrows
-
5. start over at another distance (50 meters for instance) – 36 arrows
 6. start over at another distance (70/60 meters for instance) – 36 arrows
 7. start over at another distance (90/70 meters for instance) – 36 arrows

Volume: 144 arrows

Total volume for the session: 9 warm-up arrows + 95 arrows over exercise A + 144 arrows over the exercises B = **248 arrows** over the session.

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour (see the important note below)

Description: **Long Duration - Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current Cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium				
Long	X			
Duration				

Today we propose a Cardio session made of “**Long Duration - Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

Session: General Body Balance.

of session: 1 of +/- 1 hour.

Objective: Reduce natural body swinging and make faster the permanent body re-equilibration.

Description: Described in document entitled “[General Body Balance Program](#)” included in “[2002-24 Body Balance 1](#)”. When appropriate implement each exercise during **55 seconds** each.



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## THURSDAY

### Session: **Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- \* *External visualization* = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.
- \* *Internal visualization* = You just see what you can see while shooting, i.e. your hands, feet, but not your face, back...

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## FRIDAY

### Session: **Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **18 arrows**.

#### BODY STABILITY

Same as Monday and Tuesday

Volume: 18 warm-up arrows + 230 arrows over the exercises = **248 arrows** over the session.

Note: while shooting from the unstable platforms you can score some rounds, matches and simulate some shoot-offs.

### Session: **Strengthening (maintenance).**

# of sessions: 1

*Neural Adaptation (maximal strength)*

Description: Neural adaptation is a way to increase your strength with few muscular mass development.

- \* # of sets: 3 to 5 in theory, I recommend at least 4 with a preference for 5.
- \* of repetitions : 1 to 5.
- \* Intensity: As heavy as you can, no less than :
  - 90% of your Maximal R.M. if you are a beginner in strengthening
  - 85% of your Maximal R.M. if you have 1 to 4 year(s) of experience in strengthening
  - 75% of your Maximal R.M. if you have 5 years or more of experience in strengthening
- \* Rest between sets: 3:30 minutes to 5 minutes.
- \* Rest between exercise: 3 min.
- \* Tempo: natural, always in control, no jerk

For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,



## FITA Training SUGGESTIONS starting on **May 6**, 2002.

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- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

Recommendations:

To prioritize:

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (except some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;
- . it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back

To avoid:

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying.. – in archery all the body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

Session: General Body Balance.

of session: 1 of +/- 1 hour.

As per Wednesday.

SATURDAY

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour

Description: as per Wednesday



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## SUNDAY

### Session: Shooting

# of sessions: 1

#### TEST (or TOURNAMENT)

- *if test*: 18 warm-up arrows + 136 arrows over the test :
  - half a FITA round = 72 arrows;
  - 2 x 18 arrow match;
  - 2 x 12 arrow match
  - 6 shoot-off arrows= about **154 arrows** over the session.
- *if tournament* - pending the format.

### Session: General Body Balance.

# of session: 1 of +/- 1 hour.

*As per Wednesday*



FITA Training SUGGESTIONS starting on **May 13, 2002.**

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** -** COMMENTS and NEWS ****

This is our 30th week of practice. This is last week with following the schedule, ending a long work on Body Balance:

Time sharing:	Shooting 60 % and 40 % for other developments (8 hours).	
Total volume:	20 hours per week	
Shooting:	5 sessions per week of 2 hour each (including 3 SHOOTING BODY BALANCE sessions), <u>and</u> one test or tournament	= 12 hours
Cardio:	2 sessions per week of 1 hour each	= 2 hours
Yoga :	1 session per week of 1:30 hour each	= 1:30 hour
Strength:	1 maintenance session per week of 1:30 hour	= 1:30 hour
General Body balance:	3 sessions per week of 1 hour (out of shooting)	= 3 hours

Shooting Body Balance: *Mainly made of shots from unstable platforms.*

Note:

The training plan shows shooting sessions of 2 hours each. In fact each session does not last 2 hours, since some sessions are:

- *light and shorter than 2 hours, for instance the one from Monday*
- *heavy and longer than 2 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2 hours should be considered as an **average**. Nevertheless we will not exceed the total of 12 hours of shooting per week (equivalent to 6 sessions of 2 hours), except when there is a tournament.*

This week we will:

- Pursuit the development of our **Body Balance** while shooting;
- Check the string clearance
- Refine our string alignment.
- Have a test.

Next week we will:

- Have a different program ;
- Revisit our full draw action;
- Develop our Cardio and shooting perceptions;
- Attend a local tournament.

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Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

Pascal COLMAIRE

FITA Development Manager



FITA Training SUGGESTIONS starting on **May 13, 2002.**

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***The week at a glance:***

| <b>Days</b>      | <b>#</b> | <b>Session Type</b> | <b>Subject / Skill</b>         | <b>Volume</b>           |
|------------------|----------|---------------------|--------------------------------|-------------------------|
| <b>Monday</b>    | 1        | Shooting            | Body Balance                   | 93 arrows - 1:05 hour   |
| <b>Tuesday</b>   | 1        | Shooting            | Body Balance                   | 108 arrows – 1:15 hour  |
|                  | 1        | Yoga                | As per Teacher                 | 1:30 hour               |
| <b>Wednesday</b> | 1        | Shooting            | String alignment               | 255 arrows – 3:00 hours |
|                  | 1        | Cardio              | Aerobic Capacity               | 1:00 hour               |
|                  | 1        | Body Balance        | General                        | 1:00 hour               |
| <b>Thursday</b>  |          | Visualization       |                                | 3 times a day           |
| <b>Friday</b>    | 1        | Shooting            | Body Balance                   | 255 arrows – 3:00 hours |
|                  | 1        | Strengthening       | Maintenance – Endurance        | 1:30 hour               |
|                  | 1        | Body Balance        | General                        | 1:00 hour               |
| <b>Saturday</b>  | 1        | Shooting            | String clearance and alignment | 93 arrows - 1:05 hour   |
|                  | 1        | Cardio              | Aerobic Capacity               | 1:00 hour               |
| <b>Sunday</b>    | 1        | Shooting            | Tournament or test             | 220 arrows – 2:35 hours |
|                  | 1        | Body Balance        | General                        | 1:00 hour               |

**Note:**

The shooting rhythm is now up to 85 arrows per hour. If you cannot follow this rhythm, just extend the duration of your sessions. **DO NOT LOWER THE QUALITY OF YOUR SHOOT** for reaching this shooting rhythm! Nevertheless keep in mind that our objective is to shoot at least 300 arrows per session, twice a week; it would take 3:45 hours per session at a rhythm of 80 arrows per hour! Hence we will progressively increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase. Nevertheless you should consider to:

- reduce your rest time between arrows;
- speed up the recuperation process of the arrows that you have shot;
- shoot more arrows per end, to reduce the number of travels for recuperating your arrows. 9 arrows per end are suggested.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

**MONDAY**

**Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **18 arrows.**

**BODY STABILITY**

*Description:* Shoot from an unstable platform during one hour. Examples of platforms:

- \* wobble boards: one wobbling from toes to heels, the other one from left to right,
- \* a board on one tube (your 2 feet on that board), use different sizes of tubes.
- \* 2 boards, each one on a tube (and 1 foot on each board)

Note 1: the tubes should be soft, not fully inflated.

Note 2: if you shoot Outdoor, put the wobble boards on a flat board laid down on the ground





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Material for Shooting Body Balance Development (the design of the wobble boards is attached to the training tips of last week “2002-25 Body Balance 2”) :

1. One direction unbalanced platform - from heels to toes.
 - Board size = 40 x 70 cm
 - At 50 cm apart from each other, affix a part of a 56cm (22”) wooden disk
 - Use a non-slipping board
2. One direction unbalanced platform – from left to right.
 - Board size = 40 x 70 cm
 - At 25 cm apart from each other, affix a part a 86 cm (34”) wooden disk
 - Use a non-slipping board
3. Balance on an inflated tube.

Pending your current body stability, use one of the following tube sizes, or better organize a circuit with these 3 sizes.

 - 8, 10 and 12 inches (this is the second number that you can read on a regular tire reference, for instance: 145 - 12;
 - Use a non-slipping board

And an air pomp!

Volume: 18 Warm-up arrows + 75 arrows shot from the wobble boards and tubes = **93 arrows** over the session.

TUESDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **18 arrows** .

BODY STABILITY

Description: Same as yesterday

Volume: 18 Warm-up arrows + 90 arrows shot from the wobble board and the tubes = **108 arrows** over the session.

Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

You can include a Relaxation session.



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## WEDNESDAY

### Session: Shooting.

# of sessions: 1

General warm-up and shooting warm-up including **18 arrows**.

### STRING ALIGNMENT.

#### Purpose of the string alignment:

Since the string is located in the centre of the bow, the archer DOESN'T align the string. In fact the archer adjusts the position of his/her eyes in reference with the plan of the bow, which includes the string and the bow. Hence we should not say "String alignment" but "AIMING EYE POSITIONING".

#### Simulations.

At full draw the archers cants the top of his/her head from right to left while watching the string and the bow, and see respectively the string on the left and right – **6 times**.

#### 1. Identification of the most consistent/natural location for string alignment.

At any distance (but windless).

Raise your bow - Close your eyes - Draw your bow back - Open your aiming eye (or both eyes) at full draw and observe where is aligned your string, continue and achieve your shooting sequence

Volume: **18 arrows**.

*For Recurve:* Integrate the most common location of string alignment in your shooting sequence.

*For Compound:* Find your initial head position (head canting before the draw), to get your peep and scope aligned at full draw once you re-open your eyes.

#### 2. Identification of the most efficient location for string alignment.

At one distance at which you can use a tri-spot target face, shoot one or two ends for adjusting your sight.

Affix a NEW tri-spot target face:

- Use one spot for the arrows shot with string aligned on the riser.
- Use a second spot for the arrows shot with the string aligned on one side of the sight tunnel.
- Use the third spot for another alignment of your choice.

Volume: Shoot 36 arrows per spot, alternatively 1 arrow per spot. Do not shoot 12 consecutive arrows at the same spot. Total = **108 arrows** over this second exercise.

When analyzing the impacts, do not compare the scores, because your sight is adjusted for one out of the three situations. Analyze the tightness of the group of impacts achieved at each spot.

*Suggestion:* run this analysis on the back of the target face.

#### 3. String alignment stability

##### *a. Test of duration of stable string alignment:*

One observer standing against a wall. Archer at 2 meters from the observer. Without arrow, the archer draws back and aims one observer's eyes, and aligns his/her string in the middle of his/her sight (which is on the observer's eye). As soon as the observer sees the archer's eye, sight and string ALIGNED, he/she starts a timer. The observer stops the timer when he/she sees a too poor alignment - for example:

- for Recurve: when there is space between the string and the aiming dot;
- for Compound: when the peep hole is moving out of the sight tunnel.

Records at least **6 timings**, if they are not consistent, increase their number.



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Note: this exercise seems valid for compound, but still needs some refinement. Any suggestion will be welcome.

b. Self control.

- * Affixed a mirror flat to a target butt. The top edge of the mirror should be at a height such that at full draw, the archer can aim at his/her aiming eye at about 3" from the top edge of the mirror. To achieve this view, you can play with the inclination of the mirror.
- * Mark a line on the butt where the top edge of the mirror is located, then take the mirror away.
- * Finally mark another line about 3" below the one indicating where will be the top edge of the mirror – see picture entitled **“Preparation to shoot at a mirror” published with “2002-5 Face marks & Alignment”**.
- * Now take your bow and your stance at a distance such that the end of your long stabiliser is at about 2 or 3 feet from the butt. Move your sight down:
 - Olympic men at about 90 meters
 - Olympic women at about 75-80 meters
 - Compound men at about 100 meters
 - Compound women at about 85-90 meters.Aim at the bottom line, and shoot. Be sure that your arrow hits above the top line, let say 2" above it, adjust your sight accordingly – see picture entitled **“Sighting to shoot at a mirror” published with “2002-5 Face marks & Alignment”**. +/- **3 arrows**
- * When your sight is adjusted, re-affix the mirror to the butt.
- * Shoot **36 arrows** at the mirror aiming at your aiming eye which should be roughly at the same level as the lowest of the 2 lines (the one at about 3" from the top edge) – see picture entitled **“Shooting at a mirror” published with “2002-5 Face marks & Alignment”**; try to maintain the best stability as possible between your eyes, your string and your sight, while aiming. Of course you can really shoot the arrow

Complete the session with scoring arrows at different distances with you new (if any) string alignment location) – **60 arrows** (12 arrows at each of the 4 distances + one 12 arrow match).

Volume: 18 warm-up arrows + 177 arrows through exercises and simulations + 60 scoring arrows = **255 arrows** over the entire session.

Session: Cardio Maintenance.

of session: 1

Duration: 1:00 hour (see the important note below)

Description: **Long Duration - Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because pending:

- * your current Cardio development,
 - * the activity you have chosen,
 - * your shape of the day,
- the notions of intensity and duration can vary a lot.

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium				



FITA Training SUGGESTIONS starting on **May 13, 2002.**

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|          |   |  |
|----------|---|--|
| Long     | X |  |
| Duration |   |  |

Today we propose a Cardio session made of “**Long Duration - Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

**Session: General Body Balance.**

# of session: 1 of +/- 1 hour.

Objective: Reduce natural body swinging and make faster the permanent body re-equilibration.

Description: Described in document entitled “[General Body Balance Program](#)” included in “[2002-24 Body Balance 1](#)”. When appropriate implement each exercise during **1 minute** each.

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## THURSDAY

**Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

\* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*

\* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*

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## FRIDAY

**Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **18 arrows** .

**BODY STABILITY**

Same as Monday and Tuesday

Volume: 18 warm-up arrows + 237 arrows over the exercises = **255 arrows** over the session.

Note: while shooting from the unstable platforms you can score some rounds, matches and simulate some shoot-offs.

**Session: Strengthening (maintenance).**

# of sessions: 1

Description: “Stripping method”.

\* # of sets: 4



**FITA Training SUGGESTIONS starting on May 13, 2002.**

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- Set #1: Load = about 60% of your 1 Maximal Repetition - Implement 12 to 20 reps.
- Set #2: Reduce the load a bit - Implement 12 to 20 reps.
- Set #3: Reduce again the load a bit - Implement 12 to 20 reps.
- Set #4: Reduce again the load a bit - Implement more than 12 reps.

* Tempo: natural, always in control, no jerk

* Rest between sets: 30 sec. to 1 min..

* Rest between exercises: 1 min. to 1.5 min.

For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

Recommendations:

To prioritize:

- exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- the stand-up position (except some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- breathing out during the effort (concentric part) – for physiological reason;
- it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back

To avoid:

- the machines, which guide your motions - in archery we have to control and direct our action;
- positions that reduce body's involvement, like seating, lying.. – in archery all the body participates to the body stability during the effort (draw and full draw);
- jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.



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**Session: General Body Balance.**

# of session: 1 of +/- 1 hour.

As per Wednesday.

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## SATURDAY

**Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **18 arrows** .

STRING CLEARANCE.

1. At the bow arm level.

With no hand on the string, raise your bow and check where your string on your armguard or forearm is. About half an inch forwards to this spot, affix a piece of tape which is 2 mm raised up in its center (bridge shape – a bandage is fine). The bridge of tape should be affixed vertically, across your bow forearm/armguard, or if you prefer parallel to the string. Identify with a pen, the side of the tape closest to the string (I prefer to mark this side before sticking the tape on the armguard). This mark will help to identify if the string hits the tape while pushing the arrow or during its way back. See [illustration “Armguard clearance test”](#). Shoot one arrow with this tape in place - pay attention to not flatten out the bridge-tape before the draw! After the shot, watch the tape, and analyze the hit (if any).

If you conclude that the string clearance is poor, play with the following elements until a good string clearance:

- **the angle “bow arm / shoulders line”** by the mean of chest &/or feet orientation, also the parallelism hips/shoulder. Usually your shoulders should remain above your hips and feet, since any twist between top body and hips reduces the string clearance. See picture [“String clearance through stance”](#).
- **the position of your bow shoulder join**. This join should remain above the hipbone (of the same side!). Moving this join toward the string reduces drastically the string clearance. Nevertheless your bow arm can rotate clockwise in the shoulder girdle, as long as the girdle remains on spot
- **the bow elbow position**. See pictures [“Pushed elbow down”](#), [“Pushed clear elbow”](#), [“Close elbows - Volley”](#) and [“Spread elbows - Volley”](#) showing exercises for the correct elbow position.
- bow hand position on the grip. See picture [“Bow on thumb”](#), [“Regular bow grip”](#), [“Correct bow hand”](#) and [“Bow on Hypothenar”](#)

2. At the bow chest level.

Either watching yourself in a mirror, or with the help of an assistant observe at full draw where the string touches your chest (if any). About a half-inch forward of this spot affix a piece of tape that has a bridge shape - 2 mm raised up in the middle (a bandage is fine). See picture [“Tape on chestguard”](#) published with [2002-6 String clearance & Alignment](#)

The most critical point is the edge (hem or trim) of the chestguard surrounding your bow shoulder.

The bridge of tape should be affixed parallel to the string on your chestguard. Shoot one arrow with this tape in place - pay attention to not flatten out the “bridge” part before the draw. After the shot, analyze the hit (if any).

If you conclude that the string clearance is poor, play with the following elements until a good string clearance:

- **the angle “bow arm / shoulders line”** as above



**FITA Training SUGGESTIONS starting on **May 13**, 2002.**

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- **the position of your bow shoulder join** as above
- **the verticality of your body.** Leaning toward the target helps to clear the string from your chest; towards your toes too, but could disturb your body stability.
- **the inner chest tension.** Lowering your energy in your belly helps to flatten your chest, this is also good for body balance (lower center of gravity) and for staying relaxed.

Volume: variable, pending the initial quality of your string clearance, and the speed to solve the problem.
Nevertheless you should shoot about **93 arrows** total over the session, including the warm-up arrows.

Session: **Cardio Maintenance.**

of session: 1

Duration: 1:00 hour

Description: as per Wednesday

SUNDAY

Session: **Shooting**

of sessions: 1

TEST (or TOURNAMENT)

- *if test:* 18 warm-up arrows + 136 arrows over the test :
 - half a FITA round = 72 arrows;
 - 2 x 18 arrow match;
 - 2 x 12 arrow match
 - 6 shoot-off arrows= about **154 arrows** over the session.
- *if tournament* - pending the format.

Session: **General Body Balance.**

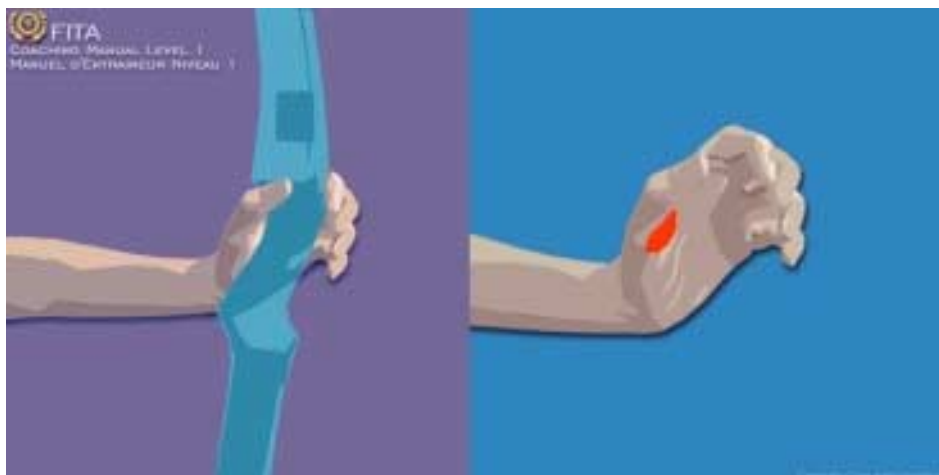
of session: 1 of +/- 1 hour.

As per Wednesday





Bow on Hypothenar



Bow on thumb



Correct bow hand



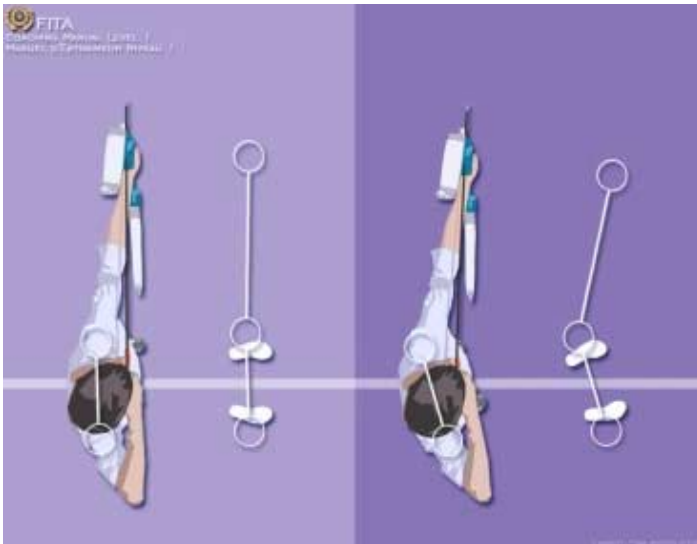
Pushed clear elbow



Pushed elbow down



Regular bow grip



String clearance through stance



Armguard clearance test



Spread elbows - Volley



Close elbows - Volley

FITA Training SUGGESTIONS starting on **May 20, 2002.**

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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* -\*\* COMMENTS and NEWS \*\***

This is our 31st week of practice of the 2001-2002 archery season. We are at the step #9 of our “[2001-2002 Overall Training Plan](#)”. This is the first week according to the new schedule below, targeting the development of the shooting perceptions and Cardio:

|                              |                                                                                                                                                                                                                                                                                                          |               |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Time sharing:                | Shooting <b>2/3</b> and <b>1/3</b> for other developments (6:45 hours).                                                                                                                                                                                                                                  |               |
| Total volume:                | <b>20:15 hours</b> per week                                                                                                                                                                                                                                                                              |               |
| Shooting:                    | 5 sessions per week of <b>2:15 hour</b> each (including 3 SHOOTING PERCEPTION sessions), <u>and</u> <b>1</b> test or tournament                                                                                                                                                                          | = 13:30 hours |
| <b>Cardio:</b>               | 3 sessions per week of <b>1:15 hour</b> each                                                                                                                                                                                                                                                             | = 3:45 hours  |
| Yoga :                       | 1 session per week of <b>1:30 hour</b> each                                                                                                                                                                                                                                                              | = 1:30 hour   |
| Strength:                    | 1 maintenance session per week of <b>1:30 hour</b>                                                                                                                                                                                                                                                       | = 1:30 hour   |
| <b>Shooting Perceptions:</b> | made of blind shot: eyes closed or masked, hidden target, ....                                                                                                                                                                                                                                           |               |
| <b>Cardio:</b>               | Running on rough field is recommended. It is suggested to develop the various energy sources: <i>Capacity and Power, Aerobe and Anaerobe, lactic and Alactic</i> . As per this beginning of the competition season, it is interest to allow the archer to drag his/her energy from any of these sources. |               |

*Note:*

*The training plan shows shooting sessions of 2:15 hours each. In fact each session does not last 2:15 hours, since some sessions are:*

- *light and shorter than 2:15 hours, for instance the one from Monday*
- *heavy and longer than 2:15 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2:15 hours should be considered as an **average**. Nevertheless we will strive to not exceed the total of 13:30 hours of shooting per week (equivalent to 6 sessions of 2:15 hours), except when there is a tournament.*

This week we will:

- Start to refine our shooting feeling;
- Revisit our full draw action;
- Enhance our Cardio development;
- Attend a local tournament.

Next week we will:

- Target the same developments;
- Have no tournament or test, but emphasize the work on our Full Draw action;
- Introduce a long period of psychological developments.

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Have a good week of practice!

On behalf of the **FITA Coaches Committee:**



**FITA** Training SUGGESTIONS starting on **May 20**, 2002.

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Pascal COLMAIRE

FITA Development Manager



FITA Training SUGGESTIONS starting on **May 20, 2002.**

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***The week at a glance:***

| Days             | # | Session Type  | Subject / Skill                | Volume                  |
|------------------|---|---------------|--------------------------------|-------------------------|
| <b>Monday</b>    | 1 | Shooting      | Feeling (Perceptions)          | 94 arrows - 1:05 hour   |
|                  | 1 | Cardio        | Short Duration– High Intensity | 1:15 hour               |
| <b>Tuesday</b>   | 1 | Shooting      | Feeling (Perceptions)          | 111 arrows – 1:20 hour  |
|                  | 1 | Yoga          | As per Teacher                 | 1:30 hour               |
| <b>Wednesday</b> | 1 | Shooting      | Full draw action - Push        | 262 arrows – 3:05 hours |
|                  | 1 | Cardio        | Aerobic Capacity               | 1:15 hour               |
| <b>Thursday</b>  |   | Visualization |                                | 3 times a day           |
| <b>Friday</b>    | 1 | Shooting      | Feeling (Perceptions)          | 262 arrows – 3:05 hours |
|                  | 1 | Strengthening | Maintenance – Endurance        | 1:30 hour               |
| <b>Saturday</b>  | 1 | Cardio        | Aerobic Capacity               | 1:15 hour               |
| <b>Sunday</b>    | 1 | Shooting      | Tournament or test             | 168 arrows – 4:55 hours |

**Note:**

The shooting rhythm is now up to 85 arrows per hour. If you cannot follow this rhythm, just extend the duration of your sessions. **DO NOT LOWER THE QUALITY OF YOUR SHOOT** for reaching this shooting rhythm! Nevertheless keep in mind that our objective is to shoot at least 300 arrows per session, twice a week; it would take 3:45 hours per session at a rhythm of 80 arrows per hour! Hence we will progressively increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase. Nevertheless you should consider to:

- reduce your rest time between arrows;
- speed up the recuperation process of the arrows that you have shot;
- shoot more arrows per end, to reduce the number of travels for recuperating your arrows. 9 arrows per end are suggested.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

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**MONDAY**

**Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **13 arrows**.

**THE HIDDEN TARGET EXERCISE.**

You need access to long shooting distances.

*Description:* Shoot at a hidden target (70m or 90 m) by another target right in front of it (20m ahead). After each shot, announce where you think the arrow should be. A spotter will confirm or correct your estimation. This exercise is better described in the article entitled [“Hidden Target”](#) that is posted at the end of these tips and with [“2002-14 Technical & Perception one arrow sequence”](#)

**Volume:** 13 Warm-up arrows + 9 sighting arrows at the longest distance + 72 arrows at the hidden target = **94 arrows** over the session.



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Session: Cardio Maintenance.

of session: 1

Duration: 1:15 hour (see the important note below)

Description: Short Duration – High Intensity

Note: It is difficult to provide accurate suggestions in this matter, the notions of intensity and duration can vary a lot pending:

- * your current cardio development,
- * the activity you have chosen,
- * your shape of the day,

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short			X	
Medium				
Long				
Duration				

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above: “**Short Duration – High Intensity**”

Choose an activity that you enjoy. You can change the activity as often as you want.

Note:

Some of you have asked if such a session should not be shorter since we implement short duration efforts.

The answer is “a little”, because:

- *You need a serious warm-up before providing Intense efforts: +/- 10 minutes;*
- *You will not only provide one short and intense effort, but a set of them alternated with rest/recuperation periods. Let us suppose that we chose a set of 10 sprints of +/- 20 seconds each, alternated with 3 -4 minutes of rest/recuperation: +/- 43 minutes*
- *A cool-down period (including stretching) is recommended at the end of the session: +/- 7minutes*

Total Duration: **1 hour**, letting 15 minutes for a shower ...

TUESDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **18 arrows** .

ONE END FEELING SEQUENCE.

Identify all the feelings that you get to shoot one end, from stepping the shooting line until the end of release of the last (3rd or 6th) arrow.

1. At a very close distance close your eyes while stepping the shooting line and implement your sequence with your eyes closed.

Note: for some tasks you will need some visual references, like to direct your body on the shooting line, to nock the arrow, ... just open your eyes the minimum time for these tasks, and close again your eyes.



FITA Training SUGGESTIONS starting on **May 20, 2002.**

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Implement most of your sequence with your eyes closed to better FEEL. Not only physical and technical feeling, but also psychological feeling like relaxation level, recuperation need and process after the shoot, concentration/preparation to the next shot, confidence level, ... - **18 arrows.**

2. Alternate one end with closed eyes and one end with open eyes. When implementing your sequence with your eyes open, strive to identify the relations between your visual sequence and any feeling – **18 arrows.**
3. Shoot 9 arrows per cut-out target faces (6 cut-out faces, respectively without: 6, 7, 8, middle 8, 9, middle 9) at a regular shooting distance and strive to identify the relations between your visual sequence and any feeling – **54 arrows.**
4. Shoot **3 arrows** at a regular target face.

Write down this sequence. You can use the chart entitled “My Sequences”; this form is attached to “2002-16 One arrow visual sequence”.

Volume: 18 warm-up arrows + 93 arrows over the exercises = **111 arrows** total over the session.

### Session: **Yoga.**

# of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

You can include a Relaxation session.

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## WEDNESDAY

### Session: **Shooting.**

# of sessions: 1

General warm-up and shooting warm-up including **18 arrows.**

PUSH or REPULSE ACTION.

*Objective:* Research of the bow arm action allowing to stay in the shooting plane, and avoiding any twisting while:

- extending our draw length - for users of clicker and back tension release aid (or release aid with trigger but using a back tension method);
- avoiding any creeping due to the spring effect of the bow – for Recurve archers with no clicker, including Bare-Bow division and also for Compound archers not identified above..

In other words: How to spread our bow blade/shoulder away and down from our spine?



## FITA Training SUGGESTIONS starting on **May 20**, 2002.

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Special attention: Have the feeling to relax down & away your string shoulder. While shooting during this session, reduce your draw action. The action should mainly come from the big muscles around your rib cage, allowing reducing the muscular work of your bow arm

Note: All the pictures of this session have already been published in “[2002-7 Full Draw Action 1](#)”

1. Simulate the action of your bow shoulder on a doorframe or any other pillar,... as per picture entitled “[Push simulation on a pillar](#)”. Try to move your body in the shooting plane ONLY - **20** reps.
2. In front of a mirror, simulate your push action with an elastic band attached to your string elbow and held by your bow hand, watch the constant distance between your elastic band and bow shoulder/arm – see illustrations entitled “[Before push with elastic band](#)” and “[After push with elastic band](#)” – **20** repetitions
3. While shooting, an assistant applies an arrow flat across your top back just above your shoulder blades. At FULL DRAW (not during the draw), the assistant aims along the shaft while you are pushing to extend your draw length (clicker) / fighting the spring effect of the bow (no clicker). The arrow should keep the same orientation (whatever this orientation) – see picture entitled “[Assistant controlling the Push axis](#)” – **18** arrows.
4. At full draw, watch your bow arm while pushing to extend your draw length (clicker) / fighting the spring effect of the bow (no clicker). No twisting should be observed at the bow shoulder level, and the distance between the arrow and your bow-arm/shoulder should remain constant - **18** arrows.
5. Repeat #4 with eyes closed - **36** arrows.
6. Same, but with eyes up & blurred - **36** arrows.
7. Same but watching and shooting at a blank butt - **36** arrows.
8. Pursuit on cut-out spots or faces - 9 arrows per cut-out target faces (6 cut-out faces, respectively without: 6, 7, 8, middle 8, 9, middle 9) = **54** arrows.
9. Complete the session shooting at a regular target face from a regular shooting distance – **6 arrows**

Note: After step #3, we suggest an extra step using the following laser control device as shown on the pictures entitled “[Lazer-head by PC](#)” and “[Laserhead by PC in use- Close up](#)”. It is not an expensive item, and it provides a tremendous feedback to the archer. If you do so, please re-adjust the number of arrows per step.

Volume: 18 arrows of warm-up + 40 simulations + 204 arrows over the exercises = **262** shots over the entire session.

Session: **Cardio Maintenance.**

of session: 1

Duration: 1:15 hour (see the important note below)

Description: **Long Duration - Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because the notions of intensity and duration can vary a lot pending:

- your current Cardio development,
- the activity you have chosen,
- your shape of the day,

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium				
Long	X			
Duration				

Today we propose a Cardio session made of “**Long Duration - Low Intensity**” exercises.



FITA Training SUGGESTIONS starting on **May 20, 2002.**

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Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

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### THURSDAY

#### Session: Mimics / Visualization.

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*

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### FRIDAY

#### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – **19 arrows**.

#### THE HIDDEN TARGET EXERCISE.

You need access to long shooting distances.

Description: Shoot at a hidden target (70m or 90 m pending your accuracy and bow weight) by another target right in front of it (20m ahead). After each shot, announce where you think the arrow should be. A spotter will confirm or correct your estimation. This exercise is better described in the article entitled “[Hidden Target](#)” that is posted at the end of these tips and with “[2002-14 Technical & Perception one arrow sequence](#)”.

Alternate 1 complete round shot at the hidden target and one complete round shot at one regular target. Below is an example of session:

- \* 19 warm-up arrows
- \* 9 sighting arrows at 90 meters
- \* 36 arrows at a hidden target at 90 meters (the masking target is at 70 meters) then 36 arrows at 90 meters
- \* 9 sighting arrows at 70 meters
- \* 36 arrows at a hidden target at 70 meters (the masking target is at 50 meters) then 36 arrows at 70 meters
- \* 9 sighting arrows at 80 meters
- \* 36 arrows at a hidden target at 80 meters (the masking target is at 60 meters) then 36 arrows at 80 meters

Note: for some compound archers the hidden target at 70 meters (with the masking target is at 50 meters) does not work, if so, just work the 2 other situations.

Variations: you can shoot – at the hidden targets - some Elimination or Final matches, up to the suggested number of arrows.

Volume: 19 Warm-up arrows + 243 sighting arrows over the exercises = **262 arrows** over the session.



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Session: Strengthening (maintenance).

of sessions: 1

ISOMETRIC METHOD.

Description

- * # of sets: 3 to 5, pending your current level.
- * Holding time: 10 to 12 seconds.
- * Intensity: As heavy as you can to hold at least 10 seconds, no less than 80%.
- * Rest between sets: 3 min.

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

Recommendations:

To prioritize:

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (except some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;
- . it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back

To avoid:

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying... – in archery all the body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.



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## SATURDAY

Session: **Cardio Maintenance.**

# of session: 1

Duration: 1:15 hour (see the important note below)

Description: **Medium Duration – Medium Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because the notions of intensity and duration can vary a lot pending:

- \* your current Cardio development,
- \* the activity you have chosen,
- \* your shape of the day,

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   |     | X      |      |           |
| Long     |     |        |      |           |
| Duration |     |        |      |           |

Today we propose a Cardio session made of “**Medium Duration – Medium Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

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## SUNDAY

Session: **Shooting**

# of sessions: 1

General warm-up and shooting warm-up – at least **12 arrows** (suggestion: 24 for a tournament).  
COMPETITION, or TEST

Volume:

- if tournament - pending the format.
- if test: 12 warm-up arrows + 144 arrows over the test (4 scoring round) + one 12 arrow match = **168 arrows** over the session.



FITA Training SUGGESTIONS starting on **May 27, 2002.**

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** -** COMMENTS and NEWS ****

This is our 32nd week of practice of the 2001-2002 archery season. We are at the step #9 of our “[2001-2002 Overall Training Plan](#)”. This is the second week according to the new schedule below, targeting the development of the shooting perceptions and Cardio:

Time sharing: Shooting 2/3 and 1/3 for other developments (6:45 hours).

Total volume: **20:15 hours** per week

Shooting: 5 sessions per week of **2:15 hour** each (including 3 SHOOTING PERCEPTION sessions), and 1 test or tournament = 13:30 hours

Cardio: 3 sessions per week of **1:15 hour** each = 3:45 hours

Yoga : 1 session per week of **1:30 hour** each = 1:30 hour

Strength: 1 maintenance session per week of **1:30 hour** = 1:30 hour

Shooting Perceptions: made of blind shot: eyes closed or masked, hidden target, ...

Cardio: Running on rough field is recommended. It is suggested to develop the various energy sources: *Capacity and Power, Aerobe and Anaerobe, lactic and Alactic*. As per this beginning of the competition season, it is interest to allow the archer to drag his/her energy from any of these sources.

Note:

The training plan shows shooting sessions of 2:15 hours each. In fact each session does not last 2:15 hours, since some sessions are:

- *light and shorter than 2:15 hours, for instance the one from Monday*
- *heavy and longer than 2:15 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2:15 hours should be considered as an **average**. Nevertheless we will strive to not exceed the total of 13:30 hours of shooting per week (equivalent to 6 sessions of 2:15 hours), except when there is a tournament.*

This week we will:

- Continue to refine our shooting feeling;
- Continue to revisit our full draw action;
- Continue to improve our Cardio development.

Next week we will:

- Target the same developments;
- Re-work our hands and release;
- Refine our aiming off skill.

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Have a good week of practice!

On behalf of the **FITA Coaches Committee:**



FITA Training SUGGESTIONS starting on **May 27**, 2002.

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***Pascal COLMAIRE***

*FITA Development Manager*



**FITA Training SUGGESTIONS starting on **May 27, 2002.****

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The week at a glance:

Days	#	Session Type	Subject / Skill	Volume
Monday	1	Shooting	Feeling (Perceptions)	95 arrows - 1:05 hour
	1	Cardio	Short Duration – High Intens.	1:15 hour
Tuesday	1	Shooting	Full draw action - Pull	114 arrows – 1:20 hour
	1	Yoga	As per Teacher	1:30 hour
Wednesday	1	Shooting	Feeling (Perceptions)	269 arrows – 3:10 hours
	1	Cardio	Short Duration– High Intensity	1:15 hour
	1	Goal setting		Negligible
Thursday		Visualization		3 times a day
Friday	1	Shooting	Full draw action - Pull	269 arrows – 3:10 hours
	1	Strengthening	Maintenance – Endurance	1:30 hour
Saturday	1	Shooting	Feeling (Perceptions)	95 arrows - 1:05 hour
	1	Cardio	Medium Duration & Intensity	1:15 hour
Sunday	2	Shooting	Full draw action - Complete and 1 Test	240 arrows – 3.40 hours

Note:

The shooting rhythm is now up to 85 arrows per hour. If you cannot follow this rhythm, just extend the duration of your sessions. **DO NOT LOWER THE QUALITY OF YOUR SHOOT** for reaching this shooting rhythm! Nevertheless keep in mind that our objective is to shoot at least 300 arrows per session, twice a week; it would take 3:45 hours per session at a rhythm of 80 arrows per hour! Hence we will progressively increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase. Nevertheless you should consider to:

- reduce your rest time between arrows;
- speed up the recuperation process of the arrows that you have shot;
- shoot more arrows per end, to reduce the number of travels for recuperating your arrows. 9 arrows per end are suggested.

Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.

MONDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **14 arrows.**

THE HIDDEN TARGET EXERCISE.

You need access to long shooting distances.

Description: Shoot at a hidden target (70m or 90 m) by another target right in front of it (20m ahead). After each shot, announce where you think the arrow should be. A spotter will confirm or correct your estimation. This exercise is better described in the article entitled “[Hidden Target](#)” that is posted at the end of these tips and with “[2002-14 Technical & Perception one arrow sequence](#)”



FITA Training SUGGESTIONS starting on **May 27**, 2002.

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Volume: 14 Warm-up arrows + 9 sighting arrows at the longest distance + 72 arrows at the hidden target =  
**95 arrows** over the session.

### Session: Cardio Maintenance.

# of session: 1

Duration: 1:15 hour (see the important note below)

Description: Short Duration – High Intensity

Note: It is difficult to provide accurate suggestions in this matter, the notions of intensity and duration can vary a lot pending:

- \* your current cardio development,
- \* the activity you have chosen,
- \* your shape of the day,

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        | X    |           |
| Medium   |     |        |      |           |
| Long     |     |        |      |           |
| Duration |     |        |      |           |

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above: “**Short Duration – High Intensity**”

Choose an activity that you enjoy. You can change the activity as often as you want.

Note:

*Some of you have asked if such a session should not be shorter since we implement short duration efforts.*

*The answer is “a little”, because:*

- *You need a serious warm-up before providing Intense efforts: +/- **10 minutes**;*
- *You will not only provide one short and intense effort, but a set of them alternated with rest/recuperation periods. Let us suppose that we chose a set of 10 sprints of +/- 20 seconds each, alternated with 3-4 minutes of rest/recuperation: +/- **43 minutes***
- *A cool-down period (including stretching) is recommended at the end of the session: +/- **7minutes***

Total Duration: **1 hour**, letting 15 minutes for a shower ...

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## TUESDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – **12 arrows**.

### COMBINED DRAW ACTIONS (Basic + Back tension)

**Objective:** Introduce Back Tension and research of the combined DRAW actions:

- \* Spread your string shoulder down and away from your spine (Basic)  
+ / and



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- * concentric action of the posterior muscles of the string shoulder (Back Tension)

Note: All the illustration of this session have already been published in “published with the FITA Training Tips “2002-7 Full Draw Action 1”.

1. Simulate a Basic Draw action with your string elbow against a wall, as you did during the latest shooting session. Try to move your body in the shooting plan ONLY - **10** repetitions.
Special attention: Your string blade should move away from your spine.
2. Back tension simulation.
Have the tips of your string -fingers on your sternum, while the inside of your string-hand is flat against your right chest. Move your string elbow forward while curling your fingers and bringing the external part of your fingers against the left part of your chest – see picture entitled “Simulation preparing to Back Tension feeling”.
Now while returning back to the original position feel the motion in the back part of your string shoulder. This feeling is close from what is usually called “Back Tension” feeling – see picture entitled “Back Tension simulation” – **10** repetitions
3. Simulate a Back Tension action with your string elbow against a wall as you did in #1, but this time try to move your body in the in the antero-posterior plan (toes to heels) - see pictures entitled “Before Back Tension - Simulation on a wall “ and “After Back Tension - Simulation on a wall “ - **10** repetitions
Special attention: Your humerus (arm) should turn clockwise viewed from the top.
4. Still with your string elbow against a wall, combined the simulations of the Basic Draw and those of Back Tension actions. Your body should move 45 degrees, e.g. a bit toward the imaginary target and toward your toes - **10** repetitions.
Special attention: Your string blade should be moved away from the spine, and the humerus (arm), should turn clockwise viewed from the top in the horizontal plan. Your string elbow should NOT move down.
5. Then simulate the combined Draw actions with an elastic band attached to your string elbow and held by your bow hand – **10** repetitions
6. While shooting, an assistant applies an arrow flat cross your top back just above your shoulder blades. The assistant aims along the shaft if at FULL DRAW (not during the draw), while you are pulling to get your clicker (Recurve) / trigger (Compound); the arrow should keep the same orientation (whatever this orientation) – similar as shown on picture entitled “Assistant controlling the Push axis” – **12** arrows.
To complete step #6, we suggest an extra step using a “Laser-head control device” as suggested previously.
7. At full draw, watch yourself through a mirror while getting your clicker (Recurve) / trigger (Compound). No twisting should be observed at the following levels:
 - bow shoulder
 - waist
 - neck**18** arrows.
8. Repeat #2 with eyes closed - **18** arrows.
9. Same, but with eyes up & blurred - **18** arrows.
10. Same but watching and shooting at a blank butt - **18** arrows.
11. Pursuit on cutout spots or faces - 18 arrows per cutout spot (6 cut-out faces, respectively without: 6, 7, 8, middle 8, 9, middle 9) - **108** arrows.




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12. Shoot **9 arrows** at a regular target face.

Volume: 12 warm-up arrows + 257 simulations and arrows over the exercises = **269** arrows total over the session.

**Session: Yoga.**

# of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

You can include a Relaxation session.

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**WEDNESDAY**

**Session: Shooting.**

# of sessions: 1

General warm-up and shooting warm-up including **17 arrows**.

**THE HIDDEN TARGET EXERCISE.**

You need access to long shooting distances.

*Description:* Shoot at a hidden target (70m or 90 m pending your accuracy and bow weight) by another target right in front of it (20m ahead). After each shot, announce where you think the arrow should be. A spotter will confirm or correct your estimation. This exercise is better described in the article entitled "[Hidden Target](#)" that is posted at the end of these tips and with "[2002-14 Technical & Perception one arrow sequence](#)".

Alternate 1 complete round shot at the hidden target and one complete round shot at one regular target.

Below is an example of session:

(18 warm-up arrows)

- \* **12** sighting arrows at 90 meters

Shoot alternately one 9 arrow end at a hidden target at 90 meters (the masking target is at 70 meters) and directly to a target at 90 meters, until you have shot 36 arrows in each situation – **72 arrows**

- \* **12** sighting arrows at 70 meters

Shoot alternately one 9 arrow end at a hidden target at 70 meters (the masking target is at 50 meters) and directly to a target at 70 meters, until you have shot 36 arrows in each situation – **72 arrows**

- \* **12** sighting arrows at 80 meters

Shoot alternately one 9 arrow end at a hidden target at 80 meters (the masking target is at 60 meters) and directly to a target at 80 meters, until you have shot 36 arrows in each situation – **72 arrows**



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Note: for some compound archers the hidden target at 70 meters (with the masking target at 50 meters) does not work, if so, just work the 2 other situations.

Variations: you can shoot – at the hidden targets - some Elimination or Final matches, up to the suggested number of arrows.

Volume: 17 Warm-up arrows + 252 sighting arrows over the exercises = **269 arrows** over the session.

Session: **Cardio Maintenance.**

of session: 1

Duration: 1:15 hour (see the important note below)

Description: **Long Duration - Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because the notions of intensity and duration can vary a lot pending:

- your current Cardio development,
- the activity you have chosen,
- your shape of the day,

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium				
Long	X			
Duration				

Today we propose a Cardio session made of “**Long Duration - Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

GOAL SETTING:

of session: 1

Duration: Negligible

Set specific measurable goals for your shooting sessions, for example you can decide a goal of 85% accurate shots, either based on your assessment of one skill execution or your overall feeling of the shot.

Setting such a goal serve to keep your attention on task = to be concentrated.

THURSDAY

Session: **Mimics / Visualization.**

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

* *External visualization* = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.



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\* *Internal visualization = You just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*

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## FRIDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – **18 arrows.**

#### EFFICIENT DRAW

**Objective:** Be able to draw without any head and top body changes.

1. Simulate the “Combined Draw Actions” with an elastic band attached to your string elbow and held by your bow hand – see [“2002-7 Full Draw Action 1”](#). Feel that your string hand moves SLIGHTLY along your chin (Recurve and some Compound archers) or jaw (Barebow and some Compound archers) – **12 repetitions**
  2. While shooting at a very short distance.  
At full draw (not during the draw) watch in a mirror the string motion on your face. Try to see its progress (moving backward) – **9 arrows.**
  3. Now eyes closed, still from a very short shooting distance, try to feel either:
    - \* the string moving backward on your face;
    - \* your string hand sliding backward under your chin, or against your jaw;
    - \* the string pressure increasing on your face (often on your chin and nose);
    - \* a combination of any above feelings.**18 arrows.**
  4. Same, but with eyes up & blurred - **18 arrows.**
  5. Same but watching and shooting at a blank butt - **18 arrows.**
  6. 18 arrows per cutout spot (6 cut-out faces, respectively without: 6, 7, 8, middle 8, 9, middle 9) - **108 arrows.**
  7. Shoot **9 arrows** at a regular target face
  8. Use the [“Laser-head control device \(PC\)”](#) as suggested and illustrated in [“2002-7 Full Draw Action 1”](#) – **18 arrows.**
  9. Shoot and score one 18 arrow match + one 12 arrow match + 1 shoot-off arrow = **31 arrows**  
During these scoring arrows strive to identify your competitive routines.
- Volume:** 18 warm-up arrows + 12 simulations + 208 arrows over the exercises + 31 scoring arrows = **269 arrows** total over the session.

### Session: Strengthening (maintenance).

# of sessions: 1

**Description:** Belt and legs according to the endurance strength method #2 (adapted by Charles Poliquin in “Designing Strength Training Program for Archers”), as per suggested program. In shorts:

- \* Intensity / load: 50 to 60% of your 1 Maximal Repetition
- \* # of repetitions: more than 8.
- \* # of sets: 3 (or 4)
- \* Rest between sets: 30 to 90 seconds; 1 minute is fine.
- \* Rest between exercises: 90 seconds



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* Tempo: 2 seconds on the concentric effort - 4 seconds on the eccentric effort

For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

Recommendations:

To prioritize:

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (except some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;
- . it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back

To avoid:

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying.. – in archery the entire body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

SATURDAY

Session: Shooting.

of sessions: 1



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General warm-up and shooting warm-up including **12 arrows**.

ONE END FEELING SEQUENCE.

*Description:* Identify all the feelings that you get to shoot one end, from stepping the shooting line until the end of release of the last (3<sup>rd</sup> or 6<sup>th</sup>) arrow.

1. At a very close distance close your eyes while stepping the shooting line and implement your sequence with your eyes closed.

Note: for some tasks you will need some visual references, like to direct your body on the shooting line, to nock the arrow ... just open your eyes the minimum time for these tasks, and close again your eyes.

Implement most of your sequence with your eyes closed to better FEEL. Not only physical and technical feeling, but also psychological feeling like relaxation level, recuperation need and process after the shoot, concentration/preparation to the next shot, confidence level, ... - **12 arrows**.

2. Alternate one end with closed eyes and one end with open eyes. When implementing your sequence with your eyes open, strive to identify the relations between your visual sequence and any feeling – **12 arrows**.
3. Shoot 9 arrows per cut-out target faces (6 cut-out faces, respectively without: 6, 7, 8, middle 8, 9, middle 9) at a regular shooting distance and strive to identify the relations between your visual sequence and any feeling – **54 arrows**.
4. Shoot **5 arrows** at a regular target face.

Write down this sequence. You can use the chart entitled “**My Sequences**”; this form is attached to “**2002-16 One arrow visual sequence**”.

*Volume:* 12 warm-up arrows + 83 arrows over the exercises = **95 arrows** total over the session.

Session: **Cardio Maintenance**.

*# of session:* 1

*Duration:* 1:15 hour (see the important note below)

*Description:* **Medium Duration – Medium Intensity**

*Note:* It is difficult to provide accurate suggestions in this matter, because the notions of intensity and duration can vary a lot pending:

- \* your current Cardio development,
- \* the activity you have chosen,
- \* your shape of the day,

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   |     | X      |      |           |
| Long     |     |        |      |           |
| Duration |     |        |      |           |

Today we propose a Cardio session made of “**Medium Duration – Medium Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

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SUNDAY

Session: Shooting

of sessions: 2

General warm-up and shooting warm-up – at least **12 arrows**

Session #1

COMPLETE FULL DRAW ACTION.

Objective: Combine the:

Push action (bow part of the archer);
and

Draw combined action (string part of the archer).

Description:

A. Push action – Revision:

- A1. Simulate the action of your bow shoulder on a doorframe or any other pillar... as per picture entitled “Push in shooting plan- Simulation on a pillar”. Try to move your body in the shooting plane ONLY - **12 reps.**
- A2. In front of a mirror, simulate your push action with an elastic band attached to your string elbow and held by your bow hand, watch the constant distance between your elastic band and bow shoulder/arm – see illustrations entitled “[Before push with elastic band](#)”, “[After push with elastic band](#)” (both illustrations published in “[2002-7 Full Draw Action 1](#)”) and “[Constant distance line of forces-Bow shoulder while pushing](#)” published in “[2002-8 Full Draw Action 2](#)” – **12 repetitions**
- A3. While shooting, an assistant applies an arrow flat across your top back just above your shoulder blades. At FULL DRAW (not during the draw), the assistant aims along the shaft while you are pushing to:
extend your draw length for getting your clicker;
or, extend slightly your draw length for getting your trigger
or, extend slightly your draw length for cancelling the spring effect of the bow (no clicker).
The arrow should keep the same orientation (whatever this orientation) – see picture entitled “[Assistant controlling the push axis](#)” and published in “[2002-7 Full Draw Action 1](#)” – **9 arrows**.

B. Combined Draw action – Revision:

- B1. With your string elbow against a wall, combined the simulations of the *Basic Draw* and of *Back Tension* actions. Your body should move 45 degrees, e.g. a bit toward the imaginary target and toward your toes - **12 repetitions.**
Special attention: Your string blade should be moved away from the spine, and the humerus (arm), should turn clockwise viewed from the top in the horizontal plan. Your string elbow should NOT move down.
- B2. In front of a mirror, simulate the combined Draw actions with an elastic band attached to your string elbow and held by your bow hand – **12 repetitions.**
- B3. While shooting, an assistant applies an arrow flat cross your top back just above your shoulder blades. At FULL DRAW (not during the draw), the assistant aims along the shaft while you are pulling to:
extend your draw length for getting your clicker;
or, extend slightly your draw length for getting your trigger
or, extend slightly your draw length for cancelling the spring effect of the bow (no clicker).



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The arrow should keep the same orientation (whatever this orientation) – similar as shown on picture entitled “[Assistant controlling the push axis](#)” and published in “[2002-7 Full Draw Action 1](#)”– **9 arrows.**

**C. Complete Full Draw Action: A + B**

C1: In front of a mirror, simulate the Complete Full Draw Actions with an elastic band attached to your string elbow and held by your bow hand – **12 repetitions.**

C2. While shooting, at full draw, watch your top body and the arrow, while you are:  
extend your draw length for getting your clicker;  
or, extend slightly your draw length for getting your trigger  
or, extend slightly your draw length for cancelling the spring effect of the bow (no clicker).  
No twisting or deformation should be observed at the following levels - **10 arrows :**

- bow shoulder
- waist
- neck

C3. Repeat #8 with eyes closed, feeling the perfect maintenance of all the axis of your physical form - **12 arrows.**

C4. Same, but with eyes up & blurred - **12 arrows .**

C5. Same but watching and shooting at a blank butt - **12 arrows .**

C6. Pursuit on cut-out spots or faces - 9 arrows per cut-out spot (6 situations) - **54 arrows.**

**Note:** For steps #3, 6 & 8 we suggest an extra step using a “[Laser-head control device \(PC\)](#)” as suggested in “[2002-7 Full Draw Action 1](#)”.

**Volume:** 12 arrows of warm-up + 166 arrows and simulations over the exercises = about **178 “arrows”** over the entire session #1.

Session #2

TEST

Two 18 arrow matches + two 12 arrow matches + two shoot-off arrows

**Volume: 62 arrows** over the entire session #2



FITA Training SUGGESTIONS starting on **June 3, 2002.**

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** -** COMMENTS and NEWS ****

This is our 33rd week of practice of the 2001-2002 archery season. We are moving to step #10 of our “[2001-2002 Overall Training Plan](#)”. We will use the same schedule as in step #9, but instead of the shooting perceptions we will target the aiming-off skill:

Time sharing:	Shooting 2/3 and 1/3 for other developments (6:45 hours).	
Total volume:	20:15 hours per week	
Shooting:	5 sessions per week of 2:15 hour each (including 3 AIMING OFF sessions), <u>and 1</u> test or tournament	= 13:30 hours
Cardio:	3 sessions per week of 1:15 hour each	= 3:45 hours
Yoga :	1 session per week of 1:30 hour each	= 1:30 hour
Strength:	1 maintenance session per week of 1:30 hour	= 1:30 hour
Aiming off:	<i>Skill to aim off the target centre to hit this centre in case of disturbed environment, particularly win and rain.</i>	

Note:

The training plan shows shooting sessions of 2:15 hours each. In fact each session does not last 2:15 hours, since some sessions are:

- *light and shorter than 2:15 hours, for instance the one from Monday*
- *heavy and longer than 2:15 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2:15 hours should be considered as an **average**. Nevertheless we will strive to not exceed the total of 13:30 hours of shooting per week (equivalent to 6 sessions of 2:15 hours), except when there is a tournament.*

This week we will:

- Re-work our hands and release;
- Start to improve our aiming off skills;
- Have a tuning session.

Next week we will:

- Strengthen our Follow-through;
- Have some attention exercises;
- Start to identify our ideal Performance State (IPS);
- Attend a local tournament.

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**



FITA Training SUGGESTIONS starting on **June 3**, 2002.

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**Pascal COLMAIRE**  
*FITA Development Manager*



**FITA Training SUGGESTIONS starting on June 3, 2002.**

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The week at a glance:

Days	#	Session Type	Subject / Skill	Volume
Monday	1	Shooting	Aiming off	96 arrows - 1:05 hour
	1	Cardio	Short Duration – High Intens.	1:15 hour
Tuesday	1	Shooting	Aiming off	117 arrows – 1:20 hour
	1	Yoga	As per Teacher	1:30 hour
Wednesday	1	Shooting	Hands & Release	276 arrows – 3:10 hours
	1	Cardio	Long Duration- Low Intensity	1:15 hour
	1	Mental Preparation	Adaptation to next event	Negligible
Thursday		Visualization		3 times a day
Friday	1	Shooting	Hands & Release	276 arrows – 3:10 hours
	1	Strengthening	Maintenance – Eccentric	1:30 hour
Saturday	1	Shooting	Aiming off	96 arrows - 1:05 hour
	1	Cardio	Medium Duration & Intensity	1:15 hour
Sunday	2	Shooting	Tuning and Test	240 arrows – 3.40 hours

Note:

The shooting rhythm is now up to 86 arrows per hour. If you cannot follow this rhythm, just extend the duration of your sessions. **DO NOT LOWER THE QUALITY OF YOUR SHOOT** for reaching this shooting rhythm! Nevertheless keep in mind that our objective is to shoot at least 300 arrows per session, twice a week; it would take 3:45 hours per session at a rhythm of 80 arrows per hour! Hence we will progressively increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase. Nevertheless you should consider to:

- reduce your rest time between arrows;
- speed up the recuperation process of the arrows that you have shot;
- shoot more arrows per end, to reduce the number of travels for recuperating your arrows. 9 arrows per end are suggested.

Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.

MONDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **18 arrows.**

COUNTER AIMING SESSION:

Draw with thin lines the rings of a target face with an off center (let say with the bull's eyes in the 7 point scoring area at 9 o'clock). These thin lines should not be visible from where you will shoot.

1. Shoot and score some rounds at different distances. For instance you can shoot:



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- one 36 arrows at 70 meters;
- one 18 arrow match;
- two 12 arrow matches.

**Volume:** 18 arrows for warm-up + 78 arrows over the various rounds = about **96 arrows** over the session.

### **Session: Cardio Maintenance.**

**# of session:** 1

**Duration:** 1:15 hour (see the important note below)

**Description:** Short Duration – High Intensity

**Note:** It is difficult to provide accurate suggestions in this matter, the notions of intensity and duration can vary a lot pending:

- \* your current cardio development,
- \* the activity you have chosen,
- \* your shape of the day,

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|                 | Low | Medium | High | Intensity |
|-----------------|-----|--------|------|-----------|
| Short           |     |        | X    |           |
| Medium          |     |        |      |           |
| Long            |     |        |      |           |
| <b>Duration</b> |     |        |      |           |

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above: “**Short Duration – High Intensity**”

Choose an activity that you enjoy. You can change the activity as often as you want.

**Note:**

*Some of you have asked if such a session should not be shorter since we implement short duration efforts.*

*The answer is “a little”, because:*

- *You need a serious warm-up before providing Intense efforts: +/- **10 minutes**;*
- *You will not only provide one short and intense effort, but a set of them alternated with rest/recuperation periods. Let us suppose that we chose a set of 10 sprints of +/- 20 seconds each, alternated with 3 -4 minutes of rest/recuperation: +/- **43 minutes***
- *A cool-down period (including stretching) is recommended at the end of the session: +/- **7minutes***

**Total Duration:** **1 hour**, letting 15 minutes for a shower ...

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## **TUESDAY**

### **Session: Shooting**

**# of sessions:** 1



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General warm-up and shooting warm-up – **18 arrows.**

COUNTER AIMING SESSION:

Draw with thin lines the rings of a target face with an off center (let say with the bull's eyes in the 7 point scoring area at 9 o'clock). These thin lines should not be visible from where you will shoot.

1. Shoot and score some rounds at different distances. For instance you can shoot:

- half a FITA round, e.g. 18 arrows per distance – **72 arrows**
- two 12 arrow match – **24 arrows**
- 3 shoot off arrows

Volume: 18 warm-up arrows + 99 arrows over the exercises = about **117 arrows** over the session.

Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

You can include a Zazen session.

WEDNESDAY

Session: Shooting.

of sessions: 1

General warm-up and shooting warm-up including **18 arrows.**

REVISION SESSION ON HANDS & RELEASE

BOW HAND

Objective: Get an impassive bow hand and fingers, in order to let the propulsion of the arrow done without any force applied on the riser, which could create some torque motion during the arrow propulsion period and disturb this step.

Note: all the illustrations related to Bow Hand have already been published with the FITA Training Tips "[2002-9 Full Draw Action 3](#)". See Friday Phase A.

Simulations of bow hand relaxation.



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Wrist is relaxed on the grip, therefore when the grip moves forward just after the release, the wrist bends down – See pictures entitled “[Simulation of a relaxed bowhand at full draw](#)” and “[Simulation of a relaxed bowhand after release](#)” - **12 repetitions**

**\* Olympic Archers**

1. At about 4 meters from the target, load an arrow on your bow WITHOUT clicker, raise your bow arm at your shoulders level, an assistant behind you maintains you at your string shoulder, and draws your string just a bit (10cm) and release – **12 arrows.**

Note to the assistant: draw just a bit toward the archer’s chest, NOT higher, to avoid punching the archer’s face upon release – see picture entitled “[Bowhand relaxation – shooting with an assistant](#)”.

Archer’s task: OBSERVE YOUR bow-hand, make it as relaxed as possible, when the assistant releases you should see your bow wrist smoothly bending down and finish very soft, your fingers should have stayed slightly curved and very relaxed – See picture entitled “[A relaxed bowhand](#)”.

2. Now do it alone – see picture entitled “[Bowhand relaxation at reduced draw](#)” - **12 arrows**
3. Same but increase your draw progressively at each arrow until a complete draw - **12 arrows**
4. Same with your clicker on - **12 arrows**

**\* Compound archers.**

A1. At full draw, at a short distance, WATCH YOUR bow hand, make it as relaxed as possible while an assistant squeeze your trigger to release on your behalf. You should see your bow wrist bending down and finished very relaxed, your fingers should have stayed slightly curved and very soft - **12 arrows**.

A2. Now do it alone one every second arrow - **18 arrows**

A.3: Now do it by yourself only – **18 arrows**

Volume: 12 simulations + **48 arrows** over the BOWHAND exercise.

|                     |
|---------------------|
| <b>STRING HAND.</b> |
|---------------------|

**Objective:** Have less tension as possible in string wrist and forearm, to avoid changing effort on the string. When the string moves forward at the release, the tensionless string wrist bends down (and moves back due to muscular activity of the muscles located in the back of your string shoulder) with the flexed string arm.

Note: all the illustrations related to String Hand have already been published with the FITA Training Tips “[2002-11 Hands & Release](#)”. See Wednesday.

Simulation of string hand relaxation.

While gripping your middle bow finger that is pointed down, have a flat string wrist & hand (no knuckles), your string hand should be "twistable" - simulate a release while watching your string hand. At the end of the simulation, be sure that your hand is relaxed, the wrist should be bent down and the fingers quite relaxed –



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see picture entitled “[Simulation of a relaxed string grip](#)” – **12 repetitions**.

*** RECURVE ARCHERS**

1. At 4 meters from the target, load an arrow on your bow WITHOUT clicker. Raise your bow and just draw a bit (10 cm) toward your chest level (to avoid kicking your chin upon release!), release while watching your string hand – see pictures entitled “[Release exercise at reduced draw](#)” and “[Upon and after release keep watching your string hand](#)” - **18 arrows**

Important: Don't stop the draw, ensure a CONTINUOUS back motion of the string until the release, and ALWAYS WATCH your string hand being slowly & progressively more relaxed, follow it with your eyes all the release trajectory long; then increase the draw progressively to full draw

2. When you cannot observe the string hand directly anymore (string hand under your chin), use a mirror to observe your hand during and after the release - **18 arrows**.

You can introduce your clicker after 4 to 6 arrows.

Always keep the string hand, as relaxed as possible.

Note: If you cannot avoid any:

- knuckle showing on the back of your string hand
- bent in your string wrist

try a deeper string grip.

*** COMPOUND ARCHERS**

1. Start at the above point #2. Observe your string hand in a mirror. Check that it remains relaxed through the entire draw. After the release, your wrist should bend down – **36 arrows**.

Special attention (to both types of bow users):

Keep your string elbow SLIGHTLY raised (but low shoulders). Your tensionless string wrist could bend down after the release. String-hand should slide along your neck, never away (we'll work on this during our next session).

Volume: 12 simulations + **36 arrows** over the String hand exercise.

RELEASE.

Objective: Keep the same muscular activity from full draw, to the end of the shot (muscular follow-through).

For finger archers : only one change - the level of tension in your string fingers.

For archers with a mechanic release : no change

Note: all the illustrations related to the Release have already been published with the FITA Training Tips “[2002-11 Hands & Release](#)”. See Friday.

Simulations of string hand relaxation.



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- a) While gripping your pointed down middle bow finger, have a flat string wrist & hand (no knuckles), your string hand should be "twistable" - simulate a release while watching your string hand – see pictures entitled "[Simulation of a relaxed string grip](#)" and "[Release simulation](#)" – **12 repetitions.**
- b) While gripping your pointed down middle bow finger, turn your head, and watch your string bow-elbow, it should keep the same angle, moving back and away, horizontally ; the motion should come FROM the shoulder joint see picture entitled "[A Left Hand archer watches his string elbows during release simulation](#)" – **12 repetitions.**
- c) Combine both simulations while watching toward the target, your string hand should slide along your neck, and stop about at the vertical of your ear (below it) – see picture entitled "[End of release simulation](#)" – **12 repetitions.**

Compound archers: pending where is your string hand on your face, this exercise could be or not be possible, if not possible, move to the next step.

At about 4 meters from the butt, at full draw, turn your head 180 degrees for watching your string elbow, release and observe - **18 arrows:**

- the constant angle at the elbow level,
- your string elbow moving back on the same horizontal plan (more or less),
- the pivoting/rotation motion of your string arm at the shoulder joint.

See pictures entitled "[Watch your string elbow at full draw](#)" and "[Watch your string elbow angle upon release](#)".

#### **For both types of bow.**

- \* At full draw, observe your string hand through a mirror. Keep your string hand as relaxed as possible. Release WHILE WATCHING your string hand and arm in the mirror - 24 arrows for those who were not able to implement the previous exercise, **18 arrows** for the others.
- \* Shoot eyes closed, while staying concentrated on your release, feel that your body and release remain in the shooting plan (no twist) - **18 arrows**
- \* Same, but eyes up - **18 arrows**
- \* Same, but shooting at a blank butt - **18 arrows**
- \* Shoot at cut-out spots. You are suggested alternately as follow: one arrow in the ten-test - one arrow at a reverse (white) cut-out spot - one arrow at a coloured spot of the same size - **24 arrows**

**Volume:** **114 arrows** over the RELEASE exercise,

**Total volume:** 18 warm-up arrows + 60 simulations + 198 arrows over exercises = **276 "arrows"** over the entire session.

Session: **Cardio Maintenance.**

# of session: 1

Duration: 1:15 hour (see the important note below)

Description: **Long Duration - Low Intensity**



## FITA Training SUGGESTIONS starting on **June 3, 2002.**

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Note: It is difficult to provide accurate suggestions in this matter, because the notions of intensity and duration can vary a lot pending:

- your current Cardio development,
- the activity you have chosen,
- your shape of the day,

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium				
Long	X			
Duration				

Today we propose a Cardio session made of “**Long Duration - Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

ADAPTATION TO NEXT EVENT:

of session: 1

Duration: Negligible

Visualize yourself competing at the next event. Below are some examples of what you can visualize:

- Your behavior and type of focus while arriving on site.
- The way you will meet the other participants, organizers and judges.
- Your attitude and plan during practice
- Your mindset just before the first arrows and your plan for waiting the official start.
- Yourself shooting on site (same environment)
- Various implementations for the best start: in case of a good beginning, of a medium one and in case of a bad one.
- How you will cope with the format of the event: the various rounds, including in case of tie.
- Your alternatives for shooting at the best with various types of opponents: Left-hand, nice persons, open persons, non-peaking persons, aggressive people, braggarts, fast / slow archers, better/weaker, ...

We will make ourselves ready for each of the above situations over the next weeks, as a start we suggest to mainly focus on getting use to the most popular formats of the archery events. You can rehearse such format when you are suggested to shoot some rounds, matches and shoot-off's.

THURSDAY

Session: Mimics / Visualization.



FITA Training SUGGESTIONS starting on June 3, 2002.

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# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = you just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*

*During such sessions you can implement what as been described yesterday in “ADAPTATION TO NEXT EVENT”.*

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**FRIDAY**

**Session: Shooting.**

# of sessions: 1

General warm-up and shooting warm-up including **18 arrows**.

REVISION SESSION ON HANDS & RELEASE

Same as Wednesday

**Total volume:** 18 warm-up arrows + 60 simulations + 198 arrows over exercises = **276 “arrows”** over the entire session.

**Session: Strengthening (maintenance).**

# of sessions: 1

**Maximal Eccentric Contractions Method**

**Goal:** to increase your maximal strength (neural adaptation with little muscular mass development).

**Description:**

- \* # of sets: 3
- \* of repetitions : 3 to 6 (5 is a good number)
- \* Intensity: As heavy as you can, up to 150 % of your maximal R.M. You can ask the help of an assistant for the concentric motions, but should implement the eccentric part of the effort (at least most of it) by yourself;
- \* Rest between sets and repetitions : 3 minutes
- \* Tempo: natural

For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,



## FITA Training SUGGESTIONS starting on **June 3, 2002.**

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- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

Recommendations:

To prioritize:

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (except some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;
- . it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back

To avoid:

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying.. – in archery the entire body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

SATURDAY

General warm-up and shooting warm-up – **18 arrows** .

COUNTER AIMING SESSION:



FITA Training SUGGESTIONS starting on **June 3**, 2002.

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Draw with thin lines the rings of a target face with an off center (let say with the bull's eyes in the 7 point scoring area at 9 o'clock). These thin lines should not be visible from where you will shoot.

1. Shoot and score some rounds at different distances. For instance you can shoot:

- one 36 arrows at 70 meters;
- one 18 arrow match;
- two 12 arrow matches.

During these scoring arrows strive to identify your competitive routines

**Volume:** 18 arrows for warm-up + 78 arrows over the various rounds = about **96 arrows** over the session.

Session: **Cardio Maintenance.**

# of session: 1

**Duration:** 1:15 hour (see the important note below)

**Description:** *Medium Duration – Medium Intensity*

**Note:** It is difficult to provide accurate suggestions in this matter, because the notions of intensity and duration can vary a lot pending:

- \* your current Cardio development,
- \* the activity you have chosen,
- \* your shape of the day,

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   |     | X      |      |           |
| Long     |     |        |      |           |
| Duration |     |        |      |           |

Today we propose a Cardio session made of “*Medium Duration – Medium Intensity*” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

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## SUNDAY

**Session: Shooting**

# of sessions: 2

General warm-up and shooting warm-up – at least **12 arrows** (suggestion: 24 for a tournament).

Session #1

General warm-up and shooting warm-up – **18 arrows**.

TUNING



**FITA Training SUGGESTIONS starting on June 3, 2002.**

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Since we have revised most of the technical steps that could have influence the relation bow-archer, we can now check and refine (if necessary) our equipment tuning.

Description: There are so many written and Audio-visual publications on this subject that we will not detail any tuning process here; it would be too long and repeat the information that you can easily find somewhere else. For instance you can use the tuning process described in the Easton catalog. If you have not yet this catalog, you can order it from the following website:

<http://www.eastonarchery.com/>

Several bow makers also provides good advises, like the PSE Compound BowUser's guide:

www.pse-archery.com

Two already published documents may help you:

- * "French Test" has been published with "[2002-3 Raise & Draw Start](#)"
- * "Tiller Adjustment" has been published with "[2002-13 Stable Aiming](#)"

Note: The required number of arrows can vary a lot pending your need of tuning and adjustment.

Session #2

TEST

The number of rounds and/or matches that you can schedule depends on the number of arrows that you had shot for tuning your equipment.

Strive to shoot **240** arrows over the two sessions (tuning and test), ...



FITA Training SUGGESTIONS starting on **June 10, 2002.**

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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* -\*\* COMMENTS and NEWS \*\***

This is our 34th week of practice of the 2001-2002 archery season. We are still in step #10 of our “[2001-2002 Overall Training Plan](#)”:

|                    |                                                                                                                           |               |
|--------------------|---------------------------------------------------------------------------------------------------------------------------|---------------|
| Time sharing:      | Shooting 2/3 and 1/3 for other developments (6:45 hours).                                                                 |               |
| Total volume:      | <b>20:15 hours</b> per week                                                                                               |               |
| Shooting:          | 5 sessions per week of <b>2:15 hour</b> each (including 3 AIMING OFF sessions),<br>and 1 test or tournament               | = 13:30 hours |
| <b>Cardio:</b>     | 3 sessions per week of <b>1:15 hour</b> each                                                                              | = 3:45 hours  |
| Yoga :             | 1 session per week of <b>1:30 hour</b> each                                                                               | = 1:30 hour   |
| Strength:          | 1 maintenance session per week of <b>1:30 hour</b>                                                                        | = 1:30 hour   |
| <b>Aiming off:</b> | <i>Skill to aim off the target centre to hit this centre in case of disturbed environment, particularly win and rain.</i> |               |

*Note:*

*The training plan shows shooting sessions of 2:15 hours each. In fact each session does not last 2:15 hours, since some sessions are:*

- *light and shorter than 2:15 hours, for instance the one from Monday*
- *heavy and longer than 2:15 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2:15 hours should be considered as an **average**. Nevertheless we will strive to not exceed the total of 13:30 hours of shooting per week (equivalent to 6 sessions of 2:15 hours), except when there is a tournament.*

This week we will:

- Re-work our Follow-through;
- Continue to improve our aiming off skills;
- Attend a tournament.

Each time you are suggested to score some arrows or shoot some simulated matches, strive to identify your personal Ideal State of Performance (IPS, also know as your “Zone”). Read the document entitled “[Ideal Performance State](#)” at the end of these tips to know more about this IPS.

Next week we will start the last step of our training plan before the transition period: the Competition period with 15 hours of shooting per week.

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

**Pascal COLMAIRE**

*FITA Development Manager*



**FITA Training SUGGESTIONS starting on **June 10, 2002.****

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The week at a glance:

Days	#	Session Type	Subject / Skill	Volume
Monday	1	Shooting	Aiming off	97 arrows - 1:05 hour
	1	Cardio	Short Duration – High Intens.	1:15 hour
Tuesday	1	Shooting	Aiming off	120 arrows – 1:25 hour
	1	Yoga & Attention	As per Teacher	1:30 hour
Wednesday	1	Shooting	Follow-through	283 arrows – 3:15 hours
	1	Cardio	Long Duration - Low	1:15 hour
	1	Mental Preparation	Intensity Adaptation to next event	Negligible
Thursday		Visualization		3 times a day
Friday	2	Shooting	Aiming off & Follow-through	283 arrows – 3:15 hours
	1	Strengthening	Maintenance - Endurance	1:30 hour
Saturday	1	Cardio	Medium Dur. – Med. Int.	1:15 hour
Sunday	1	Shooting	Tournament	4:30 hours

Note:

The shooting rhythm is now up to 86 arrows per hour. If you cannot follow this rhythm, just extend the duration of your sessions. **DO NOT LOWER THE QUALITY OF YOUR SHOOT** for reaching this shooting rhythm! Nevertheless keep in mind that our objective is to shoot at least 300 arrows per session, twice a week; it would take 3:45 hours per session at a rhythm of 80 arrows per hour! Hence we will progressively increase the shooting rhythm to at least 90 arrows per hour. Steps will achieve this increase. Nevertheless you should consider to:

- reduce your rest time between arrows;
- speed up the recuperation process of the arrows that you have shot;
- shoot more arrows per end, to reduce the number of travels for recuperating your arrows. 9 arrows per end are suggested.

Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.



FITA Training SUGGESTIONS starting on **June 10, 2002.**

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### MONDAY

#### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – **18 arrows.**

#### COUNTER AIMING SESSION:

Draw with thin lines the rings of a target face with an off center (let say with the bull's eyes in the 6 point scoring area at 3 o'clock). These thin lines should not be visible from where you will shoot.

1. Shoot and score some rounds at different distances. For instance you can shoot:

- one 36 arrows at 70 meters;
- one 18 arrow match;
- two 12 arrow matches.
- one shoot-off arrow

Volume: 18 arrows for warm-up + 79 arrows over the various rounds = about **97 arrows** over the session.

#### Session: Cardio Maintenance.

# of session: 1

Duration: 1:15 hour (see the important note below)

Description: Short Duration – High Intensity

Note: It is difficult to provide accurate suggestions in this matter, the notions of intensity and duration can vary a lot pending:

- \* your current cardio development,
- \* the activity you have chosen,
- \* your shape of the day,

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        | X    |           |
| Medium   |     |        |      |           |
| Long     |     |        |      |           |
| Duration |     |        |      |           |

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above: “**Short Duration – High Intensity**”

Choose an activity that you enjoy. You can change the activity as often as you want.

Note:

*Some of you have asked if such a session should not be shorter since we implement short duration efforts.*

*The answer is “a little”, because:*

- *You need a serious warm-up before providing Intense efforts: +/- **10 minutes**;*
- *You will not only provide one short and intense effort, but a set of them alternated with rest/recuperation periods. Let us suppose that we chose a set of 10 sprints of +/- 20 seconds each, alternated with 3 -4 minutes of rest/recuperation: +/- **43 minutes***
- *A cool-down period (including stretching) is recommended at the end of the session: +/- **7minutes***

Total Duration: **1 hour**, letting 15 minutes for a shower ...



**FITA Training SUGGESTIONS** starting on **June 10, 2002.**

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## TUESDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up – **18 arrows.**

#### COUNTER AIMING SESSION:

Draw with thin lines the rings of a target face with an off center (let say with the bull's eyes in the 7 point scoring area at 9 o'clock). These thin lines should not be visible from where you will shoot.

1. Shoot and score some rounds at different distances. For instance you can shoot:

- half a FITA round, e.g. 18 arrows per distance – **72 arrows**
- one **18 arrow** match
- one **12 arrow** match

Volume: 18 warm-up arrows + 102 arrows over the exercises = about **120 arrows** over the session.

### Session: Yoga.

# of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

Attention exercises adapted from Schmid & Peper, 1993.

1. Focus on breathing, alternating between normal breathing and a deeper, slower breath. During this exercise you have an INTERNAL attention.
2. Attend to specific sounds that are may be present, identify and label each sound. During this exercise you have an EXTERNAL attention.
3. Then simultaneously listen to all the sounds blending together without any attempt made at identification. During this exercise you have a combined attention.
4. Alternate between a specific (narrow) and broad awareness is then repeated for your bodily experiences and then emotions and thoughts. The goal is to empty your mind of thoughts and feelings.
5. Fixate an object whilst using peripheral vision to be aware of other features in the environment. Imagine a narrow funnel centering on the chosen object before gradually widening the funnel to take in everything in the room.



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WEDNESDAY

Session: Shooting.

of sessions: 1

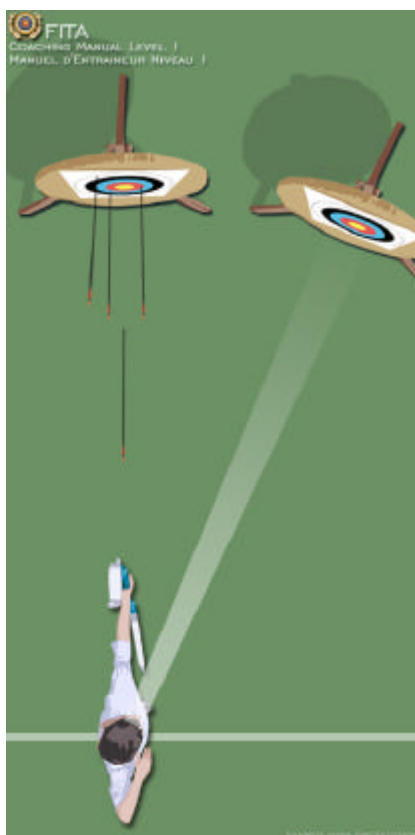
General warm-up and shooting warm-up including **18 arrows**.

Set of exercise #1

FOLLOW-THROUGH - Two targets exercise.

Prepare two targets:

- one right in front of you - called the “shot” target;
- the other one at least 3 target spaces away on the right (for R/H archer) - called the “aimed” target.



1. Once at full draw aim at the “shot” target in front of you, then move your eyes - neither your sight nor your head, to the “aimed” target on the right - focus visually and mentally that “aimed” target. Get your trigger/clicker and release. Strive to keep an impassive aiming (visual and mental focus) - **18 arrows**
- 2 – 3 & 4. Make the 2 targets progressively closer and closer from each other; have at least 3 more steps before the “aimed” and “shot” target are side to side - 18 arrow per step, i.e. at least **54 arrows**.
Note: There is one distance between the 2 targets at which your riser will hide the “aimed” face, just pass over this step.
5. At the second last step, you will have either:
 - 2 target faces side by side,
 - or
 - one on tri-spot face, you will aim at one spot, while shooting at one other – **18 arrows**.
6. Aim and shoot at the same target face, or spot - **36 arrows**

Volume: 18 warm-up arrows + 126 arrows over exercises = **144 “arrows”** over the 1st set of exercises.

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## Exercise #2

### ***FOLLOW-THROUGH – Mirror***

Objective: Be able to let the string going off the fingers or release aid, without any mental, visual and physical modification.

Note: Only the “Finger” archers have a slight physical modification, in the tension level of their string fingers muscles.

#### 1. Follow-through simulations:

- \* Recurve Archers: With your string fingers, grab one of your bow fingers.
- \* Compound archers: With your release, grab any stick. Hold the stick with your bow hand, and your trigger in our string hand.

#### For both type of bows:

Raise your both forearms in the above position up to your throat level. They should be now horizontal and aligned. With your back muscles, pull on your hands as described above. Turn your head toward the butt, increase your pull effort on your arms to simulate a full draw effort. Move your eyes in a mirror, do not move your head – the mirror should be very close from your face - watch in the bottom of your own eyes, check your eyes impassivity while simulating a release, no trouble should occur - **13 reps.**

2. Same exercise but while shooting at a short distance (+/- 6 meters) - **27 arrows**
3. Shoot at a blank butt from any distance (18 meters / Indoor - 70 meters / Outdoor) - **27 arrows**
4. Shoot at cut-out faces; 6 cut-out faces; 9 arrows per cut-out = **54 arrows**



#### 5. Shot at a normal face - **18 arrows** .

Volume 13 repetitions + 126 arrows over this second set of exercises = **139 arrows** total over the 2<sup>nd</sup> set of exercises.

**Total volume:** 18 warm-up arrows +261 arrows(including some simulations) over the 2 set of exercises = 283 arrows over the entire session.

## FITA Training SUGGESTIONS starting on **June 10**, 2002.

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Session: **Cardio Maintenance.**

of session: 1

Duration: 1:15 hour (see the important note below)

Description: **Long Duration - Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because the notions of intensity and duration can vary a lot pending:

- your current Cardio development,
- the activity you have chosen,
- your shape of the day,

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium				
Long	X			
Duration				

Today we propose a Cardio session made of “**Long Duration - Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

ADAPTATION TO NEXT EVENT:

of session: 1

Duration: Negligible

Visualize yourself competing at the next event. Below are some examples of what you can visualize:

- Your behavior and type of focus while arriving on site.
- The way you will meet the other participants, organizers and judges.
- Your attitude and plan during practice
- Your mindset just before the first arrows and your plan for waiting the official start.
- Yourself shooting on site (same environment)
- Various implementations for the best start: in case of a good beginning, of a medium one and in case of a bad one.
- How you will cope with the format of the event: the various rounds, including in case of tie.
- Your alternatives for shooting at the best with various types of opponents: Left-hand, nice persons, open persons, non-peaking persons, aggressive people, braggarts, fast / slow archers, better/weaker, ...

We will make ourselves ready for each of the above situations over the next weeks, as a start we suggest to mainly focus on getting use to the most popular formats of the archery events. You can rehearse such format when you are suggested to shoot some rounds, matches and shoot-off's.



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## THURSDAY

### **Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = you just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*

*During such sessions you can implement what as been described yesterday in “ADAPTATION TO NEXT EVENT”.*

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FRIDAY

Session: Shooting.

of sessions: 2

General warm-up and shooting warm-up including **18 arrows** .

Session #1

COUNTER AIMING SESSION:

Draw with thin lines the rings of a target face with an off center (let say with the bull's eyes in the 6 point scoring area at 3 o'clock). These thin lines should not be visible from where you will shoot.

Shoot and score some rounds at different distances. For instance you can shoot:

- half a FITA round, e.g. 18 arrows per distance – **72 arrows**
- one **18 arrow** match
- two 12 arrow match – **24 arrows**
- 3 shoot off arrows

Volume: 18 arrows for warm-up + 117 arrows over the various rounds = about **135 arrows** over the session.

Session #2

Follow Through

Objective: Keep the same mental activity from full draw until the end of the shot.

Simulations.

a) *Recurve archers:* With your string fingers, grip your pointed down middle bow finger;

Compound archers: With your release aid, grab a stick

simulate your position at full draw – make a loud and continuous sound from your throat like “Hhhhhuuuuuummmm...” simulate a release while keeping the exact sound until two seconds after the release.

Avoid any : “Hhhhhuuuuuuuummmm...” (interruption upon release)

Or

“HhhhhuuuuUuummmm...” (higher intensity upon release).

Goal: The continuity and intensity of the sound should be exactly the same – 13 simulations

b) Same but with an elastic band – **13 simulations**

Now while shooting.

- 1 Same while shooting eyes closed at a short distance, 10 meters – **18 arrows**
- 2 Same while watching yourself – in your own eyes - in a mirror – **9 arrows**
- 3 Same while shooting at a blank butt at a regular shooting distance (70 meters for instance) – **9 arrows**
- 4 Same shooting at cut-out faces; 5 cut out faces; 9 arrows per cut-out face – **45 arrows** total
- 5 Same while shooting at a regular face from a regular shooting distance – **18 arrows**
- 6 Same but with no sound every second arrows – **18 arrows**



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7 Same without any sound – **18 arrows**

**Volume:** 13 simulations + 135 arrows over the exercises = **148 arrows** over the session.

**Total volume:** 18 warm-up arrows + 13 simulations + 252 arrows over the 2 sessions = **283 “arrows”**

**Session: Strengthening (maintenance).**

# of sessions: 1

**Any Endurance Method**

*Description:* According to any endurance method of your choice, that usually requires:

|                                  |                          |
|----------------------------------|--------------------------|
| Low intensity (load, or weight): | about 60% of your 1 R.M. |
| A lot of repetitions:            | between 14 and 20        |
| Few sets:                        | about 3                  |
| Short rest:                      | 30 seconds to 2 minutes. |

For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

Recommendations:

To prioritize:

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (except some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;
- . it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back

To avoid:

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying.. – in archery the entire body participates to the body stability during the effort (draw and full draw);



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- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

SATURDAY

Session: **Cardio Maintenance.**

of session: 1

Duration: 1:15 hour (see the important note below)

Description: **Medium Duration – Medium Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because the notions of intensity and duration can vary a lot pending:

- * your current Cardio development,
- * the activity you have chosen,
- * your shape of the day,

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium		X		
Long				
Duration				

Today we propose a Cardio session made of “**Medium Duration – Medium Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

SUNDAY

Session: **Shooting**

of sessions: 1

General warm-up and shooting warm-up – at least **12 arrows** (suggestion: 24 for a tournament).

COMPETITION, or TEST

Volume:

- if tournament - pending the format.

if test: 12 warm-up arrows + 144 arrows over the test (4 scoring round) + one 12 arrow match = **168 arrows** over the session.



FITA Training SUGGESTIONS starting on **June 10**, 2002.

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## **Ideal Performance State.**

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From my analysis of many reports from elite athletes, coaches, and sport psychologists, in different sports, below is an attempt to list the distinct aspects which are recognised as usual requirements for IPS:

- * Relaxation / Activation
- * Physically relaxed
- * Effortless
- * Mentally calm
- * Energised

- * Confidence / Anxiety
- * Self-Confident and motivated
- * Low Anxiety
- * Optimistic

- * Concentration and Attention
- * Be concentrated
- * Enjoyment
- * Kind of attention
- * Alert
- * In Control
- * Harmony
- * Adaptability
- * Automatic

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### **RELAXATION / ACTIVATION**

Everybody involved in Elite sport knows that the level of performance depends on the balance between the level of relaxation, and the level of activation (inverted "U" arousal theory), this has been proven by scientists.

#### **Physically relaxed**

In archery usually the archer needs a low level of activation (stress). Psyched up does not mean being up tight and nervous. You should feel loose (links with the following point).

#### **Effortless**

Archery requires fine motor skills, this is why it is essential that muscles are loose and relaxed. There should be no muscle tension. You do not produce effort on the riser or string/release, either in you hands, forearms, and arms.

#### **Mentally calm**

A sense of inner calm and quiet is needed to perform well. This is in all sports. Everything should appear to slow down. Feeling of slow motion (links with "to be concentrated").

#### **Energised**

Energy comes from the joy of shooting or competing, not from fear, anxiety, anger or frustration. Best performances come from positive sources (links with "optimistic"). Energy comes from positive thoughts and feelings, together with a strong sense of inner calmness.

## **Ideal Performance State.**

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CONFIDENCE / ANXIETY

Everybody involved in Elite sport knows that the level of performance depends on the balance between the level of confidence, and the level of anxiety, this has been proved by scientists too.

Self-Confident and motivated

There is a feeling that you can do it, and you feel ready for it. This feeling can be cultivated with choice of reasonable objectives, serious preparation (level of dedication, quality of planning), and positive internal dialogue.

Low Anxiety

No anxiety present when performances are at their best. Under high pressure, performance is poor. Great athletes have a learned ability to reduce the amount of pressure. Tough, difficult situations must be dealt with reduced/minimal pressure.

Optimistic

Best performances come from positive sources (links with "energised"). Bio-feedback research shows that negative thoughts and feelings lessen performance. Positive thinkers are better performers. Even slightly negative and pessimistic feelings make staying loose and calm impossible.

CONCENTRATION AND ATTENTION

To do a multi-task activity, such archery, well requires the co-ordination between the physical perceptions - visual information - and the pressure on the trigger / increase of the draw length, and concentration on the overall shooting process and its environment.

Be concentrated

A requirement for any active person, who wish to do well his/her task. It is to be "on the now and here", just think to what you are doing now and here.

Enjoyment

To be mentally focussed on your current action, requires that you enjoyed to do it. If it is boring you will think to other things, therefore your action will not be done with the maximum of attention. In archery that means that you will not probably feel the co-ordination between the physical perceptions - visual information - and the pressure on the trigger / increase of the draw length.

Kind of attention

Because the main skill for the archer is to co-ordinate his/her physical perceptions - visual information - the pressure on the trigger / increase of the draw length - the effect of the environment; the usual type of attention is different from indoor to outdoor:

- Indoor is it mainly an internal-broad type, because there is a constant environment, with a part of external-narrow attention (the gold);
- outdoor, especially when it is windy, it is an internal-broad attention too, but with an external-broad attention (noise of the wind, pressure of the wind on the skin, visual observation of the bow movements and of the impacts).

Ideal Performance State.

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### **Alert**

Like a supervisor you should be vigilant to your overall shooting process, and its environment, not only to one technical detail, or the wind, because the lack of awareness to the other components of a good shoot could affect their quality.

### **In Control**

When in IPS there is often a feeling of inner strength and self-control. A good preparation is useful to develop this feeling. Be in control of the situation, rather than the situation controlling you. Emotional / behaviour control is the ultimate control. Control your emotional responses to event.

### **Harmony**

A performer does not shoot against, but "deals with", in other words shoot in harmony with. He/she can introduce this harmonic state with his/her target mates, scoria, judges, coach(es), and the organisers. By a positive approach, and some adaptability skills, it is also possible to develop harmony with the environment.

### **Adaptability**

The best competitors are those who are able to compose at the best with the profile and the components of the current tournament (jet lags, distance hotel / range, quality of organisation, weather, food, judging, relation with target mates, ...)

### **Automatic**

Because the athlete in IPS is a kind of vigilant supervisor of his/her overall shooting process and the environment, he/she has the feeling that the shot is done alone / automatically. Several persons have explained this feeling, in archery we can suggest you the lecture of Rick McKinney's interview: "let it do, let it go"

## **CONCLUSION**

All above could be summarised by "behaviour management", what elite sport mainly is. By managing at its best his/her behaviour during all the event long, the athlete can have a great time, and get exceptional performance.

FITA Training SUGGESTIONS starting on **June 17, 2002.**

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** -** COMMENTS and NEWS ****

This is our 35th week of practice of the 2001-2002 archery season. We are moving to the step #11 of our “[2001-2002 Overall Training Plan](#)”, which is our Outdoor competitive period (North Hemisphere):

Time sharing:	78 % Shooting and 22 % for other developments.	
Total volume :	19:15 hours per week	
Shooting:	5 sessions per week of 2:30 hour each, <u>and</u> 1 test or tournament	= 15 hours
Cardio:	1 session per week of 1:15 hour each	= 1:15 hours
Yoga :	1 session per week of 1:30 hour each	= 1:30 hour
Strength:	1 maintenance session per week of 1:30 hour	= 1:30 hour

Note:

The training plan shows shooting sessions of 2:30 hours each. In fact each session does not last 2:30 hours, since some sessions are:

- *light and shorter than 2:30 hours, for instance the one from Monday*
- *heavy and longer than 2:30 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2:30 hours should be considered as an **average**. Nevertheless we will strive to not exceed the total of 15:00 hours of shooting per week (equivalent to 6 sessions of 2:30 hours), except when there is a tournament.*

This period will last until the end of the Competition period.

This week we will:

- Re-work our Follow-Through;
- Continue to improve our Hands & Release;
- Have a test.

Each time you are suggested to score some arrows or shoot some simulated matches, strive to identify your personal Ideal State of Performance (IPS, also know as your “Zone”). Read the document at the end of these tips of “[2002-34 Aiming Off 2](#)”.

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

Pascal COLMAIRE

FITA Development Manager



FITA Training SUGGESTIONS starting on June 17, 2002.

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***The week at a glance:***

| Days             | # | Session Type       | Subject / Skill                    | Volume                  |
|------------------|---|--------------------|------------------------------------|-------------------------|
| <b>Monday</b>    | 1 | Shooting           | Follow-through                     | 98 arrows - 1:05 hour   |
| <b>Tuesday</b>   | 1 | Shooting           | Follow-through                     | 123 arrows – 1:25 hour  |
|                  | 1 | Yoga & Attention   | As per Teacher                     | 1:30 hour               |
| <b>Wednesday</b> | 1 | Shooting           | Equipment tuning: Back-up          | 290 arrows – 3:20 hours |
|                  | 1 | Cardio             | Short Duration - High              | 1:15 hour               |
|                  | 1 | Mental Preparation | Intensity Adaptation to next event | Negligible              |
| <b>Thursday</b>  |   | Visualization      |                                    | 3 times a day           |
| <b>Friday</b>    | 1 | Shooting           | Hands and Release                  | 290 arrows – 3:20 hours |
|                  | 1 | Strengthening      | Maintenance – Max Pyramid          | 1:30 hour               |
| <b>Saturday</b>  | 1 | Shooting           | Follow-through                     | 123 arrows – 1:25 hour  |
| <b>Sunday</b>    | 1 | Shooting           | Test (or tournament)               | 170 arrows – 4:25 hours |

**Note:**

The shooting rhythm is now up to 87 arrows per hour. If you cannot follow this rhythm, just extend the duration of your sessions. **DO NOT LOWER THE QUALITY OF YOUR SHOOT** for reaching this shooting rhythm! Nevertheless keep in mind that our objective is to shoot at least 300 arrows per session, twice a week (almost reached – next week we will do); it would take 3:45 hours per session at a rhythm of 80 arrows per hour! Hence we will progressively increase the shooting rhythm to almost 90 arrows per hour. Steps will achieve this increase. Nevertheless you should consider to:

- reduce your rest time between arrows;
- speed up the recuperation process of the arrows that you have shot;
- shoot more arrows per end, to reduce the number of travels for recuperating your arrows. 9 or 10 arrow ends are suggested.
- During a test and of course a tournament, we will shoot at a slower rhythm with only 6 or 3 arrows per end.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

**MONDAY**

**Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **9 arrows**.

**FOLLOW-THROUGH** - Combination Sound & Mirror

Combine two sessions: the one using a mirror and the one making a throat noise.

**Objective:** Keep the same mental, visual and physical activities from full draw until the end of the shot .

*Note:* Only the “Finger” archers have a slight physical modification, in the tension level of their string fingers muscles.

1. Follow-through simulations:

- \* Recurve Archers: With your string fingers, grip your pointed down middle bow finger;



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- * Compound archers: With your release, grab any stick. Hold the stick with your bow hand, and your trigger in our string hand.

For both type of bows:

Raise your both forearms in the above position up to your throat level (mouth level for Bare-bow archers). The forearms should be now horizontal and aligned. With your back muscles, pull on your hands as described above. Turn your head toward the butt, increase your pull effort on your arms to simulate a full draw effort. See picture # 2. Move your eyes in a mirror - mirror very close from your face - watch in the bottom of your own eyes, and start making a loud and continuous sound from your throat like "Hhhhhuuuuuummmmm..." Then simulate a release while keeping the exact same sound and aim until two seconds after the release - **6 reps**.

Your eyes should remain impassive while simulating a release, no trouble should occur

Upon release avoid any :

"Hhhhhuuuuuummmmm..." (interruption upon release)

or

"Hhhhhuuuuuummmmm..." (higher intensity upon release).

The continuity and intensity of the sound should be exactly the same.

2. Same but with an elastic band – **7 simulations**
3. Same exercise but while shooting at a short distance (+/- 6 meters). Still watching yourself – in your own eyes - in a mirror - **9 arrows**
4. Same exercise but while shooting at a blank butt from any distance (18 meters / Indoor - 70 meters / Outdoor) - **9 arrows**
5. Same exercise but while shooting at cut-out faces; 4 cut-out faces; 8 arrows per cut-out = **32 arrows**
6. Same while shooting at a regular face from the regular distance – **9 arrows**
7. Same but with no sound every second arrows – **8 arrows**
8. Same without any sound – **9 arrows**

Volume: 9 warm-up arrows + 13 simulations + 76 arrows over the exercises = **98 arrows** over the session.

Session: Cardio Maintenance.

of session: 1

Duration: 1:15 hour (see the important note below)

Description: Short Duration – High Intensity

Note: It is difficult to provide accurate suggestions in this matter, the notions of intensity and duration can vary a lot pending:

- * your current cardio development,
- * the activity you have chosen,
- * your shape of the day,

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short			X	
Medium				
Long				



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### **Duration**

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above: “**Short Duration – High Intensity**”

Choose an activity that you enjoy. You can change the activity as often as you want.

*Note:*

*Some of you have asked if such a session should not be shorter since we implement short duration efforts.*

*The answer is “a little”, because:*

- *You need a serious warm-up before providing Intense efforts: +/- 10 minutes;*
- *You will not only provide one short and intense effort, but a set of them alternated with rest/recuperation periods. Let us suppose that we chose a set of 10 sprints of +/- 20 seconds each, alternated with 3-4 minutes of rest/recuperation: +/- 43 minutes*
- *A cool-down period (including stretching) is recommended at the end of the session: +/- 7minutes*

*Total Duration: 1 hour, letting 15 minutes for a shower ...*

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## **TUESDAY**

### **Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **9 arrows.**

### **For Recurve archers**

#### **Double clicker method**

1. Get your clicker and let down - **6 times.**
2. Get your clicker and CONTINUE to extend your draw during 2-3 seconds, then let down – **6 times.**
3. Affix a second clicker under your usual one. If it is a Beiter one, remove the plastic part at the bottom (it is too big), and replace it with a piece of tape. The additional clicker should be 1mm. further (closer to the target). – See illustration # 3 of the “2002-12 Follow-through”
4. Shoot eyes closed with the 2 clickers. Strive to continue all your physical and mental activities between the 2 clickers, like these activities were before the first clicker – **12 arrows.**

Attention: there are several steps to overpass:

- a) click without any reaction
  - b) click and be able to maintain
  - c) click and CONTINUE about 2 to 3 seconds.
5. Same with your eyes up and blurred - **9 arrows.**
  6. Same at a blank butt – **9 arrows.**
  7. Still at a blank butt, alternate:
    - a) the shot of one arrow with the 2 clickers as previously,
    - b) the shot of one arrow with one clicker only, BUT these seconds arrows must be shot like if there was a second imaginary clicker to get. In other words, even when you use one clicker only, you continue all your physical and mental activities about 2 mm. After the sound of the clicker – **18 arrows.**





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8. Shoot with one clicker only, but as above (see #7b) at cut-out faces; 4 cut-out faces; 9 arrows per spot = **36 arrows**
9. Shoot **9 arrows** with one clicker only, but as above (see #7b) at a regular face.
10. Shoot **9 arrows** at a regular face with one clicker only, releasing at the sound of the first clicker.

Volume: 9 arrows for warm-up + 12 simulations + 102 arrows over the various rounds = about **123 arrows** over the session.

For Compound and Bare bow archers

Repeat Monday session – adjust the number of arrows per step.

If you prefer you can choose one session from last week: ***FOLLOW-THROUGH - Two targets exercise.***
or ***FOLLOW-THROUGH – Mirror***

Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

Attention exercise.

The following exercise completes the exercises from last week (Exercises adapted from Schmid & Peper, 1993.)

SOFT EYES - HARD EYES.

To know if you tighten the muscles around your eye while focusing onto a specific external cue, and if you feel your eye becoming “soft” while focusing on peripheral cues, implement the following simple exercise, which will help you to switch from one attention state to another one:

Watch at your thumbnail up at arm’s length, and have a narrow focus on to a specific mark or part of the thumbnail, then shift to a broad-external focus to bring into focus the back-ground. You are encouraged to practice this attention switching technique in a variety of general situations outside archery, in order to rapidly identify your eye tension of the moment. You should also practice to remain with the same eye tension as long as possible, to allow some period of calmness to your mind, and to develop the habit to aim with a constant focus.

WEDNESDAY

Session: Shooting.

of sessions: 1



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General warm-up and shooting warm-up including **18 arrows.**

*Description:* PREPARATION of your BACK-UP BOW for OUTDOOR

*Objectives:* 1. Prepare a back-up bow as similar as possible to your bow #1 (if not done yet);  
2. Pre-tune that bow;  
3. Identify the difference (in target) between bow #1 to #2;  
4. Adjust your back-up bow tuning to get the same shooting feeling and accuracy, and – if possible, the same sighting. If you cannot reduce the sighting difference identified in #3, record it for each distance.

### Tips for bow pre-tuning – Objective #2:

Follow your usual tuning process. If you have not any, you can either:

- Follow Easton's recommendations that are posted at the end of the catalogue of this company;  
or
- Follow the recommendations that are in the Easton "Tuning Seminar" booklet.

*Volume:* about **120 arrows** for tuning.

### Tips for bows matching – Objectives #3 and 4:

- Shoot alternatively with your back-up and your first bow.  
Shoot 18 arrows per distance: one 9 arrow end with each bow. Keep track of the impacts achieved with each bow. You can identify on a scorecard which bow you are using with different ink color, or you can use 2 scorecard, ... - **72 arrows.**
- Analyze the difference of impact, achieved by the two bows (if any).
- If necessary, make some changes on your back-up bow accordingly and start over from step 2) with 12 arrows per distance, switching your bow after 6 arrows – **48 arrows .**
- If necessary, make some changes again on your back-up bow accordingly and start over from step 2) with 8 arrows per distance, switching your bow after 4 arrows – **32 arrows .**

*Volume:* 18 warm-up arrows + 120 arrows to pre-tune your back-up bow + 72 arrows to check the difference between the two bows (if any) + 48 arrows for matching the 2 bows (if required) + 32 arrows for matching the 2 bows (if not satisfied with the previous step) = **290 arrows** over the entire session.

*Note:* The above number of arrows can vary a lot pending your need of tuning and adjustment. Strive to complete the session up to **290 arrows**, for instance with scoring rounds, match simulations, skill development, ...

## **Session: Cardio Maintenance.**

*# of session:* 1

*Duration:* 1:15 hour (see the important note below)

*Description:* Short Duration – High Intensity

*Note:* It is difficult to provide accurate suggestions in this matter, the notions of intensity and duration can vary a lot pending:

- \* your current cardio development,
- \* the activity you have chosen,
- \* your shape of the day,

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|       | Low | Medium | High | Intensity |
|-------|-----|--------|------|-----------|
| Short |     |        | X    |           |



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Medium		
Long		
Duration		

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above: “**Short Duration – High Intensity**”

Choose an activity that you enjoy. You can change the activity as often as you want.

Note:

Some of you have asked if such a session should not be shorter since we implement short duration efforts.

The answer is “a little”, because:

- *You need a serious warm-up before providing Intense efforts: +/- 10 minutes;*
- *You will not only provide one short and intense effort, but a set of them alternated with rest/recuperation periods. Let us suppose that we chose a set of 10 sprints of +/- 20 seconds each, alternated with 3-4 minutes of rest/recuperation: +/- 43 minutes*
- *A cool-down period (including stretching) is recommended at the end of the session: +/- 7minutes*

Total Duration: 1 hour, letting 15 minutes for a shower ...

THURSDAY

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- * *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- * *Internal visualization = you just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*

During such sessions you can implement the following exercise:

ADAPTATION TO NEXT EVENT:

of session: 1

Duration: Negligible

Visualize yourself competing at the next event. Below are some examples of what you can visualize:

- Your behavior and type of focus while arriving on site.
- The way you will meet the other participants, organizers and judges.
- Your attitude and plan during practice
- Your mindset just before the first arrows and your plan for waiting the official start.
- Yourself shooting on site (same environment)
- Various implementations for the best start: in case of a good beginning, of a medium one and in case of a bad one.



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- How you will cope with the format of the event: the various rounds, including in case of tie.
- Your alternatives for shooting at the best with various types of opponents: Left-hand, nice persons, open persons, non-peaking persons, aggressive people, braggarts, fast / slow archers, better/weaker, ...

We will make ourselves ready for each of the above situations over the next weeks, as a start we suggest to mainly focus on getting use to the most popular formats of the archery events. You can rehearse such format when you are suggested to shoot some rounds, matches and shoot-off's.

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## FRIDAY

### Session: Shooting.

# of sessions: 2

General warm-up and shooting warm-up including **18 arrows**.

Session #1

REVISION SESSION ON HANDS & RELEASE

### BOW HAND

*Objective:* Get an impassive bow hand and fingers, in order to let the propulsion of the arrow done without any force applied on the riser, which could create some torque motion during the arrow propulsion period and disturb this step.

Note: all the illustrations related to Bow Hand have already been published with the FITA Training Tips "[2002-9 Full Draw Action 3](#)". See Friday Phase A.

Simulations of bow hand relaxation.

Wrist is relaxed on the grip, therefore when the grip moves forward just after the release, the wrist bends down – See pictures entitled "[Simulation of a relaxed bowhand at full draw](#)" and "[Simulation of a relaxed bowhand after release](#)" - **12 repetitions**

#### \* Olympic Archers

1. At about 4 meters from the target, load an arrow on your bow WITHOUT clicker, raise your bow arm at your shoulders level, an assistant behind you maintains you at your string shoulder, and draws your string just a bit (10cm) and release – **9 arrows**.

Note to the assistant: draw just a bit toward the archer's chest, NOT higher, to avoid punching the archer's face upon release – see picture entitled "[Bowhand relaxation – shooting with an assistant](#)".

Archer's task: OBSERVE YOUR bow-hand, make it as relaxed as possible, when the assistant releases you should see your bow wrist smoothly bending down and finish very soft, your fingers should have stayed slightly curved and very relaxed – See picture entitled "[A relaxed bowhand](#)".

2. Now do it alone – see picture entitled "[Bowhand relaxation at reduced draw](#)" - **9 arrows**
3. Same but increase your draw progressively at each arrow until a complete draw - **18 arrows**
4. Same with your clicker on - **18 arrows**

#### \* Compound archers.



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- A1. At full draw, at a short distance, WATCH YOUR bow hand, make it as relaxed as possible while an assistant squeeze your trigger to release on your behalf. You should see your bow wrist bending down and finished very relaxed; your fingers should have stayed slightly curved and very soft - **18 arrows** .
- A2. Now do it alone one every second arrow - **18 arrows**
- A.3: Now do it by yourself only – **18 arrows**

Volume: 12 simulations + **54 arrows** over the BOWHAND exercise.

STRING HAND.

Objective: Have less tension as possible in string wrist and forearm, to avoid changing effort on the string. When the string moves forward at the release, the tensionless string wrist bends down (and moves back due to muscular activity of the muscles located in the back of your string shoulder) with the flexed string arm.

Note: all the illustrations related to String Hand have already been published with the FITA Training Tips “[2002-11 Hands & Release](#)”. See Wednesday.

Simulation of string hand relaxation.

While gripping your middle bow finger that is pointed down, have a flat string wrist & hand (no knuckles), your string hand should be "twistable" - simulate a release while watching your string hand. At the end of the simulation, be sure that your hand is relaxed, the wrist should be bent down and the fingers quite relaxed – see picture entitled “[Simulation of a relaxed string grip](#)” – **12 repetitions** .

*** RECURVE ARCHERS**

1. At 4 meters from the target, load an arrow on your bow WITHOUT clicker. Raise your bow and just draw a bit (10 cm) toward your chest level (to avoid kicking your chin upon release!), release while watching your string hand – see pictures entitled “[Release exercise at reduced draw](#)” and “[Upon and after release keep watching your string hand](#)” - **18 arrows**

Important: Don't stop the draw, ensure a CONTINUOUS back motion of the string until the release, and ALWAYS WATCH your string hand being slowly & progressively more relaxed, follow it with your eyes all the release trajectory long; then increase the draw progressively to full draw

2. When you cannot observe the string hand directly anymore (string hand under your chin), use a mirror to observe your hand during and after the release - **18 arrows** .

You can introduce your clicker after 4 to 6 arrows.

Always keep the string hand, as relaxed as possible.

Note: Try a deeper string grip if you cannot avoid any:

- knuckle showing on the back of your string hand;
- bent in your string wrist.

*** COMPOUND ARCHERS**

1. Start at the above point #2. Observe your string hand in a mirror. Check that it remains relaxed through the entire draw. After the release, your wrist should bend down – **36 arrows** .

Special attention to both types of bow users:



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Keep your string elbow SLIGHTLY raised (but low shoulders). Your tensionless string wrist could bend down after the release. String-hand should slide along your neck, never away (we'll work on this during our next session).

Volume: 12 simulations + **36 arrows** over the String hand exercise.

## RELEASE.

**Objective:** Keep the same muscular activity from full draw, to the end of the shot (muscular follow-through).

For finger archers: only one change - the level of tension in your string fingers.

For archers with a mechanic release: no change

Note: all the illustrations related to the Release have already been published with the FITA Training Tips "[2002-11 Hands & Release](#)". See Friday.

### ***Simulations of string hand relaxation.***

- While gripping your pointed down middle bow finger, have a flat string wrist & hand (no knuckles), your string hand should be "twistable" - simulate a release while watching your string hand – see pictures entitled "[Simulation of a relaxed string grip](#)" and "[Release simulation](#)" – **8 repetitions**.
- While gripping your pointed down middle bow finger, turn your head, and watch your string bow-elbow, it should keep the same angle, moving back and away, horizontally ; the motion should come FROM the shoulder joint see picture entitled "[A Left Hand archer watches his string elbows during release simulation](#)" – **12 repetitions**.
- Combine both simulations while watching toward the target, your string hand should slide along your neck, and stop about at the vertical of your ear (below it) – see picture entitled "[End of release simulation](#)" – **12 repetitions**.

Compound archers: pending where is your string hand on your face; this exercise could be or not be possible, if not possible, move to the next step.

At about 4 meters from the butt, at full draw, turn your head 180 degrees for watching your string elbow, release and observe - **18 arrows** :

- the constant angle at the elbow level,
- your string elbow moving back on the same horizontal plan (more or less),
- the pivoting/rotation motion of your string arm at the shoulder joint.

See pictures entitled "[Watch your string elbow at full draw](#)" and "[Watch your string elbow angle upon release](#)".

### **For both types of bow.**

- \* At full draw, observe your string hand through a mirror. Keep your string hand as relaxed as possible. Release WHILE WATCHING your string hand and arm in the mirror - 24 arrows for those who were not able to implement the previous exercise, **18 arrows** for the others.
- \* Shoot eyes closed, while staying concentrated on your release, feel that your body and release remain in the shooting plan (no twist) - **18 arrows**
- \* Same, but eyes up - **18 arrows**
- \* Same, but shooting at a blank butt - **18 arrows**
- \* Shoot at cut-out spots. 6 cut-out faces & 9 arrows per cut-out face = **54 arrows**.

**Volume: 126 arrows** over the RELEASE exercises.



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Total volume: 18 warm-up arrows + 56 simulations + 216 arrows over exercises = **290 “arrows”** over the entire session.

Session: Strengthening (maintenance).

of sessions: 1

Bulgarian Pyramid method.

Description:

- * Intensity / load: > 75% of your 1 Maximal Repetition
- * # of sets : 6
- * # of repetitions: less than 8, for instance 7 at the 1st set - 6 / 2nd - 4 / 3rd - 2 / 4th - 3 / 5th - 5 / 6th
- * Rest between sets: 2 - 3 min..
- * Rest between exercises: 3 - 4 min.
- * Tempo: natural

For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce **variations** in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

Recommendations:

To prioritize:

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (except some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;
- . it is suggested to alternate one exercise for the agonistic and one for the antagonists, for instance pectorals and back

To avoid:

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying.. – in archery the entire body participates to the body stability during the effort (draw and full draw);



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- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

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## SATURDAY

### Session: Shooting

# of sessions: 1

General warm-up and shooting warm-up including **9 arrows**.

### Follow Through

**Objective:** Keep the same mental activity from full draw until the end of the shot.

### Simulations.

- a) *Recurve archers:* With your string fingers, grip your pointed down middle bow finger;

*Compound archers:* With your release aid, grab a stick

simulate your position at full draw – make a loud and continuous sound from your throat like “Hhhhhuuuuuummm...” simulate a release while keeping the exact sound until two seconds after the release.

Avoid any : “Hhhhhuuuuuuuummm...” (interruption upon release)

Or

“Hhhhhuuuuuummm...” (higher intensity upon release).

Goal: The continuity and intensity of the sound should be exactly the same – **8 simulations**

- b) Same but with an elastic band – **8 simulations**

Now while shooting.

- 1 Same while shooting eyes closed at a short distance +/- 10 meters – **9 arrows**
- 2 Same while watching yourself – in your own eyes - in a mirror – **9 arrows**
- 3 Same while shooting at a blank butt at the regular shooting distance – **9 arrows**
- 4 Same shooting at cut-out faces; 5 cut out faces; 9 arrows per cut-out face – **45 arrows total**
- 5 Same while shooting at a regular face from the regular distance – **9 arrows**
- 6 Same but with no sound every second arrows – **10 arrows**
- 7 Same without any sound – **9 arrows**

**Volume:** 9 warm-up arrows + 16 simulations + 98 arrows over the exercises = **123 arrows** over the session.





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SUNDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up

TEST (or TOURNAMENT)

- *if test*: 14 warm-up arrows + 156 arrows over the test :
 - one FITA round = 144 arrows;
 - 1 x 12 arrow match;= about **170 arrows** over the session.
- *if tournament* - pending the format.



FITA Training SUGGESTIONS starting on **June 24, 2002.**

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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* -\*\* COMMENTS and NEWS \*\***

This is our 36th week of practice of the 2001-2002 archery season. We have reached the step #11 of our “[2001-2002 Overall Training Plan](#)”, which is our Outdoor competitive period (North Hemisphere):

|                |                                                                                                      |              |
|----------------|------------------------------------------------------------------------------------------------------|--------------|
| Time sharing:  | <b>78 %</b> Shooting and <b>22 %</b> for other developments.                                         |              |
| Total volume : | <b>19:15 hours</b> per week                                                                          |              |
| Shooting:      | 5 sessions per week of <b>2:30 hour</b> each, <u>and</u> <b>1</b> test or <a href="#">tournament</a> | = 15 hours   |
| Cardio:        | <b>1</b> session per week of <b>1:15 hour</b>                                                        | = 1:15 hours |
| Yoga :         | <b>1</b> session per week of <b>1:30 hour</b>                                                        | = 1:30 hour  |
| Strength:      | <b>1</b> maintenance session per week of <b>1:30 hour</b>                                            | = 1:30 hour  |

*Note:*

*The training plan shows shooting sessions of 2:30 hours each. In fact each session does not last 2:30 hours, since some sessions are:*

- *light and shorter than 2:30 hours, for instance the one from Monday*
- *heavy and longer than 2:30 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2:30 hours should be considered as an **average**. Nevertheless we will strive to not exceed the total of 15:00 hours of shooting per week (equivalent to 6 sessions of 2:30 hours), except when there is a tournament.*

This week you are supposed to attend a tournament, which is time consuming, we forecast 7hours; hence we will consider your participation to this tournament as 2 sessions, leaving only 8:00 hours for the training sessions: We propose to you only 3 training sessions (1 small and 2 big) this week in order to keep them enough intense.

The 2 most intense sessions have now 297 arrows, since our goal was to reach 2 sessions per week of at least 300 arrows, we will reach this goal next week with 304 arrows. We will not propose further increase over the next weeks (we will keep 304 arrows for the most intense sessions).

This period will last until the end of the Competition period.

This week we will:

- Re-work our String Alignment and Clearance;
- Revisit the stability of our aiming;
- Take part to a tournament (local level).

Each time you are suggested to score some arrows or shoot some simulated matches, strive to identify your personal Ideal State of Performance (IPS, also know as your “Zone”). Read the document at the end of these tips of “[2002-34 Aiming Off 2](#)”.

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

**Pascal COLMAIRE**

*FITA Development Manager*



**FITA Training SUGGESTIONS starting on June 24, 2002.**

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The week at a glance:

Days	#	Session Type	Subject / Skill	Volume
Monday	1	Shooting	Stable aiming	99 arrows - 1:10 hour
Tuesday	1 1	Strengthening Visualization	Maintenance – Endurance	1:30 hour 3 times a day
Wednesday	1 1	Shooting Cardio	String clearance & alignment Med. Duration– Med. Intensity	297 arrows – 3:25 hours 1:15 hour
Thursday		Visualization	Adaptation to coming event	3 times a day
Friday	1 1	Shooting Yoga & Attention	Stable aiming As per Teacher	297 arrows – 3:25 hours 1:30 hour
Saturday		Mental Preparation	Goal setting	Negligible
Sunday	1	Shooting	Test (or tournament) and IPS introduction.	170 arrows – 7 hours

Note:

The shooting rhythm is now up to 87 arrows per hour. If you cannot follow this rhythm, just extend the duration of your sessions. **DO NOT LOWER THE QUALITY OF YOUR SHOOT** for reaching this shooting rhythm! Nevertheless keep in mind that our objective is to shoot at least 300 arrows per session, twice a week (almost reached – next week we will do); it would take 3:45 hours per session at a rhythm of 80 arrows per hour! Hence we will progressively increase the shooting rhythm to almost 90 arrows per hour. Steps will achieve this increase. Nevertheless you should consider to:

- reduce your rest time between arrows;
- speed up the recuperation process of the arrows that you have shot;
- shoot more arrows per end, to reduce the number of travels for recuperating your arrows. 9 or 10 arrow ends are suggested.
- During a test and of course a tournament, we will shoot at a slower rhythm with only 6 or 3 arrows per end.

Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.

MONDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **9 arrows**.

STABLE AIMING

Objective : Stability of the unit bow-archer in the shooting axis, even without visual feedback, e.g. even without aiming.

IMPORTANT: the following exercises are only valid for archers who do NOT deform their body while aiming and getting their clicker/trigger.

No wind is required.

STABLE LATERAL AIMING



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Objective : Stability of the unit bow-archer in the shooting plan, even without visual feed-back, e.g. even without aiming.

Shooting distance: 30 meters. Please adapt this distance to your level.

Target: Affix a vertical line across the butt; pending your accuracy and the shooting distance you can use masking tape, toilet paper, ....

1. Adjust the windage of your sight - **9** arrows
2. As soon as you have started to aim at the line, close your eyes; without any rush continue the rest of your shooting sequence with your eyes closed down. Note: it is better for this exercise to be a longer time at full draw than what you are use to be – **9** arrows.

If your arrows are (for a right-hand archer):

a) on the right of the line: move your both feet to face a bit more the target (open stance);

See the illustration entitled “[Horizontal orientation](#)” in “[2002-13 Stable Aiming](#)”.

b) on the left of the line: move your both feet to be make your back facing a bit the target (closed stance);

c) close from the line: your body orientation is fine, furthermore now you are sure that the unit archer-bow, is able to maintain its direction (at least in this plan) even without visual feed-back and correction. Memorize your feet position.

3. If necessary, cases a) and b), shoot **9** arrows with the new stance. If still required, rectify again and start over.
4. If you have moved your feet to achieve a constant lateral aiming, especially if you have turn your back toward the target, and that you notice a poor string clearance, try to find the best compromise between the clearance of your string and your aiming stability (body orientation). If you notice nothing wrong, wait until Wednesday for checking your string clearance – **18** arrows.

Volume: about **45 arrows** over the exercise

|                                                   |
|---------------------------------------------------|
| <b>STABLE VERTICAL AIMING / TILLER ADJUSTMENT</b> |
|---------------------------------------------------|

Objective: Stable unit bow-archer in the vertical plan even without visual feedback and correction, e.g. even without aiming.

Shooting distance: Same as previously - 30 meters (to be adjusted to your level).

Affix a horizontal line across the butt, made of masking tape, toilet paper, ...

1. As soon as you have started to aim at the line, close your eyes; without any rush continue the rest of your shooting sequence with your eyes closed. It is better for this exercise to be a longer time at full draw than what you are use to be – **9** arrows.

If your arrows are:

a) below the line: increase the weight of the bottom limb, and / or decrease the weight of the top limb, pending if you want to keep or not the same bow weight.

See the illustration entitled “[Vertical orientation](#)” in “[2002-13 Stable Aiming](#)”.

b) above the line: opposite adjustment as above.

c) close from the line: your bow tiller is fine, furthermore now you are sure that the unit archer-bow, is able to maintain its direction (at least in this plan) even without visual feed-back and correction.

Note: if you increase the weight of one limb and decrease the weight of the other limb of the same amount, you will not change your total bow weight.

2. If you have changed the weight of one or two limb(s) – cases a) and b):
  - 4.1. Re-adjust your nocking point, by implementation of the test that you are used to – **9** arrows
  - 4.2. Re-adjust your sight - **9** arrows.



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- 4.3. Start over the tiller adjustment process from step #1 with 6 arrows per step = **18** arrows.
3. Once you get the proper adjustment:
- * Register it.
 - * Tight all the screws
 - * Have a mark on each screw.

Volume: 45 arrows over the exercises

Volume: 9 arrows of warm-up + 45 arrows over the exercises for Lateral aiming + 45 arrows for the exercise for vertical aiming = about **99 arrows** over the entire session.

TUESDAY

Session: Strengthening (maintenance).

of sessions: 1

Description: Implement 4 sets of 10 or more repetitions, according to the Endurance strength method with 40 to 60% of 1 MR (adapted from Letzelter in 1978) as follow:

* 40% for the first set with weight "A"	14-20 repetitions
* 50-55% at the 2 nd set with weight "B" > "A"	12-15 repetition
* 45-50% at the 3 rd set with weight "C" such as "B" > "C" > "A"	13-17 repetition
* 55-60% at the 4 th set with weight "D" > "B"	10-12 repetition

Rest between sets: 30 to 90 seconds.

Rest between exercises: 60 to 90 seconds.

Tempo (ratio of time for concentric & eccentric efforts): 3 / 3 sec.

For abdominals, calves and some small muscles for which you can work until a "burning" feeling

Do not hesitate to introduce variations in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

.

Recommendations:

To priorities:

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (apart from some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;



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- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;

To avoid:

- . the machines, which guide your motions - in archery we have to control and direct our action;
- . positions that reduce body's involvement, like seating, lying .. – in archery all the body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance,...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

### **Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = you just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*

*During such sessions you can implement the following exercise:*

#### **ADAPTATION TO NEXT EVENT:**

# of session: 1

Duration: Negligible

Visualize yourself competing at the next event. Below are some examples of what you can visualize:

- Your behavior and type of focus while arriving on site.
- The way you will meet the other participants, organizers and judges.
- Your attitude and plan during practice
- Your mindset just before the first arrows and your plan for waiting the official start.
- Yourself shooting on site (same environment)
- Various implementations for the best start: in case of a good beginning, of a medium one and in case of a bad one.
- How you will cope with the format of the event: the various rounds, including in case of tie.
- Your alternatives for shooting at the best with various types of opponents: Left-hand, nice persons, open persons, non-peaking persons, aggressive people, braggarts, fast / slow archers, better/weaker, ...

We will make ourselves ready for each of the above situations over the next weeks, as a start we suggest to mainly focus on getting use to the most popular formats of the archery events. You can rehearse such format when you are suggested to shoot some rounds, matches and shoot-off's.



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WEDNESDAY

Session: Shooting.

of sessions: 1

General warm-up and shooting warm-up including **18 arrows.**

Part #1.

STRING CLEARANCE .

Note: The illustrations of this part are with training tips: [“2002-13 STABLE AIMING”](#).

1. At the bow arm level.

With no hand on the string, raise your bow and check where your string on your armguard or forearm is. About half an inch forwards to this spot, affix a piece of bandage or tape which is 2 mm raised up in its center, giving a bridge shape. The bridge of bandage should be affixed vertically, across your bow forearm/armguard, or if you prefer parallel to the string. Identify with a pen, the side of the bandage closest to the string (I prefer to mark this side before sticking the bandage on the armguard). This mark will help to identify if the string hits the bandage while pushing the arrow or during its way back. See illustration [“3 - String Clearance test”](#). Shoot one arrow with this bandage in place - pay attention to not flatten out the bridge of bandage before the draw! After the shot, watch the bandage, and analyze the hit (if any).

If you conclude that the string clearance is poor, play with the following elements until a good string clearance:

- ***the angle “bow arm / shoulders line”*** by the mean of chest &/or feet orientation, also the parallelism hips/shoulder. Usually your shoulders should remain above your hips and feet, since any twist between top body and hips reduces the string clearance. See picture [# 4](#).
- ***the position of your bow shoulder join***. This join should remain above the hipbone (of the same side!). Moving this join toward the string reduces drastically the string clearance. Nevertheless your bow arm can rotate clockwise in the shoulder girdle, as long as the girdle remains on spot
- ***the bow arm rotation***. See pictures [# 5, 6, 7 & 8](#) showing exercises for the correct elbow position.
- ***the bow hand position*** on the grip. See picture [# 9, 10 & 11](#)

2. At the bow chest level.

Either watching yourself in a mirror, or with the help of an assistant observe at full draw where the string touches your chest (if any). About a half-inch forward of this spot affix a piece of bandage or tape that has a bridge shape - 2 mm raised up in the middle (a bandage is fine). See picture [# 12 “Bandage on chestguard”](#). The most critical point is the edge (hem or trim) of the chestguard surrounding your bow shoulder.

The bridge of bandage should be affixed parallel to the string on your chestguard. Shoot one arrow with this bandage in place - pay attention to not flatten out the “bridge” part before the draw. After the shot, analyze the hit (if any).

If you conclude that the string clearance is poor, play with the following elements until a good string clearance:

- ***the angle “bow arm / shoulders line”*** as above
- ***the position of your bow shoulder join*** as above



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- **the verticality of your body.** Leaning toward the target helps to clear the string from your chest; towards your toes too, but could disturb your body stability.
- **the inner chest tension.** Lowering your energy in your belly helps to flatten your chest, this is also good for body balance (lower center of gravity) and for staying relaxed.

*Volume:* variable, pending the initial quality of your string clearance, and the speed to solve the problem. Nevertheless you should shoot about **72 arrows** total over the part #1.

## **Part #2:**

### **STRING ALIGNMENT.**

#### Purpose of the string alignment:

Since the string is located in the centre of the bow, the archer DOESN'T align the string. In fact the archer adjusts the position of his/her eyes in reference with the plan of the bow, which includes the string and the bow. Hence we should not say "String alignment" but "AIMING EYE POSITIONING".

*Note:* The illustrations of this part are with training tips: "[2002-30 SHOOTING BALANCE 5](#)".

#### Simulations.

At full draw the archers cants the top of his/her head from right to left while watching the string and the bow, and see respectively the string on the left and right – **9 times**.

#### 1. Identification of the most consistent/natural location for string alignment.

At any distance (but windless).

Raise your bow - Close your eyes - Draw your bow back - Open your aiming eye (or both eyes) at full draw and observe where is aligned your string, continue and achieve your shooting sequence

*Volume:* **18 arrows.**

*For Recurve:* Integrate the most common location of string alignment in your shooting sequence.

*For Compound:* Find your initial head position (head canting before the draw), to get your peep and scope aligned at full draw once you re-open your eyes.

#### 2. Identification of the most efficient location for string alignment.

At one distance at which you can use a tri-spot target face, shoot one or two ends for adjusting your sight.

Affix a NEW tri-spot target face:

- Use one spot for the arrows shot with string aligned on the riser.
- Use a second spot for the arrows shot with the string aligned on one side of the sight tunnel.
- Use the third spot for another alignment of your choice.

*Volume:* Shoot 36 arrows per spot, alternatively 1 arrow per spot. Do not shoot 12 consecutive arrows at the same spot. Total = **108 arrows** over this second exercise.

When analyzing the impacts, do not compare the scores, because your sight is adjusted for one out of the three situations. Analyze the tightness of the group of impacts achieved at each spot.

*Suggestion:* run this analysis on the back of the target face.

#### 3. String alignment stability

##### *a. Test of duration of stable string alignment:*





## FITA Training SUGGESTIONS starting on **June 24, 2002.**

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One observer standing against a wall. Archer at 2 meters from the observer. Without arrow, the archer draws back and aims one observer's eyes, and aligns his/her string in the middle of his/her sight (which is on the observer's eye). As soon as the observer sees the archer's eye, sight and string **ALIGNED**, he/she starts a timer. The observer stops the timer when he/she sees a too poor alignment - for example:

- for Recurve: when there is space between the string and the aiming dot;
- for Compound: when the peep hole is moving out of the sight tunnel.

Records at least **9 timings**, if they are not consistent, increase their number.

Note: this exercise seems valid for compound, but still needs some refinement. *Any suggestion will be welcome.*

b. *Self control.*

Affix a mirror flat to a target butt. The top edge of the mirror should be at a height such that at full draw, the archer can aim at his/her aiming eye at about 3" from the top edge of the mirror. To achieve this view, you can play with the inclination of the mirror.

Mark a line on the butt where the top edge of the mirror is located, then take the mirror away, finally mark another line about 3" below the one indicating where will be the top edge of the mirror – see picture entitled "[Preparation to shoot at a mirror](#)" published with "[2002-5 Face marks & Alignment](#)". Now take your bow and stand at a distance such that the end of your long stabiliser is at about 2 or 3 feet from the butt. Move your sight down:

Olympic men at about 90 meters

Olympic women at about 75-80 meters

Compound men at about 100 meters

Compound women at about 85-90 meters.

Aim at the bottom line, and shoot. Be sure that your arrow hits above the top line, let say 2" above it, adjust your sight accordingly. When your sight is adjusted, re-affix the mirror to the butt.

Shoot **36 arrows** at the mirror aiming at your aiming eye which should be roughly at the same level as the lowest of the 2 lines (the one at about 3" from the top edge) – see picture entitled "[Shooting at a mirror](#)" published with "[2002-5 Face marks & Alignment](#)"; try to maintain the best stability as possible between your eyes, your string and your sight, while aiming. Of course you can really shoot the arrow

Volume: about **180 arrows** total over the part #2.

Complete the session with scoring arrows at different distances with you new (if any) string alignment location) – **27 arrows** (2 x 12 arrow matches + 3 shoot-off arrows at 70 meters).

Volume: 18 warm-up arrows + 72 arrows through Part #1 + 180 arrows through Part 2 + 27 scoring arrows = **297 arrows** over the entire session.

Session: Cardio Maintenance.

of session: 1

Duration: 1:15 hour (see the important note below)

Description: Medium Duration – Medium Intensity

Note: It is difficult to provide accurate suggestions in this matter, the notions of intensity and duration can vary a lot pending:

- * *your current cardio development,*
- * *the activity you have chosen,*



FITA Training SUGGESTIONS starting on June 24, 2002.

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\* *your shape of the day,*

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|                 | Low | Medium | High | Intensity |
|-----------------|-----|--------|------|-----------|
| Short           |     |        |      |           |
| Medium          |     | X      |      |           |
| Long            |     |        |      |           |
| <b>Duration</b> |     |        |      |           |

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above: “**Medium Duration – Medium Intensity**”

Choose an activity that you enjoy. You can change the activity as often as you want.

*Note:*

*Some of you have asked if such a session should not be shorter since we implement short duration efforts.*

*The answer is “a little”, because:*

- *You need a serious warm-up before providing Intense efforts: +/- 10 minutes;*
- *You will not only provide one short and intense effort, but a set of them alternated with rest/recuperation periods. Let us suppose that we chose a set of 10 sprints of +/- 20 seconds each, alternated with 3 -4 minutes of rest/recuperation: +/- 43 minutes*
- *A cool-down period (including stretching) is recommended at the end of the session: +/- 7minutes*

*Total Duration: 1 hour, letting 15 minutes for a shower ...*

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## **THURSDAY**

### **Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = you just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*

*During such sessions you can implement the following exercise:*

**ADAPTATION TO NEXT EVENT:**

# of session: 1

Duration: Negligible

Visualize yourself competing at the next event. Below are some examples of what you can visualize:

- Your behavior and type of focus while arriving on site.
- The way you will meet the other participants, organizers and judges.
- Your attitude and plan during practice
- Your mindset just before the first arrows and your plan for waiting the official start.



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- Yourself shooting on site (same environment)
- Various implementations for the best start: in case of a good beginning, of a medium one and in case of a bad one.
- How you will cope with the format of the event: the various rounds, including in case of tie.
- Your alternatives for shooting at the best with various types of opponents: Left-hand, nice persons, open persons, non-peaking persons, aggressive people, braggarts, fast / slow archers, better/weaker, ...

We will make ourselves ready for each of the above situations over the next weeks, as a start we suggest to mainly focus on getting use to the most popular formats of the archery events. You can rehearse such format when you are suggested to shoot some rounds, matches and shoot-off's.

FRIDAY

Session: Shooting.

of sessions: 2

General warm-up and shooting warm-up including **18 arrows** .

CHECKING the STABILITY of AIMING with Laserhead (PC).

Objective: Observe if the archer stay in the shooting plane while getting his/her Trigger/Clicker and assess the stability of his/her full draw action.

Preparation:

- If it is sunny, move the target in the shade, or use an umbrella to create some shade on the butt. Ideally the archer and the target should be in the shade. Ideally chose a cloudy day, or schedule your session at the beginning of the darkness.
- Reduce the shooting distance down to 10 meters as a start. If it is OK, you can increase the distance.
- Set a target face on the butt and sight accordingly.
- Install the lazerhead (PC) on the archer. Adjust the laserhaed to get the laser dot close from the aiming point – **18 arrows**.

The laserhead device is shown on pictures "[Push axis control with a laser-head \(PC\)](#)" and "[Laser-Head device \(PC\)](#)" published in "[2002-7 Full Draw Action 1](#)"

Process:

- The archer should synchronise the arrival of his/her sight in the centre of the target with the "landing" of the string on his/her face – it is very IMPORTANT. A poor synchronisation would false the test; for instance if the archer achieves his/her facial marks with his/her sight above the bull's eye, when he/she will lower his/her sights we will observe the laser dot moving down on the target face.
- An assistant turns the laserhead on when the archer raises his/her bow. Avoid letting the laserhead continuously turned on, batteries would get rapidly empty.

A. *Observe and record the:*

- amount and direction of the deviation;
- size of the zone in which the dot is moving;

27 arrows - if the laser dot moves (for RH archer):

- 1) to the Right: it is usually due to a twisting (or level) of the archer's body in the horizontal plane (Bow shoulder moving toward the arrow);



FITA Training SUGGESTIONS starting on **June 24, 2002.**

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- 2) Up: it is usually due to a leaning back (or level) of the archer's body in the shooting plane, away from the target (toward the right foot);
- 3) Down: it is usually because the archer moves his/her chin back with the string, creating a slight canting of the head in the shooting plane & flatter of his/her nape (forehead a little forward, and more string pressure on the nose);
- 4) Left: it is usually because the archer moves his/her head back with the string
- 5) Diagonally Right & Up: this is usually a combination of #1 and #2;
- 6) And so on for the other diagonals ...

*Note:* due to:

- a) the requirement to maintain the peep centred with the scope,
  - b) the non use of a clicker (no need to increase the draw length while aiming),
- Compound users deform much less than Recurve users. Nevertheless slight deformation is not unusual. For Compound archers the laserhead is also very helpful to assess the Dynamic Stability, e.g. laser dot stability/tremor on the target face at full draw.

### ***B. Tips for rectifying the deviation:***

- Best results are usually achieved when the assistant applies a light hand pressure on the archer (at full draw) to increase the deformation, with the instruction to the archer to resist to this push. "Usually", but not always any external *resistance* to the deformation from the assistant does not improve anything.
- A change of effort (muscular action) at full draw, often leads to a change of laser dot deviation.
  - 1. Assist the archer to reduce the deviation (if any) – **36 arrows**.
  - 2. Same but with assistance one every second arrow – **36 arrows**.
  - 3. Same with eyes closed; the assistant provides on-going and loudly comments on the deviation of the laser dot, and tells to the archer where was the dot upon release – **27 arrows**

Now remove the laserhead, and stop the external assistance.

- 4. Shoot with eyes up & blurred - **27 arrows**.
- 5. Same but watching and shooting at a blank butt - **18 arrows**.
- 6. Continue on cut-out spots or faces - 9 arrows per cut-out spot (6 situations) - **54 arrows**.
- 7. Continue on a regular target face at a regular shooting distance with **36 scoring arrows**

*Volume:* 18 warm-up arrows + 279 arrows over the exercises = **297 arrows** over the entire session.

### **Session: Yoga.**

# of sessions: 1

*Description:* We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...



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During this Yoga session you can run the following session:

Session: Attention

of session: 1

Watching the clock face (adaptation from the article written by Albinson & Bull, 1998).

Focus attention on a clock face, watch the second hand sweep. Every five seconds snap your fingers (for instance), during one minute; then every 10 seconds during another minute, and again every 5 seconds during a third minute. Strive to discover how and where your attention is; below are some alternatives:

- You watch the number of seconds (where you will snap your fingers) and wait the arrival of the second arm;
- Your eyes move back & forth from the number to the arm;
- You always follow the clock arm;
- You use an overall / broad supervision;
- Other ...

We suggest testing each of the above method to discover the one fitting you the best.

If you replace the clock arm with your sight and the second numbers with the centre of the target, you should use the same method. We will implement this during one next shooting session.

To lower your mind activities and because in archery we aim at the centre of the target, we recommend to affix your central vision on the number and your peripheral vision on the arm clock. While shooting you will focus on the centre of the target whereas your peripheral vision will help your sight to wander round and round this centre. Imaging yourself shooting with such a visual attitude.

SATURDAY

Session: Goal setting.

of session: 1

Duration: Negligible

Description: based on your past Outdoor performances and your current progression, set out your objectives for the tournament to be held this weekend.

SUNDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up (see below) – at least **12 arrows** (suggestion: 24 for a tournament).
COMPETITION, or TEST

Volume:

- if tournament - pending the format.

if test: 12 warm-up arrows + 144 arrows over the test (4 scoring round) + one 12 arrow match = **168 arrows** over the session.

ADAPTATION TO THE FIELD OF PLAY

Description:



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1. Take some time to “feel” this range. Check its orientation: will you need an eyeshade and /or a cap for your scope?  
By the way this item should be ready.  
From where does come the dominant wind? Should you adapt your stance accordingly?  
Are there any disturbing elements? How to make them helpful? If no answer, how to ignore them.
2. Identify the Organization and Judging persons. If possible and useful, introduce the type relationship that is positive for you. At this step you can register yourself
3. Identify your target mates. Is there a wheelchair archer? A left-hand archer? Do they use a scope?  
As long as possible meet your target mates in order to:
  - introduce the type relationship that is positive for you,
  - get to an agreement on the occupation of the shooting line. Avoid doing it tomorrow, because if some difficulties happen, they run affect your attitude and your shoot.
4. Get prepare and rehears your preparation plan for the warm-up period for tomorrow, then shoot few ends at each distance for sight adjustment.



FITA Training SUGGESTIONS starting on **July 1, 2002.**

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** -** COMMENTS and NEWS ****

This is our 37th week of practice of the 2001-2002 archery season. We are in the step #11 of our [“2001-2002 Overall Training Plan”](#), which is our Outdoor competitive period (North Hemisphere):

Time sharing:	78% Shooting and 22% for other developments.	
Total volume :	19:15 hours per week	
Shooting:	5 sessions per week of 2:30 hour each, <u>and</u> 1 test or tournament	= 15 hours
Cardio:	1 session per week of 1:15 hour	= 1:15 hours
Yoga :	1 session per week of 1:30 hour	= 1:30 hour
Strength:	1 maintenance session per week of 1:30 hour	= 1:30 hour

Note:

The training plan shows shooting sessions of 2:30 hours each. In fact each session does not last 2:30 hours, since some sessions are:

- *light and shorter than 2:30 hours, for instance the one from Monday*
- *heavy and longer than 2:30 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2:30 hours should be considered as an **average**. Nevertheless we will strive to not exceed the total of 15:00 hours of shooting per week (equivalent to 6 sessions of 2:30 hours), except when there is a tournament.*

WE HAVE REACHED OUR HIGHEST SHOOTING VOLUME OF THE YEAR!

Our goal in shooting volume will be achieved this week since we will shoot more than 300 arrows during the 2 most intense shooting sessions. We will not propose further increase over the next weeks (we will keep 304 arrows for the most intense sessions).

This period will last until the end of the Competition period, which can be different from one country to another one.

This week we will:

- Start to re-work our sequences. First we will revisit the following sequences: Motions (technical sequence) and perceptions;
- Have a test.

Each time you are suggested to score some arrows or shoot some simulated matches, strive to identify how to maintain your personal Ideal State of Performance (IPS, also know as your “Zone”). Read the document at the end of the tips of [“2002-34 Aiming Off 2”](#).

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

Pascal COLMAIRE

FITA Development Manager



FITA Training SUGGESTIONS starting on **July 1, 2002.**

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***The week at a glance:***

| <b>Days</b>      | <b>#</b> | <b>Session Type</b>          | <b>Subject / Skill</b>                                    | <b>Volume</b>                        |
|------------------|----------|------------------------------|-----------------------------------------------------------|--------------------------------------|
| <b>Monday</b>    | 1        | Shooting                     | One arrow technical sequence                              | 100 arrows - 1:15 hour               |
| <b>Tuesday</b>   | 1<br>1   | Shooting<br>Yoga & Attention | One arrow feeling sequence<br>As per Teacher              | 126 arrows – 1:32 hour<br>1:30 hour  |
| <b>Wednesday</b> | 1<br>1   | Shooting<br>Cardio           | One arrow technical sequence Long. Duration – Low Intens. | 304 arrows – 3:40 hours<br>1:15 hour |
| <b>Thursday</b>  |          | Visualization                |                                                           | 3 times a day                        |
| <b>Friday</b>    | 1<br>1   | Shooting<br>Strengthening    | 1 arrow feeling sequence<br>Maintenance – Neural Adapt.   | 304 arrows – 3:40 hours<br>1:30 hour |
| <b>Saturday</b>  |          | Visualization                |                                                           | 3 times a day                        |
| <b>Sunday</b>    | 1        | Shooting                     | Test (or tournament) with arrow recuperation routine.     | 171 arrows – 5 hours                 |

**Note:**

The shooting rhythm is now a little slower than the past week (82 – 83 arrows per hour) in order to find a good balance between:

- the time required to implement the heaviest session;
- the endurance development (by reduction of the rest periods);
- the shooting rhythm of the tournaments.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

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**MONDAY**

**Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – **10 arrows.**

**ONE ARROW TECHNICAL SEQUENCE**

Exercise #1 – An assistant identifies your sequence of technical motions.

Ask to one person to write down all the motions and positioning implemented by yourself for shooting one arrow. This assistant can use the video.

Total volume over exercise #1: **36 arrows.**

Exercise #2 – Simplified sequence of technical motions.

Note: by the end of this day your physical sequence (also called sequence of motions) should be written down. It is strongly recommended to write it on a diskette, save with the date.

Any future change in your sequence, should be saved under a new date, and document with the previous sequence should be kept. So if the new changes do not work, you will know exactly where to return.

Identify all the motions that are:





## FITA Training SUGGESTIONS starting on **July 1, 2002.**

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- energy consuming,
- biomechanically not efficient for your shoot
- exciting

for instance: to drum one's bow fingers - re-adjust your chest-guard, arm-guard, sling, belt quiver, ... just chose one which fits better, or made some adaptations. - ...

As it is easier to repeat simple things (and sequence) strive to simplify your sequence as much as you can. Nevertheless some motions which are non-related to the shooting process can be kept, but not too much to avoid superstition or fetishism. For this session an assistant is very helpful.

Total volume over exercise #2: **27 arrows.**

Exercise #3 – Best execution rhythm.

Implement the simplified sequence, as follow:

1. While shooting slower as usual - 9 arrows
2. While shooting faster as usual - 9 arrows
3. While shooting at your usual paste - 9 arrows

Total volume over exercise #3: **27 arrows.**

Volume: 10 arrows of warm-up + 36 arrows over exercise #1 + 27 arrows over exercise #2 + 27 arrows over exercise #3 = about **100 arrows** over the entire session.

TUESDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **18 arrows.**

ONE ARROW FEELING SEQUENCE.

Objective: Identify all the feelings that are associated to your proper technical form (physical feelings) and to your efficient arousal (psychological feelings) through the following various situations:

A. Physical feelings

1. Eyes closed.

At a very close distance (5m), with your eyes closed identify all the feelings related to the shot of one arrow, from gripping your bow and string (with your fingers or your release) until your bow is returned on floor/foot- **36 arrows**

Then continue while aiming from any distance.

2. While shooting slower as usual - **9 arrows**
3. While shooting faster as usual - **9 arrows**
4. While shooting at your usual paste - **18 arrows**

Write down your feeling sequence for shooting one arrow; you can use the chart entitled “My Sequences”, but it is not a requirement.

Note: by the end of this day your kinesthetic sequence (also called sequence of feelings, or of perceptions) should be written down. It is **strongly recommended** to write it on a computer, save with the date. Any future change in your sequence, should be saved under a new date; the document with the previous sequence should be kept. So if the new change(s) does not work, you will know exactly where to return at.



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### **B. Psychological feelings**

5. Shoot **36 arrows** for identifying the psychological feelings that makes you implementing a perfect one arrow sequence and shooting efficiently .

*Volume:* 18 warm-up arrows + 108 arrows over the exercises = **126 arrows** total over the session.

### **Session: Yoga.**

# of sessions: 1

*Description:* We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

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## **WEDNESDAY**

### **Session: Shooting.**

# of sessions: 1

General warm-up and shooting warm-up including **18 arrows** .

### **PART A**

#### **ONE ARROW TECHNICAL SEQUENCE**

1. At a very close distance (5m), close your eyes while gripping your bow / string, and implement your sequence with your eyes close until that your bow is returned on floor/foot - **27 arrows**

Continue to refine the description of your sequence while implementing each step of your sequence at any distance with your eye(s) open (aiming):

2. slower as usual - **18 arrows**
3. faster as usual - **18 arrows**
4. at your usual pace - **18 arrows**.

By the end of this step, your physical sequence (also called sequence of motions) should be written down. It is strongly recommended to write it on a computer, save with the date.

Any future change in your sequence, should be saved under a new date; the document describing the previous sequence should be kept. Hence if the new change(s) does not work, you will know exactly where to return.

5. Identify all the motions that are - **27 arrows** :

- energy consuming,
- biomechanically not efficient for your shoot
- exciting / irritating

for instance: to drum bow fingers - re-adjust your chest-guard, arm-guard, sling, belt quiver, ...



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As it is easier to repeat simple things (and sequence) strive to simplify your sequence as much as you can. Nevertheless some motions which are non-related to the shooting process can be kept, but not too many to avoid superstition or fetishism. For this session an assistant is very helpful.

6. End this session by shooting with your simplified sequence – **36 arrows**. You can score these arrows. Make the changes (if any) to your computerized document.

Volume: 18 warm-up arrows + 126 arrows over the exercises = about **144 arrows** over the Part A.

PART B

VISUAL FOCUS IDENTIFICATION (Identification of the aiming method)

Watching the clock face (adaptation from the article written by Albinson & Bull, 1998).

Focus attention on a clock face, watch the second hand sweep. Every five seconds snap your fingers (for instance), during one minute; then every 10 seconds during another minute, and again every 5 seconds during a third minute. Strive to discover how and where your attention is; below are some alternatives:

- You watch the number of seconds (where you will snap your fingers) and wait the arrival of the second arm;
- Your eyes move back & forth from the number to the arm;
- You always follow the clock arm;
- You use an overall / broad supervision;
- Other ...

We suggest testing each of the above method to discover the one fitting you the best.

If you replace the clock arm with your sight and the second numbers with the centre of the target, you should use the same methods.

- Your eyes move back & forth from the center of the target face to the sight – *The less recommended method, because the unstable visual focus generates excessive mental activities* – **36 arrows**.
- You always follow the sight - *Used by some archers and/or during windy days. Not recommended method, because seeing all the sight motions it generates a lot of observations, self-talk, mental activity, ...* – **36 arrows**.
- You have a balanced focus on both: the center of the target face and the sight – *The efficiency of this method depends on the skill in maintaining a constant balanced focus. Any change in the balanced focus can generate some difference in your mindset* – **36 arrows**.
- You watch the center of the target face and implement your full draw action pending the motions of your sight – *The most recommended method, see comment below* – **36 arrows**.
- Other (if you identify other aiming methods, please let me know)

Comment:

To lower your mind activities and because in archery we aim at the centre of the target, it is recommended to affix your central vision on the number and your peripheral vision on the arm clock. While shooting you will focus on the centre of the target whereas your peripheral vision will help your sight to wander round and round this centre.

Volume: **144 arrows** over the exercises of the Part B.

PART C

Have 4 sighting arrows and a 12 arrow match with the most efficient Technical sequence and aiming focus that you have identified throughout the Part A and B. – **16 arrows**



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Volume: 18 warm-up arrows + 126 arrows through Part A + 144 arrows through Part B + 16 arrows through Part C = **304 arrows** over the entire session.

### Session: Cardio Maintenance.

# of session: 1

Duration: 1:15 hour (see the important note below)

Description: Long Duration – Low Intensity

Note: It is difficult to provide accurate suggestions in this matter, the notions of intensity and duration can vary a lot pending:

- \* your current cardio development,
- \* the activity you have chosen,
- \* your shape of the day,

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   |     |        |      |           |
| Long     | X   |        |      |           |
| Duration |     |        |      |           |

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above: “**Long Duration – Low Intensity**”

Choose an activity that you enjoy. You can change the activity as often as you want.

Note:

*Some of you have asked if such a session should not be shorter since we implement short duration efforts.*

*The answer is “a little”, because:*

- You need a serious warm-up before providing Intense efforts: +/- **10 minutes**;
- You will not only provide one short and intense effort, but a set of them alternated with rest/recuperation periods. Let us suppose that we chose a set of 10 sprints of +/- 20 seconds each, alternated with 3 -4 minutes of rest/recuperation: +/- **43 minutes**
- A cool-down period (including stretching) is recommended at the end of the session: +/- **7minutes**

Total Duration: **1 hour**, letting 15 minutes for a shower ...

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## THURSDAY

### Session: Mimics / Visualization.

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.



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- * *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- * *Internal visualization = you just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*

FRIDAY

Session: Shooting.

of sessions: 2

General warm-up and shooting warm-up including **17 arrows**.

PART A

ONE ARROW KINESTHETIC SEQUENCE.

Identify all the feelings related to the shot of one arrow, from gripping your bow and string (with your fingers or your release) to the end of the follow-through.

Suggestion to better identify this kinaesthetic sequence: at a very close distance, close your eyes while gripping your bow / string, and implement your sequence with your eyes close until the end of your follow-through – **18 arrows**

Write down this sequence; you can use the chart entitled “[My Sequences](#)” (published several times this year), but it is not a requirement.

Continue the same exercise alternating one arrow eyes closed and one arrow aiming – **26 arrows**

Volume: 17 warm-up arrows + 44 arrows over the exercise = 61 arrows over the Part A.

PART B

THE HIDDEN TARGET EXERCISE.

You need access to long shooting distances.

Description: Shoot at a hidden target (70m or 90 m pending your accuracy and bow weight) by another target right in front of it (20m ahead). After each shot, announce where you think the arrow should be. A spotter will confirm or correct your estimation. This exercise is better described in the article entitled “[Hidden Target](#)” that is posted at the end of these tips and with “[2002-14 Technical & Perception one arrow sequence](#)”.

Alternate 1 complete round shot at the hidden target and one complete round shot at one regular target.

Below is an example of session:

- * 9 sighting arrows at 90 meters
- * 36 arrows at a hidden target at 90 meters (the masking target is at 70 meters) then 36 arrows at 90 meters
- * 9 sighting arrows at 70 meters
- * 36 arrows at a hidden target at 70 meters (the masking target is at 50 meters) then 36 arrows at 70 meters
- * 9 sighting arrows at 80 meters
- * 36 arrows at a hidden target at 80 meters (the masking target is at 60 meters) then 36 arrows at 80 meters

Note: for some compound archers the hidden target at 70 meters (with the masking target is at 50 meters) does not work, if so, just work the 2 other situations.

Variations: you can shoot – at the hidden targets - some Elimination or Final matches, up to the suggested number of arrows.

Volume: 243 arrows over the Part B.



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**Volume:** 17 warm-up arrows + 44 arrow throughout Part A + 243 arrows throughout Part B = **304 arrows** over the entire session.

**Session: Strengthening (maintenance).**

# of sessions: 1

*Neural Adaptation (maximal strength)*

**Description:** Neural adaptation is a way to increase your strength with little muscular mass development.

- \* # of sets: 3 to 5 in theory, I recommend at least 4 with a preference for 5.
- \* of repetitions: 1 to 5.
- \* Intensity: As heavy as you can, no less than:
  - 90% of your Maximal R.M. if you are a beginner in strengthening
  - 85% of your Maximal R.M. if you have 1 to 4 year(s) of experience in strengthening
  - 75% of your Maximal R.M. if you have 5 years or more of experience in strengthening
- \* Rest between sets: 3:30 minutes to 5 minutes.
- \* Rest between exercises: 3 min.
- \* Tempo: natural, always in control, no jerk

For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce variations in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

Recommendations:

*To priorities:*

- . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
- . the stand-up position (apart from some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;

*To avoid:*

- . the machines, which guide your motions - in archery we have to control and direct our action;



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- . positions that reduce body's involvement, like seating, lying... – in archery all the body participates to the body stability during the effort (draw and full draw);
- . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

SATURDAY

Session: Mimics / Visualization.

of sessions: at least 6 reps at each "session". Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- * *External visualization* = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.
- * *Internal visualization* = you just see what you can see while shooting, i.e. your hands, feet, but not your face, back...

SUNDAY

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up (see below) – at least **12 arrows** (suggestion: 24 for a tournament).

TEST (or TOURNAMENT)

- *if test*: 27 warm-up arrows + 144 arrows over the test :
 - half a FITA round = 72 arrows;
 - 2 x 18 arrow match;
 - 3 x 12 arrow match= about **171 arrows** over the session.
- *if tournament* - pending the format.

IDENTIFICATION OF YOUR ROUTINES TO RETRIEVE THE ARROWS.

During this test have a paper on a clipboard handy, write down what are your routines to go and collect your arrows, as well as you return back to the shooting line and to prepare yourself before the call to the shooting line.



FITA Training SUGGESTIONS starting on **July 8, 2002.**

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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* -\*\* COMMENTS and NEWS \*\***

This is our 38th week of practice of the 2001-2002 archery season. We are in the step #11 of our “[2001-2002 Overall Training Plan](#)”, which is our Outdoor competitive period (North Hemisphere). This period will last until the end of the Competition period, which can be different from one country to another one.

On the program ,this week:

|                |                                                                                      |  |              |
|----------------|--------------------------------------------------------------------------------------|--|--------------|
| Time sharing:  | <b>78 %</b> Shooting and <b>22 %</b> for other developments.                         |  |              |
| Total volume : | <b>19:15 hours</b> per week                                                          |  |              |
| Shooting:      | 5 sessions per week of <b>2:30 hour</b> each, <u>and</u> <b>1</b> test or tournament |  | = 15 hours   |
| Cardio:        | <b>1</b> session per week of <b>1:15 hour</b>                                        |  | = 1:15 hours |
| Yoga :         | <b>1</b> session per week of <b>1:30 hour</b>                                        |  | = 1:30 hour  |
| Strength:      | <b>1</b> maintenance session per week of <b>1:30 hour</b>                            |  | = 1:30 hour  |

*Note:*

*The training plan shows shooting sessions of 2:30 hours each. In fact each session does not last 2:30 hours, since some sessions are:*

- *light and shorter than 2:30 hours, for instance the one from Monday*
- *intense and longer than 2:30 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2:30 hours should be considered as an **average**. Nevertheless we will strive to not exceed the total of 15:00 hours of shooting per week (equivalent to 6 sessions of 2:30 hours), except when there is a tournament.*

**WE HAVE REACHED OUR HIGHEST SHOOTING VOLUME OF THE YEAR!**

See note from last week.

This week we will:

- continue to revisit our sequences, with the one arrow breathing and visual sequence;
- Attend a competition of a good level (National level will do).

Each time you are suggested to score some arrows or shoot some simulated matches, strive to identify how to maintain your personal Ideal State of Performance (IPS, also know as your “Zone”). Read the document at the end of the tips of “[2002-34 Aiming Off 2](#)”.

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

**Pascal COLMAIRE**

*FITA Development Manager*





**FITA Training SUGGESTIONS starting on **July 8, 2002.****

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The week at a glance:

Days	#	Session Type	Subject / Skill	Volume
Monday	1	Strengthening	Maintenance - Endurance	1:15 hour
Tuesday	1	Yoga & Attention	As per Teacher	1:30 hour
	1	Shooting	1 arrow Breathing sequence	126 arrows – 1:30 hour
Wednesday	1	Shooting	1 arrow visual sequence	304 arrows – 3:40 hours
	1	Cardio	Short Duration - High Intens.	1:15 hour
Thursday	1	Visualization		3 times a day
Friday	1	Shooting	1 arrow breathing sequence	304 arrows – 3:40 hours
	1	Goal Setting	For the tournament	Negligible
Saturday	1	Visualization		3 times a day
Sunday	1	Shooting	Tournament	170 arrows – 6:10 hours

Note:

The shooting rhythm is now a little slower than the past week (82 – 83 arrows per hour) in order to find a good balance between:

- the time required to implement the heaviest session;
- the endurance development (by reduction of the rest periods);
- the shooting rhythm of the tournaments.

Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.

MONDAY

Session: Strengthening (maintenance).

of sessions: 1

Description: Implement 4 sets of 10 or more repetitions, according to the Endurance strength method with 40 to 60% of 1 MR (adapted from Letzelter in 1978) as follow:

* 40% for the first set with weight “A”	14-20 repetitions
* 50-55% at the 2 nd set with weight “B” > “A”	12-15 repetition
* 45-50% at the 3 rd set with weight “C” such as “B” > “C” > “A”	13-17 repetition
* 55-60% at the 4 th set with weight “D” > “B”	10-12 repetition

Rest between sets: 30 to 90 seconds.

Rest between exercises: 60 to 90 seconds.

Tempo (ratio of time for concentric & eccentric efforts): 3 / 3 sec.



FITA Training SUGGESTIONS starting on **July 8**, 2002.

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For abdominals, calves and some small muscles for which you can work until a “burning” feeling

Do not hesitate to introduce variations in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

Recommendations:

- *To priorities:*
  - . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
  - . the stand-up position (apart from some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
  - . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
  - . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
  - . breathing out during the effort (concentric part) – for physiological reason;
- *To avoid:*
  - . the machines, which guide your motions - in archery we have to control and direct our action;
  - . positions that reduce body's involvement, like seating, lying .. – in archery all the body participates to the body stability during the effort (draw and full draw);
  - . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance,...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

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**TUESDAY**



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Session: Yoga.

of sessions: 1

Description: We are proposing Yoga because through this activity we can develop:

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

During this session we recommend breathing exercises, especially from belly and with extended breathe out.

Session: Shooting

of sessions: 1

General warm-up and shooting warm-up – **18 arrows** .

ONE ARROW BREATHING SEQUENCE.

Note: by the end of this week your breathing sequence should be written down. It is **strongly recommended** to write it on a diskette, save with the date.

Any future change in your breathing sequence, should be saved under a new date, and document with the previous sequence should be kept. So if the new changes do not work, you will know exactly where to return to.

Identify all the relationships between breathing steps and physical motions - **27 arrows**.

The attached article “Breathing” could help you, even if it is written for a complete sequence, not for one arrow only.

Implement the identified sequence, as follow but in respect of your breathing sequence. When you are asked to shoot slower or faster, just slow down or speed up your breathing sequence:

1. Eyes closed - **18 arrows**
2. While shooting slower as usual - **18 arrows**
3. While shooting faster as usual - **18 arrows**
4. While shooting at your usual pace - **27 arrows**

Total volume over the session: 18 arrows warm-up + 108 arrows over the exercises = **126 arrows**

WEDNESDAY

Session: Shooting.



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# of sessions: 1

General warm-up and shooting warm-up including **18 arrows.**

### EYES ATTITUDE - CONCEPT

Objective: While shooting you look at different things in relation with each step of your sequence. We will study how to look at these things (the various steps of the shooting sequence), how to move our vision from one to another one of these things (step elements) and how to watch 2 things: one moving and one stable (sight and target).

Pre-requisite: This session should be easier if you have already practice some sort of meditation and the exercises that are below .

#### Exercise #1:

Look at something on right ahead of you. Now switch something located on your right (or left) hand side.

What did you do? How did you move from the first to the second point?

Below are the 3 most common techniques:

1) Start to move your eyes first, then your head.

You probably have “lost” some visual references during the swiping o your eyes, a kind of blurred period.

2) Start to move your head first, then your eyes.

Here again you probably have “lost” some visual references during the swiping o your eyes; experimenting a kind of blurred visual period.

3) Turn your head with your eyes always centered in their orbit

This time you should have not lost any visual references, or very few. You should not have experimented any blurred period, but have you felt a greater control, mastery, and some sort of wisdom.

This simple exercise show us how much important is the eye activity for our arousal. Add this conclusion to the one from the Hard-Soft eye exercise. Now anticipate the attitude of your eyes that you will experiment during your next shooting session.

#### Exercise #2:

a) Extend one arm. Move your thumb up. Watch the nail and move your arm while keeping your visual focus on the nail. The background should be blurred. This is what happens when you adjust your visual focus on your sight pin or scope dot. You are aware of your thumb/sight motion, but cannot aim accurately because the background is blurred.

b) Look at a specific external cue . Raise your arm, with the thumb up, toward this direction, but keep your visual focus on the specific external cue. Your thumb nail is blurred. Move your arm in a gentle sinusoid, while keeping your visual focus on the specific external cue . At any time you are re-centered your thumb on the specific external cue you can check (by closing your non-dominant eye for instance) that your thumb is perfectly centered on the specific external cue .

c) Soft eyes - hard eyes.



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To know if you tighten the muscles around your eye while focusing onto a specific external cue, and if you feel your eye becoming “soft” while focusing on peripheral cues, implement the following simple exercise, which will help you to switch from one attention state to another one:

Watch at your thumbnail up at arm’s length, and have a narrow focus on to a specific mark or part of the thumbnail, you should feel some tension in your eyes (hard eyes). Then shift to a broad-external focus to bring into focus the back-ground, you should feel less tension in your eyes (soft eyes). You are encouraged to practice this attention switching technique in a variety of general situations outside archery, in order to rapidly identify your eye tension of the moment. You should also practice to remain with the same eye tension as long as possible, to allow some period of calmness to your mind, and to develop the habit to aim with a constant focus.

EYES ATTITUDE – PRACTICAL PART

Shoot as follow - **72 arrows**:

- keeping as often as possible your eyes **stable** in their orbits, especially while moving from one to another visual step – see exercise #1
- maintaining the **same focus** or zoom, especially while aiming, and with the same eye **relaxation** – see exercises 2 & 3.

Volume: 18 warm-up arrows + 72 arrows over the exercises.

Have various scoring round or match simulations to complete the session up to **304 arrows**.

Session: Cardio Maintenance.

of session: 1

Duration: 1:15 hour (see the important note below)

Description: Short Duration – High Intensity

Note: It is difficult to provide accurate suggestions in this matter, the notions of intensity and duration can vary a lot pending:

- * *your current cardio development,*
- * *the activity you have chosen,*
- * *your shape of the day,*

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short			X	
Medium				
Long				
Duration				

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above: “**Long Duration – Low Intensity**”

Choose an activity that you enjoy. You can change the activity as often as you want.



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Note:

Some of you have asked if such a session should not be shorter since we implement short duration efforts.

The answer is “a little”, because:

- You need a serious warm-up before providing Intense efforts: **+/- 10 minutes**;
- You will not only provide one short and intense effort, but a set of them alternated with rest/recuperation periods. Let us suppose that we chose a set of 10 sprints of +/- 20 seconds each, alternated with 3 -4 minutes of rest/recuperation: **+/- 43 minutes**
- A cool-down period (including stretching) is recommended at the end of the session: **+/- 7minutes**

Total Duration: **1 hour**, letting 15 minutes for a shower ...

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## THURSDAY

**Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = you just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*

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## FRIDAY

**Session: Shooting.**

# of sessions: 2

General warm-up and shooting warm-up including **17 arrows**.

### PART A

#### ONE ARROW VISUAL, PHYSICAL & BREATHING SEQUENCE

Complete the column (or chapter) of the Breathing sequence description, and its links with your visual sequence. For instance some archers after loading their arrow, have one complete breathing sequence (breath in and breath out) while watching the target, then grab their bow and string, ...

You can use your “[My Sequences](#)” form, or any other type of document.



## FITA Training SUGGESTIONS starting on **July 8, 2002.**

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Take more attention to the identification of your sequence for shooting one arrow, i.e. from when you move your string hand/release toward the string, until you lower your bow after the follow-through step. At the moment do not care of what you are looking at between arrows.

Volume: 18 warm-up arrows + about 84 arrows = **102 arrows** total over the Part A.

PART B

MOTIONS AND BREATHING LINK.

1. At a very close distance (5m), close your eyes while gripping your bow / string, and implement your sequence with your eyes close until that your bow is returned on floor/foot - **48 arrows** - Observe the link between breathing and motions.
2. Continue to be concentrated on your Breathing and Motions while shooting at any distance (now you can aim). Now extend a bit (few tenths of second) each of your exhales, but do not slow down your shooting rhythm; by consequence your exhale will overlap the beginning of the following motion, creating a nice link between 2 motions, and a very smooth sequence – **48 arrows**.

Volume: about **96 arrows** over the exercises of Part B.

PART C

ONE ARROW BREATHING SEQUENCE.

Objective: Continue to complete the column (or chapter) of the Breathing sequence on your “[My Sequences](#)” form (or any other form) published with “[2002-16 One arrow visual sequence.doc](#)”. Just identify your breathing sequence for shooting one arrow, i.e. from when you move your string hand toward the string, until you lower your bow after the follow-through step. For the moment do not care of how you breathe between arrows.

Exercise Description:

1. Time (ask to an assistant) how long you need to shoot one arrow; timing period is from a signal given by the assistant (your arrow is already loaded on the bow), until about 2 seconds after your release.
2. Time the same period of shooting, but while you visualize this period of actions.

Suggestion: Time alternatively 9 arrows (that are really shot) with 3 visualized arrows.

Best “tool” to match these 2 situations is breathing, i.e. identify your breathing sequence (see Breathing document - if you have not this document, just ask to me), than breath accordingly while visualizing. By matching these two timings, you will get better benefits from visualization.

Volume: about **106 arrows** over the exercises of Part C

Volume: 18 warm-up arrows + 84 arrow throughout Part A + 96 arrows throughout Part B + 106 arrows throughout Part C = **304 arrows** over the entire session.

Session: **Goal setting.**

of session: 1



FITA Training SUGGESTIONS starting on **July 8**, 2002.

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*Duration:* Negligible

*Description:* based on your past Outdoor performances and your current progression, set out your objectives for the tournament to be held this weekend.

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### **SATURDAY**

**Session: Mimics / Visualization.**

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = you just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*

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### **SUNDAY**

**Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up –24 arrows minimum.

COMPETITION or TEST

*Volume:*

- if tournament - pending the format.

if test: 14 warm-up arrows + 144 arrows over the test (4 scoring round) + one 12 arrow match = **170 arrows** over the session.





FITA Training SUGGESTIONS starting on **July 15, 2002.**

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**** COMMENTS and NEWS ** - ** COMMENTS and NEWS ** -** COMMENTS and NEWS ****

This is our 39th week of practice of the 2001-2002 archery season. We are in the step #11 of our “[2001-2002 Overall Training Plan](#)”, which is our Outdoor competitive period (North Hemisphere). This period will last until the end of the Competition period, which can be different from one country to another one.

Since these training suggestions are made for preparing the 2002 World Outdoor Target Junior & Cadet Championship, we will strive to publish these suggestions until this championship.

On the program, this week:

Time sharing:	78 % Shooting and 22 % for other developments.	
Total volume :	19:15 hours per week	
Shooting:	5 sessions per week of 2:30 hour each, <u>and 1</u> test or tournament	= 15 hours
Cardio:	1 session per week of 1:15 hour	= 1:15 hours
Yoga :	1 session per week of 1:30 hour	= 1:30 hour
Strength:	1 maintenance session per week of 1:30 hour	= 1:30 hour

Note:

The training plan shows shooting sessions of 2:30 hours each. In fact each session does not last 2:30 hours, since some sessions are:

- *light and shorter than 2:30 hours, for instance the one from Monday*
- *intense and longer than 2:30 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2:30 hours should be considered as an **average**. Nevertheless we will strive to not exceed the total of 15:00 hours of shooting per week (equivalent to 6 sessions of 2:30 hours), except when there is a tournament.*

This week we will:

- continue to revisit our visual sequence, with the one arrow breathing and visual sequence;
- revisit our complete sequence for one end;
- Strengthen our aiming off skill.

Each time you are suggested to score some arrows or shoot some simulated matches, strive to identify how to maintain your personal Ideal State of Performance (IPS, also known as your “Zone”). Read the document at the end of the tips of “[2002-34 Aiming Off 2](#)”.

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

Pascal COLMAIRE

FITA Development Manager



FITA Training SUGGESTIONS starting on **July 15, 2002.**

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### *The week at a glance:*

| Days             | # | Session Type     | Subject / Skill                                        | Volume                  |
|------------------|---|------------------|--------------------------------------------------------|-------------------------|
| <b>Monday</b>    | 1 | Shooting         | One end sequences                                      | 100 arrows - 1:15 hour  |
| <b>Tuesday</b>   | 1 | Yoga & Attention | As per Teacher                                         | 1:30 hour               |
|                  | 1 | Shooting         | One end visual sequence                                | 126 arrows – 1:32 hour  |
| <b>Wednesday</b> | 1 | Shooting         | Aiming off                                             | 304 arrows – 3:40 hours |
|                  | 1 | Cardio           | Med. Duration – Med. Intens.                           | 1:15 hour               |
| <b>Thursday</b>  |   | Visualization    |                                                        | 3 times a day           |
| <b>Friday</b>    | 1 | Shooting         | 1 end complete sequence                                | 304 arrows – 3:40 hours |
|                  | 1 | Strengthening    | Maintenance – Isometric                                | 1:30 hour               |
| <b>Saturday</b>  |   | Visualization    |                                                        | 3 times a day           |
| <b>Sunday</b>    | 1 | Shooting         | Test (or tournament) with arrow recuperation routine . | 171 arrows – 5 hours    |

### **Note:**

The shooting rhythm is now a little slower than the past week (82 – 83 arrows per hour) in order to find a good balance between:

- the time required to implement the heaviest session;
- the endurance development (by reduction of the rest periods);
- the shooting rhythm of the tournaments.

*Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.*

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## **MONDAY**

### **Session: Shooting.**

# of sessions: 1

General warm-up and shooting warm-up including **18 arrows**.

Shoot the “one arrow concept” exercise as described in the attached document.

Volume: 18 warm-up arrows + 82 arrows over the exercises = 100 arrows

## **TUESDAY**

### **Session: Yoga.**

# of sessions: 1

*Description: We are proposing Yoga because through this activity we can develop:*

- our body perceptions and control;
- breathing control;
- body balance;



## FITA Training SUGGESTIONS starting on **July 15, 2002.**

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- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

During this session we recommend some eyes exercises and some Zazen.

Session: Shooting.

of sessions: 1

General warm-up and shooting warm-up including **18 arrows** .

EYES ATTITUDE - CONCEPT

Objective: While shooting you look at different things in relation with each step of your sequence. We will study how to look at these things (the various steps of the shooting sequence), how to move our vision from one to another one of these things (step elements) and how to watch 2 things: one moving and one stable (sight and target).

Pre-requisite: This session should be easier if you have already practice some sort of meditation and the exercises that are below.

Exercise #1:

Look at something on right ahead of you. Now switch something located on your right (or left) hand side.

What did you do? How did you move from the first to the second point?

Below are the 3 most common techniques:

1) Start to move your eyes first, then your head.

You probably have "lost" some visual references during the swiping o your eyes, a kind of blurred period.

2) Start to move your eyes first, then your head.

Here again you probably have "lost" some visual references during the swiping o your eyes; experimenting a kind of blurred visual period.

3) Turn your head with your eyes always centered in their orbit

This time you should have not lost any visual references, or very few. You should not have experimented any blurred period, but have you felt a greater control, mastery, and some sort of wisdom.

This simple exercise show us how much important is the eye activity for our arousal. Add this conclusion to the one from the Hard-Soft eye exercise. Now anticipate the attitude of your eyes that you will experiment during your next shooting session.

Exercise #2:



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- a) Extend one arm. Move your thumb up. Watch the nail and move your arm while keeping your visual focus on the nail. The background should be blurred. This is what happens when you adjust your visual focus on your sight pin or scope dot. You are aware of your thumb/sight motion, but cannot aim accurately because the background is blurred.
- b) Look at a specific external cue . Raise your arm, with the thumb up, toward this direction, but keep your visual focus on the specific external cue. Your thumb nail is blurred. Move your arm in a gentle sinusoid, while keeping your visual focus on the specific external cue . At any time you are re-centered your thumb on the specific external cue you can check (by closing your non-dominant eye for instance) that your thumb is perfectly centered on the specific external cue .
- c) Soft eyes - hard eyes.

To know if you tighten the muscles around your eye while focusing onto a specific external cue, and if you feel your eye becoming “soft” while focusing on peripheral cues, implement the following simple exercise, which will help you to switch from one attention state to another one:

Watch at your thumbnail up at arm’s length, and have a narrow focus on to a specific mark or part of the thumbnail, you should feel some tension in your eyes (hard eyes). Then shift to a broad-external focus to bring into focus the back-ground, you should feel less tension in your eyes (soft eyes). You are encouraged to practice this attention switching technique in a variety of general situations outside archery, in order to rapidly identify your eye tension of the moment. You should also practice to remain with the same eye tension as long as possible, to allow some period of calmness to your mind, and to develop the habit to aim with a constant focus.

## EYES ATTITUDE – PRACTICAL PART

Shoot as follow - **72 arrows** :

- keeping as often as possible your eyes **stable** in their orbits, especially while moving from one to another visual step – see exercise #1
- maintaining the **same focus** or zoom, especially while aiming, and with the same eye **relaxation** – see exercises 2 & 3.

**Volume:** 18 warm-up arrows + 72 arrows over the exercises.

Have various scoring round or match simulations to complete the session up to **126 arrows**.

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## WEDNESDAY

**Session: Shooting.**

# of sessions: 1

General warm-up and shooting warm-up including **16 arrows**.

COUNTER AIMING SESSION:



## FITA Training SUGGESTIONS starting on **July 15, 2002.**

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Draw with thin lines the rings of a target face with an off center (let say with the bull's eyes in the 6 point scoring area at 9 o'clock). These thin lines should not be visible from where you will shoot.

Shoot and score some rounds at different distances. For instance you can shoot 8 rounds of 36 arrows (two per distance) – **288** arrows, at:

- 30 m & 50 m, if you use a 80 cm face
- 60 / 70 m, and 70 / 90m if you use a 122 cm face

Suggestion: turn the target face $\frac{1}{4}$ of turn every 9 arrow end.

Volume: 16 arrows for warm-up + 288 arrows over the exercises = about **153 arrows** over the session.

Session: **Cardio Maintenance.**

of session: 1

Duration: 1:15 hour (see the important note below)

Description: Medium Duration – Medium Intensity

Note: It is difficult to provide accurate suggestions in this matter, the notions of intensity and duration can vary a lot pending:

- * your current cardio development,
- * the activity you have chosen,
- * your shape of the day,

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short				
Medium		X		
Long				
Duration				

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above: “**Medium Duration – Medium Intensity**”

Choose an activity that you enjoy. You can change the activity as often as you want.

Note:

Some of you have asked if such a session should not be shorter since we implement short duration efforts.

The answer is “a little”, because:

- You need a serious warm-up before providing Intense efforts: **+/- 10 minutes**;
- You will not only provide one short and intense effort, but a set of them alternated with rest/recuperation periods. Let us suppose that we chose a set of 10 sprints of +/- 20 seconds each, alternated with 3-4 minutes of rest/recuperation: **+/- 43 minutes**
- A cool-down period (including stretching) is recommended at the end of the session: **+/- 7minutes**

Total Duration: **1 hour**, letting 15 minutes for a shower ...



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## THURSDAY

### Session: Mimics / Visualization.

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = you just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*

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## FRIDAY

### Session: Shooting.

# of sessions: 1

General warm-up and shooting warm-up including **18 arrows**.

#### IDENTIFICATION OF YOUR ONE END SEQUENCE & IDEAL PERFORMANCE STATE

*Objective:* Better identify (and write down if not yet done) your One End Sequence.

Have a paper on a clipboard on the shooting line.

*Procedure:* 2 steps – You are recommended to alternate these 2 steps, i.e. alternate some practical and visualized ends. For instance shoot one round and visualize one end.

#### 1) Use the following game = **Practical** shots.

All archers shoot at the same time - as in regular tournament - everybody on the shooting line.

At the conclusion of each 3 arrow end, the archer with the highest score wins one point. Shoot one round of 36 arrows at 30 and 50 meters.

Between ends, take some note on your sequences, especially regarding your routines between 2 arrows, this time frame usually includes 3 periods:

- Analysis / Recuperation of the previous shot (with or without binoculars)
- Equipment preparation (load the next arrow, re-adjust the chest guard or arm guard, sight adjustment ...)
- Personal preparation to the next shot (research of a readiness state).

During this step, an assistant / timer gives to you the signal to go and step the shooting line, from there you have 20 seconds to get prepare (as in official FITA tournaments); then the timer will announce the “Green light” allowing you to start your shooting sequence. The timer person will record the time



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between the “Green light” and your last/third release, stopping the timer about 2 seconds after the last release.

Start over with one round of 36 arrows shot by 6 arrow ends at 70/60 and 90/70 meters.

Volume: 18 warm-up arrows + about 144 arrows over the exercise = **162** arrows total over this first step.

2) Time the same periods of shooting (3 & 6 arrow ends), but while you **visualize one complete end of 3 and 6 arrows.**

The best “tool” to match these 2 situations is breathing, i.e. identify your breathing sequence - see the document entitled “**Breathing**” that was attached to “**2000-15 One arrow breathing sequence**” - then breathe accordingly while visualizing. By matching these two timings (practical & visualized ones), you will get better benefits from visualization.

NOTE: It seems acceptable to have a difference of +/- 10%, i.e.:

- * 4 seconds of difference between the real shooting time and the visualized time for an archer shooting 3 arrows in about 40 seconds
- * 10 seconds for an archer shooting in 1’40”

Volume: Over the session, visualized 2 ends of 3 arrows and 2 ends of 6 arrows = **18 arrows**.

Reminder: you can alternate, or change the order of step 1) and step 2) until you have shot about **180 arrows**, including the visualized ones and warm-up.

3) Shoot **95 scoring arrows and visualize **29 arrows** using what you have discovered through the above exercises:**

a) With a slower rhythm as usual:

- 1 x 12 arrow match (alternate shooting rhythm) + 3 visualized and timed arrows (same rhythm);
- 1 x 18 arrow match + 1 visualized and timed 6 arrow end;

b) With a faster rhythm as usual:

- 1 x 12 arrow match (alternate shooting rhythm) + 3 visualized and timed arrows (same rhythm);
- 1 x 18 arrow match + 1 visualized and timed 6 arrow end;

c) With a the usual shooting rhythm:

- 1 x 12 arrow match (alternate shooting rhythm) + 3 visualized and timed arrows (same rhythm);
- 1 x 18 arrow match + 1 visualized and timed 6 arrow end;
- 5 x Shoot-off arrows + 2 visualized and timed Shoot-off arrow.

Total volume: 18 warm-up arrows + 144 arrows shot in step 1) to better know your one end sequence + 18 visualized arrows + 95 arrows & 29 visualized ones through matches = **304** arrows total over the session.

Session: Strengthening (maintenance).

of sessions: 1

ISOMETRIC METHOD.

Description

- * # of sets: 3 to 5, pending your current level.



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- \* Holding time: 10 to 12 seconds.
  - \* Intensity: As heavy as you can to hold at least 10 seconds, no less than 80%.
  - \* Rest between sets: 3 min.
- Rest between exercises: 60 to 90 seconds.

Do not hesitate to introduce variations in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

Recommendations:

- *To priorities:*
  - . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
  - . the stand-up position (apart from some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
  - . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
  - . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
  - . breathing out during the effort (concentric part) – for physiological reason;
- *To avoid:*
  - . the machines, which guide your motions - in archery we have to control and direct our action;
  - . positions that reduce body's involvement, like seating, lying.. – in archery the entire body participates to the body stability during the effort (draw and full draw);
  - . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.





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SATURDAY

Session: **Mimics / Visualization.**

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- * *External visualization* = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.
 - * *Internal visualization* = you just see what you can see while shooting, i.e. your hands, feet, but not your face, back...
-

SUNDAY

Session: **Shooting**

of sessions: 1

TEST (or TOURNAMENT)

- *if test:*

Alternative A

- 24 warm-up arrows
- half a FITA round = 72 arrows;
- 2 x 18 arrow match;
- 3 x 12 arrow match
- 3 shoot-off arrows

= about **171 arrows** over the session.

Alternative B

- 27 warm-up arrows
- one FITA round = 144 arrows

= about **171 arrows** over the session.

- *If tournament* - pending the format.



One arrow Concept.

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Several archers and coaches recommend the one arrow shot concept, i.e. to take care of one arrow at a time, and not to think to the entire end, or the complete round. This concept widely used, but not unanimously; for instance Darrel PACE twice Olympic Champion used the one end concept. But Pace was an exception, an archer far above the talent and archery specific skills of many of us, and it should not be too difficult to think to the entire end when your first arrows are already in the centre of the target, but when your first arrows are ... not so good, is it judicious to think to the entire end? Not sure.

This is why we propose to those who want to adopt this one arrow shot concept the exercise below. This exercise is also a good one for making the archer use to shoot head to head match.

## **DISTANCE.**

Shoot a 36 arrow round at a distance of your choice, our example is for the 50 meter.

## **Target face.**

Use a cut-out spot. For 50 m we recommend a cut-out spot from a 80 cm target face which includes the:

- 6,7,8,9 and 10 zones for Olympic Women.
- 7,8,9 & 10 for Olympic Men & Compound Women
- 8,9 & 10 for Compound Men

This example is for Provincial level, adjust the cut-out spot according to your own level.

## **SCORING.**

Based on maximum of hits.

Score according a disadvantage rule.

For instance a compound women who touches, even a little bit, the external line (outer 7), scores a miss.

Record the scores you achieve on the existing scoring zones on the cut-out spot. The total of this score will be used for tie-break purpose only, because the first ranking criteria is the number of hits.

Example:

- Archer "A" shot very well excepted two arrows, he/she scored 34 hits and 300 points.
- Archer "B" was not so accurate but more constant, he/she scored 36 hits and 290 points.
- Archer "C" shot not very well but did no one bad arrow, he/she scored 36 hits and 280 points.

|                   |         |             |
|-------------------|---------|-------------|
| Final ranking is: | First:  | Archer "B". |
|                   | Second: | Archer "C"  |
|                   | third:  | Archer "A"  |

# One arrow Concept.

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SHOOTING ORDER.

• First step

During the 4 first 3 arrow ends (for 50 meters), each archer comes and steps the shooting line alone (one by one) for shooting one single arrow. Then the archer returns back on the waiting line while another archer shoots one arrow, and so on until each archer has shot a complete end.

Note 1:

Here the archer shoots ONE ARROW then move physically (and mentally) from the shooting line.

Note 2:

Like in head to head match, the shooting archer is observed by the others.

• Second step

From end 5 to 8 inclusive (still for 50 m), all the archers are on the shooting line, but they shoot one arrow at a time alternatively, until everybody has shot his / her complete end.

Note 3:

Here the archer does not leave anymore the shooting line physically, but he / she is still required to shoot one arrow. This is an intermediate situation between the first & third step.

Note 4:

Like in head to head match, the archer has to remain and "wait" on the shooting line while his / her opponent is shooting

• Third step.

During the last 4 three arrow ends, all the archers are on the shooting line and shoot when they want in the allocated time.

Note 5.

Here the archers recover a "normal" shooting situation. He / she has to re-introduce his / her sequences and routines for shooting one complete end, especially regarding the period between 2 arrows.

Nevertheless the archers continue, as for the two first steps to pay attention at the shot at hand (the on-going shooting).

For FITA

Pascal COLMAIRE

FITA Training SUGGESTIONS starting on **July 22, 2002.**

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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* -\*\* COMMENTS and NEWS \*\***

This is our 40th week of practice and the second last of the 2001-2002 archery season. In 2 weeks will be held the World Outdoor Junior and Cadet World Championship!

Hence, next week we will publish another set of training tips before taking a rest until mid October 2002. We should restart the training tips on Monday October 14, 2002.

This week and next week the program will still be the one of the step #11 of our "[2001-2002 Overall Training Plan](#)" posted on the FITA Website:

|                |                                                                                      |              |
|----------------|--------------------------------------------------------------------------------------|--------------|
| Time sharing:  | <b>78 %</b> Shooting and <b>22 %</b> for other developments.                         |              |
| Total volume : | <b>19:15 hours</b> per week                                                          |              |
| Shooting:      | 5 sessions per week of <b>2:30 hour</b> each, <u>and</u> <b>1</b> test or tournament | = 15 hours   |
| Cardio:        | <b>1</b> session per week of <b>1:15 hour</b>                                        | = 1:15 hours |
| Yoga :         | <b>1</b> session per week of <b>1:30 hour</b>                                        | = 1:30 hour  |
| Strength:      | <b>1</b> maintenance session per week of <b>1:30 hour</b>                            | = 1:30 hour  |

*Note:*

*The training plan shows shooting sessions of 2:30 hours each. In fact each session does not last 2:30 hours, since some sessions are:*

- *light and shorter than 2:30 hours, for instance the one from Monday*
- *intense and longer than 2:30 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2:30 hours should be considered as an **average**. Nevertheless we will strive to not exceed the total of 15:00 hours of shooting per week (equivalent to 6 sessions of 2:30 hours), except when there is a tournament.*

This week we will:

- refine our shooting perceptions;
- tune our back-up equipment;
- take part to a high level (National) tournament..

Each time you are suggested to score some arrows or shoot some simulated matches, strive to identify how to maintain your personal Ideal State of Performance (IPS, also know as your "Zone"). Read the document at the end of the tips of "[2002-34 Aiming Off 2](#)".

Have a good week of practice!

On behalf of the **FITA Coaches Committee:**

**Pascal COLMAIRE**

*FITA Development Manager*



## FITA Training SUGGESTIONS starting on **July 22, 2002.**

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The week at a glance:

Days	#	Session Type	Subject / Skill	Volume
Monday	1	Strengthening	Maintenance - Endurance	1:15 hour
Tuesday	1 1	Yoga & Concentration Shooting	As per Teacher Shooting perceptions	1:30 hour 126 arrows – 1:30 hour
Wednesday	1 1	Shooting Cardio	Back-up equipment tuning Long Duration - Low Intens.	304 arrows – 3:40 hours 1:15 hour
Thursday	1	Visualization		3 times a day
Friday	1 1	Shooting Goal Setting	Shooting perceptions For the tournament	304 arrows – 3:40 hours Negligible
Saturday	1	Visualization		3 times a day
Sunday	1	Shooting	Tournament	170 arrows – 6:10 hours

Feel free to reschedule and adapt this program according to your availability, your current level / shape and to the access periods to your shooting range.

MONDAY

Session: Strengthening (maintenance).

of sessions: 1

Description: According to the endurance strength method #2 (adapted by Charles Poliquin in “Designing Strength Training Program for Archers”), as per suggested program. In shorts:

- * Intensity / load: 50 to 60% of your 1 Maximal Repetition
- * # of repetitions: more than 8.
- * Rest between sets: 30 to 90 seconds; 1 minute is fine.
- * Rest between exercises: 90 seconds
- * Tempo: 2 seconds on the concentric effort - 4 seconds on the eccentric effort

Do not hesitate to introduce variations in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

Recommendations:

- *To priorities:*
 - . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
 - . the stand-up position (apart from some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;



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- . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;
- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;
- *To avoid:*
  - . the machines, which guide your motions - in archery we have to control and direct our action;
  - . positions that reduce body's involvement, like seating, lying.. – in archery the entire body participates to the body stability during the effort (draw and full draw);
  - . jerking, bouncing and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

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## TUESDAY

### Session: Yoga.

# of sessions: 1

*Description: We are proposing Yoga because through this activity we can develop:*

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

During this session we recommend a Zazen session as endurance concentration exercise.

### Session: Shooting.

# of sessions: 1

General warm-up and shooting warm-up including **18 arrows** .

ONE END FEELING SEQUENCE.

Identify all the feelings that you get for shooting one end, from stepping the shooting line until the end of release of the last (3<sup>rd</sup> or 6<sup>th</sup>) arrow.



## FITA Training SUGGESTIONS starting on **July 22, 2002.**

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1. At a very close shooting distance close your eyes while stepping the shooting line and implement your sequence with your eyes closed.

Note: for some tasks you will need some visual references, such as to give the proper direction to your body on the shooting line, to nock the arrow, ... For implementing these tasks, just open your eyes the minimum time and close again your eyes.

Implement most of your sequence with your eyes closed to better FEEL. Strive to identify your physical and technical feeling, but also psychological feeling like relaxation level, recuperation need and process after the shoot, concentration/preparation to the next shot, confidence level, ... - **18 arrows**.

2. Alternate one end with closed eyes and one end with open eyes. When implementing your sequence with your eyes open, strive to identify the relations between your visual sequence and any feeling – **18 arrows**.
3. Shoot 9 arrows per cut-out target faces (6 cut-out faces, respectively without: 6, 7, 8, middle 8, 9, middle 9) at a regular shooting distance and strive to identify the relations between your visual sequence and any feeling – **54 arrows**.
4. Shoot **18 arrows** at a regular target face whilst continuing to strive to identify the relations between your visual sequence and any feeling.
5. Write down your feeling sequence. You can use the chart entitled 'My Sequences'; this form is attached to "2002-16 One arrow visual sequence".

Volume: 18 warm-up arrows + 108 arrows over the exercises = **126 arrows** total over the session.

WEDNESDAY

Session: Shooting.

of sessions: 1

General warm-up and shooting warm-up including **18 arrows**.

Description: PREPARATION of your BACK-UP BOW for OUTDOOR

Objectives: 1. Prepare a back-up bow as similar as possible to your bow #1 (if not done yet);
2. Pre-tune that bow;
3. Identify the difference (in target) between bow #1 and bow #2;
4. Adjust your back-up bow tuning to get the same shooting feeling and accuracy, and – if possible, the same sighting. If you cannot reduce the sighting difference identified in step #3, record this difference for each distance.

Tips for bow pre-tuning – Objective #2:

Follow your usual tuning process. If you have not any, you can either:

- Follow Easton's recommendations that are posted at the end of the catalogue of this company;
or
- Follow the recommendations that are in the Easton "Tuning Seminar" booklet.

Volume: about **60 arrows** for tuning.

Tips for bows matching – Objectives #3 and 4:

- Shoot alternatively with your back-up and your first bow.
Shoot 24 arrows per distance: 12 with each bow. Keep track of the impacts achieved with each bow. You can identify on a scorecard which bow you are using with different ink color or you can use 2 scorecards ... - **96 arrows**.
- Analyze the difference of impact, achieved by the two bows (if any). If necessary, make some changes on your back-up bow accordingly and start over from step 2) – **36 arrows** for refining your tuning and



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**72 arrows** (18 per distance – 9 with each bow) for checking if there is a perfect matching between the 2 bows).

- Shoot and score a 18 arrow match and 4 shoot-off arrows = **22 arrows**

TOTAL VOLUME: 18 warm-up arrows + 60 arrows to pre-tune your back-up bow + 96 arrows for identifying the bows difference + 36 and 72 arrows to refining the matching + 22 scoring arrows = **304** arrows over the entire session.

Note: The above number of arrows can vary a lot pending your need of tuning and adjustment. Strive to complete the session up to **304** arrows, for instance by scoring more arrows: rounds, match simulations, skill development ...

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### Session: Cardio Maintenance.

# of session: 1

Duration: 1:15 hour (see the important note below)

Description: **Long Duration - Low Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because the notions of intensity and duration can vary a lot pending:

- your current Cardio development,
- the activity you have chosen,
- your shape of the day,*

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

|          | Low | Medium | High | Intensity |
|----------|-----|--------|------|-----------|
| Short    |     |        |      |           |
| Medium   |     |        |      |           |
| Long     | X   |        |      |           |
| Duration |     |        |      |           |

Today we propose a Cardio session made of “**Long Duration - Low Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

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## THURSDAY

### Session: Mimics / Visualization.

# of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = you just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*





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FRIDAY

Session: **Shooting.**

of sessions: 1

General warm-up and shooting warm-up including **16 arrows.**

THE **HIDDEN TARGET** EXERCISE (ALTERNATION PER END)

You need access to long shooting distances.

Description: Shoot at a hidden target (70m or 90 m pending your accuracy and bow weight) by another target right in front of it (20m ahead). After each shot, announce where you think the arrow should be. A spotter will confirm or correct your estimation. This exercise is better described in the article entitled "[Hidden Target](#)" that is posted at the end of these tips "[2002-14 Technical & Perception one arrow sequence](#)".

Alternate 1 complete round shot at the hidden target and one complete round shot at one regular target.

Below is an example of session:

18 warm-up arrows

- * **12** sighting arrows at 90 meters

Shoot alternately one 9 arrow end at a hidden target at 90 meters (the masking target is at 70 meters) and directly to a target at 90 meters, until you have shot 36 arrows in each situation – **72 arrows**

- * **12** sighting arrows at 70 meters

Shoot alternately one 9 arrow end at a hidden target at 70 meters (the masking target is at 50 meters) and directly to a target at 70 meters, until you have shot 36 arrows in each situation – **72 arrows**

- * **12** sighting arrows at 80 meters

Shoot alternately one 9 arrow end at a hidden target at 80 meters (the masking target is at 60 meters) and directly to a target at 80 meters, until you have shot 36 arrows in each situation – **72 arrows**

Note: for some compound archers the hidden target at 70 meters (with the masking target at 50 meters) does not work, if so, just work the 2 other situations.

Variations: you can shoot – at the hidden targets - some Elimination or Final matches, up to the suggested number of arrows.

- * Complete the session with steps #1 and #2 of Tuesday = **36 arrows.**

Volume: 16 Warm-up arrows + 288 arrows over the exercises = **304 arrows** over the session.

Session: **Goal setting.**

of session: 1

Duration: Negligible

Description: based on your past Outdoor performances and your current progression, set out your objectives for the high level tournament to be held this weekend.

SATURDAY

Session: **Mimics / Visualization.**

of sessions: at least 6 reps at each "session". Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization,



FITA Training SUGGESTIONS starting on July 22, 2002.

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Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- \* *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- \* *Internal visualization = you just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*

One Zazen session is recommended, if not feasible read the attached article, that is also available in French

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**SUNDAY**

**Session: Shooting**

# of sessions: 1

**Session: Shooting**

# of sessions: 1

General warm-up and shooting warm-up – (suggestion: 24 for a tournament).

COMPETITION, or TEST

Volume:

- if tournament - pending the format.

if test:

Alternative A

- 24 warm-up arrows
  - half a FITA round = 72 arrows;
  - 2 x 18 arrow match;
  - 3 x 12 arrow match
  - 3 shoot-off arrows
- = about **171 arrows** over the session.

Alternative B

- 27 warm-up arrows
  - one FITA round = 144 arrows
- = about **171 arrows** over the session.
- 



## ***The Archer's Concentration.***

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You probably know that we can adopt different kinds of concentration. Four of this types of concentration are often defined through two types of orientation: external & internal, and two type of diffusion narrow & broad. Each of the combination between the orientation & the diffusion is usually named attention. My purpose is not to raise any discussion between concentration & attention, let consider for the following that attention defines the type of concentration adopted by a person.

Below are some examples of attention:

- Stability and maintenance of a low bow-shoulder = internal-narrow
- A general relaxation state = internal-broad
- The dot-sight stability on the Gold (or killed zone in 3D) = external-narrow
- During the draw (while the archer takes care to bow verticality, to provide his/her action in the shooting plane, to the displacement of the bow in the space - especially of the sight, to the string alignment, to the intensity of the wing through the flag motion, to the noise of the wind, ...) = external broad.

Here it is recommended to the archer to identify, and write down on his/her sequences form what type of attention he/she uses to implement properly each step of his/her sequences; including between two arrows.

In addition of the traditional types of concentration/attention described above, we can describe the archer's concentrations with another definition (see #2):

1. During the preliminaries

Preliminaries = all the actions before the main actions, i.e. from stepping the shooting line until the complete draw.

For implementing properly the preliminaries, the archer has to use different types of attention described above. He/she has to pay ATTENTION to what he/she is doing, i.e. the archer has to be mentally present on the on-going action. The archer knows exactly what he/she has to do, to feel and to see.

It just requires ATTENTION to be done properly.

2. During the main action = Full draw: from aiming to the end of Follow-Through

Here we have first to describe the main mental activity of the archer when at full draw: he/she is focussed on the coordination of:

- visual information, i.e. sight stability/motions.
- kinesthetic information, i.e. feeling & effort intensity in his/her form & action.

Because this coordination depends on wind, body balance, time to get the trigger/clicker, overall stability, muscular fatigue, ... the archer has to deal with all these performance criteria.

So during his/her main action (full draw) the archer's concentration is different than during the preliminaries, because he/she has no longer 100% accurate guidelines to follow, but has "to compose" with moving /inconsistent criteria. Therefore the archer's mind has to supervise/observe with VIGILANCE all the internal activities (feelings) and their coordination with appropriate visual information. Once the coordination of all the components is got, the archer provides a franc, confident and progressive action (pressure on the trigger for the compound archer - draw increase for the Olympic archer - release for the archer who does not use a trigger

The Archer's Concentration.

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and clicker). When the coordination is not here the archer slows down, even stops, his/her action on the trigger or the clicker; the archer without clicker and trigger waits for the next coordination period).

Note: Several researches have shown that the elite archer provides a smoother action on the trigger/clicker than any lower level athlete, which could mean two things:

- . the archer provides a constant action on his/her trigger/clicker, and strives for setting up the other performance criteria during this smooth action,
- . this smoothness is a consequence of a more frequent period of coordination of the performance criteria while at full draw than any lower level archer.

Who knows the right reason? Ignoring it, we recommend to work on the two hypotheses, i.e. we try to make the archer's action more progressive/constant, and we also try to reinforce all the performance criteria (which we can improve and know how to do it).

### **CONCLUSION:**

Briefly, the two types of concentration we have identified are the following:

- For the preliminaries (built the form) = ATTENTION to the RIGHT positioning/implementation, according to a pre-determined way of doing.
- For the main action (full draw: aiming to follow-through) = SUPERVISION or VIGILANCE to the COORDINATION period between visual & kinesthetic feed-backs.

What is this state of concentration in which the archer supervises with vigilance his/her own action?

You certainly already read some article about that topic, like:

- "Shooting with the right side of the Brain" from Dave Keagy Senior,
- The notion of something shooting for you in Kyudo,
- "Let go" from McKinney,
- ...

All recommend the same thing: shoot with your muscular memory, and don't be mentally present in your shoot. Release should be an unconsciously action, we are all convinced of that, because if we think to release we spoil our vigilance on the coordination described above. But this coordination should be followed through the arrow propulsion, i.e. during the time in which the string pushes the arrow away.

Before during and a little after the release the archer must implement the same activities (visual, mental, breath, physical), this is also another well known coaching/technical fundamental in our sport; therefore to be able to release unconsciously, the archer must already implement his/her physical activities unconsciously before the release, to keep the same mental activity before and during the release.

Here we are! The physical activities at full draw should not be done under the control of the conscientious mind (left part of the brain), but unconsciously.

Unconsciously, doesn't mean that it is done without any control. In our life we do many things unconsciously with great accuracy, like walking, eating with fork (are you injured after your meal?), driving,...

This particular mental state in which we let our body implementing very well known task, which we have repeated many times before, is very close from the meditation one.

What is the mental activity during meditation?

### ***The Archer's Concentration.***

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Imagine during some seconds that you are in summer sat close a garden fountain. What's happen?

Mentally you are concentrated on this fountain, the water motion and its noise, but you don't force your mind to be focused on this fountain. At that time your mind is free.

This is something very close from the meditation state. During meditation you don't force your mind to stay concentrate on something, your mind is free, nevertheless it stays on the meditation topic.

Don't you think that it is very close from the archer's mind at full draw?

The archer stays focus on his/her coordination between the visual and the kinesthetic information, but "unconsciously" we said above, which means that he/she does not force his/her mind to control this coordination, so his/her mind is free.

Because the psychological changes occur more when the archer is inactive then while he/she is active, the archer has to handle properly any rest time.

That does not mean that the archer has to maintain the same type and intensity of concentration away and on the shooting line. But the archer has to identify which are these types and intensities, in order to be able to switch from one type of concentration (the one requires to start properly his/her sequence, to another one (the one adopted for a specific rest time).

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**\*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\* - \*\* COMMENTS and NEWS \*\***

This is our 41<sup>st</sup> and last week of practice the 2001-2002 archery season before the main goal for this year: the 7<sup>th</sup> World Outdoor Junior and 1<sup>st</sup> World Outdoor Cadet World Championship!

This week and next week the program will still be the one of the step #11 of our “[2001-2002 Overall Training Plan](#)” posted on the FITA Website:

|                |                                                                                      |              |
|----------------|--------------------------------------------------------------------------------------|--------------|
| Time sharing:  | <b>78 %</b> Shooting and <b>22 %</b> for other developments.                         |              |
| Total volume : | <b>19:15 hours</b> per week                                                          |              |
| Shooting:      | 5 sessions per week of <b>2:30 hour</b> each, <u>and</u> <b>1</b> test or tournament | = 15 hours   |
| Cardio:        | <b>1</b> session per week of <b>1:15 hour</b>                                        | = 1:15 hours |
| Yoga :         | <b>1</b> session per week of <b>1:30 hour</b>                                        | = 1:30 hour  |
| Strength:      | <b>1</b> maintenance session per week of <b>1:30 hour</b>                            | = 1:30 hour  |

*Note:*

*The training plan shows shooting sessions of 2:30 hours each. In fact each session does not last 2:30 hours, since some sessions are:*

- *light and shorter than 2:30 hours, for instance the one from Monday*
- *intense and longer than 2:30 hours, like the ones from Wednesday and Friday.*

*Hence the duration of 2:30 hours should be considered as an **average**. Nevertheless we will strive to not exceed the total of 15:00 hours of shooting per week (equivalent to 6 sessions of 2:30 hours), except when there is a tournament.*

This week we will:

- strive to be Effortless, Fluid and Relax;
- tune our bow;
- select our arrows;
- strengthen our follow-through

Each time you are suggested to score some arrows or shoot some simulated matches, strive to identify how to maintain your personal Ideal State of Performance (IPS, also know as your “Zone”). Read the document at the end of the tips of “[2002-34 Aiming Off 2](#)”.

Good championship to those who are selected to Nymburk.

Good end of competitive season to the others.

Good rest after the competitive season to all of you (included our French translator and Webmaster...!).

Many thanks for your interest in the 2001-2002 FITA Training Tips.

We will be back on October 14, 2002.

On behalf of the **FITA Coaches Committee:**

**Pascal COLMAIRE**

*FITA Development Manager*



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Days	#	Session Type	Subject / Skill	Volume
Monday	1	Shooting	Follow-Through	100 arrows - 1:15 hour
Tuesday	1	Yoga & Attention	As per Teacher	1:30 hour
	1	Shooting	Effortless, Fluidity & Arrow selection	126 arrows – 1:32 hour
Wednesday	1	Shooting	Follow-Through	304 arrows – 3:40 hours
	1	Cardio	Short. Duration – High Intens.	1:15 hour
Thursday		Visualization		3 times a day
Friday	1	Shooting	Equipment Tuning	304 arrows – 3:40 hours
	1	Strengthening	Maintenance – Eccentric	1:30 hour
	1	Partners	Relationship	Negligible
Saturday		Visualization		3 times a day
Sunday	1	Shooting	Effortless, Fluidity, Relax.	171 arrows – 5 hours

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2. Same but with an elastic band – 7 simulations
3. Same exercise but while shooting at a short distance (+/- 6 meters). Still watching yourself – in your own eyes - in a mirror - **9 arrows**
4. Same exercise but while shooting at a blank butt from any distance (70 meters / Outdoor) - **9 arrows**
5. Same exercise but while shooting at cut-out faces; 4 cut-out faces; 8 arrows per cut-out = **32 arrows**
6. Same while shooting at a regular face from the regular distance – **9 arrows**
7. Same but with no sound every second arrows – **8 arrows**
8. Same without any sound – **9 arrows**

**Volume:** 9 warm-up arrows + 15 simulations + 76 arrows over the exercises = **100 arrows** over the session.

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### TUESDAY

#### Session: Yoga.

# of sessions: 1

*Description: We are proposing Yoga because through this activity we can develop:*

- our body perceptions and control;
- breathing control;
- body balance;
- mind control;
- flexibility;
- we are becoming more sensitive to nutrition
- we are introduced to relaxation and energy saving motions.

Unless that you have already been introduced to Yoga, it will be very difficult to practice by yourself, hence if you cannot attend any Yoga lessons, please look for some lessons of one activity close from Body Expression, Tai Chi Chuan, Sophrology, Classical dance...

During this session we recommend a relaxation session and a Zazen session as endurance concentration exercise.

#### Session: Shooting.

# of sessions: One double (with 2 exercises).

General warm-up and shooting warm-up including **18 arrows**.

#### Exercise #1:

##### EFFORTLESS

Objective: Implement a fluid sequence with a minimum of tensing of any sort. Balanced efforts will help a lot. Stay in control. You can simulate one round of the World Indoor Championship in order to make you used to the coming tournament.

Task: Update your sequences form all the session long.

#### Exercise #2:

##### ARROW SELECTION (FIRST PART)





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Description: During 10 ends shoot all your arrows in any order. You can score (optional). Record the number of each of the six best arrows (closest to the center) at each end. At the end of the session, count how many times each arrow was among the best 6; rank them accordingly. Keep the top 6 for competition and the following 3 as back-up arrows.

Volume: 18 warm-up arrows + 108 arrows over the exercises = **126 arrows** total over the session.

WEDNESDAY

Session: Shooting.

of sessions: 2

General warm-up and shooting warm-up including **18 arrows**.

Exercise #1:

For Compound archers

See the article published in Archery Focus Volume 6, Number 3, 2002 pages 6 & 7.

Several release manufacturers have a training aid that enables their releases to simulate a shot and not release the arrow. Strive to get such a training aid and adapt the session for Recurve archers.

For Recurve archers

Double clicker method

1. Get your clicker and let down - **12** times.
2. Get your clicker and CONTINUE to extend your draw during 2-3 seconds, and then let down – **12** times.
3. Affix a second clicker under your usual one. If it is a Beiter one, remove the plastic part at the bottom (it is too big), and replace it with a piece of tape. The additional clicker should be 1mm. further (closer to the target). – See illustration # 3 of the “2002-12 Follow-through”
4. Shoot eyes closed with the 2 clickers. Strive to continue all your physical and mental activities between the 2 clickers, like these activities were before the first clicker – **18 arrows**.
Attention: there are several steps to overpass:
 - a) click without any reaction
 - b) click and be able to maintain
 - c) click and CONTINUE about 2 to 3 seconds.
5. Same with your eyes up and blurred - **18 arrows**.
6. Same at a blank butt – **18 arrows**.
7. Still at a blank butt, alternate:
 - a) the shot of one arrow with the 2 clickers as previously,
 - b) the shot of one arrow with one clicker only, BUT these seconds arrows must be shot like if there was a second imaginary clicker to get. In other words, even when you use one clicker only, you continue all your physical and mental activities about 2 mm. After the sound of the clicker – **18 arrows**.
8. Shoot with one clicker only, but as above (see #7b) at cut-out faces; 4 cut-out faces; 9 arrows per spot = **36 arrows**
9. Shoot **18 arrows** with one clicker only, but as above (see #7b) at a regular face.
10. Shoot **18 arrows** at a regular face with one clicker only, releasing at the sound of the first clicker.



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**Volume:** 18 arrows for warm-up + 24 simulations + 144 arrows over the various rounds = about **186 arrows** over the exercise #1.

Exercise #2:

Complete the session by selecting your arrows as follow:  
**ARROW SELECTION FOR OUTDOOR (PART 2)**

*Description:* Number each arrow differently. Shoot them in any order; avoid shooting them in the same order.

Shoot them from any distance at targets faces that are similar: same height, because it is common to shoot higher on the top spot. Do not hesitate to move a little on the shooting line to always stand in front of the target face that you are shooting at. You can score and have some matches.  
Record your impacts.

*Analyze tool:* Have a sheet of paper on a clipboard at the target level. On this paper there should be printed several small target faces, ideally one small target face per arrow. Allocate one of these small target face to each arrow with the same number; for instance report on the small (drawn) target face #1 that is on your form the impacts of your arrow #1, and so on ...

If you have 10 or 12 arrows, but just want to shoot only 6 arrows per end, try to shoot at least 15 times each arrow over this session.

*Analyze process:*

- **Selection #1:**

Alternative #1.1.: Rank your arrow per their size of grouping. Ignore the impacts related to bad shots (not bad impacts!). Arrow #1 is the arrow with the smallest group size. For this test you must have a comparable number of impacts per arrow. Keep those with the smallest group size for the championship.

Alternative #2.1.: Rank your arrow per score. Ignore the impacts related to bad shots (not bad impacts!). Pending the number of bad shots, you can have 10 scores for one arrow and only 7 for another one. Calculate the average score per shot for each arrow. Rank your arrows per this average score. Give the #1 to the arrow with the highest average, and so on.... Keep those with the highest average for the championship.

- **Selection #2:**

Verify if your sight was well adjusted, e.g. identify where is the centre of each group of impacts in relation to the centre of the printed targets, and average them. From there, rank and number your arrow pending the distance from their grouping centre and the target centre. Keep those with the shortest distance from their grouping centre and the target centre for the championship.

- **Selection #3:**

If the second analysis proves that your sight was well adjusted, you can conduct the following third analyse: *on each small printed target, check if there is a zone (around the centre of the target face) with no or seldom impacts* – for instance no or very few impact(s) high left. Keep the arrows that have made a grouping well balanced around the bull's-eye for the championship.

- Have a **Final Selection** by combining the results of the 3 above selections.

**Volume:** about **138 arrows** over the exercise #2 = **304 arrows** over the session. During this session you can score as many arrows as you want.



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Session: Cardio Maintenance.

of session: 1

Duration: 1:15 hour (see the important note below)

Description: **Short Duration - High Intensity**

Note: It is difficult to provide accurate suggestions in this matter, because the notions of intensity and duration can vary a lot pending:

- your current Cardio development,
- the activity you have chosen,
- your *shape of the day*,

Therefore we will quote the intensity and duration of the Cardio exercises with 3 levels each:

	Low	Medium	High	Intensity
Short			X	
Medium				
Long				
Duration				

Today we propose a Cardio session made of “**Short Duration - High Intensity**” exercises.

Strive to determine *how long* and *how intense* should be YOUR Cardio exercises TODAY, for YOURSELF and in the ACTIVITY that you have chosen, to be as close as possible of the combination that we propose above.

Choose an activity that you enjoy. You can change the activity as often as you want.

THURSDAY

Session: Mimics / Visualization.

of sessions: at least 6 reps at each “session”. Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization,

Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- * *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- * *Internal visualization = you just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*

FRIDAY

Session: Shooting.

of sessions: 1

General warm-up and shooting warm-up – **18 arrows**.

TUNING

Description: There are so many written and Audio-visual publications on this subject that we will not detail any tuning process here; it would be too long and repeat the information that you can easily find somewhere else. For instance you can use the tuning process described in the Easton



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catalog. If you have not yet this catalog, you can order it from the following website:

<http://www.eastonarchery.com/>

Several bow makers also provides good advises, like the PSE Compound BowUser's guide:

[www.pse-archery.com](http://www.pse-archery.com)

Two already published documents may help you:

- \* "French Test" has been published with "2002-3 Raise & Draw Start"
- \* "Tiller Adjustment" has been published with "2002-13 Stable Aiming"

**Volume:** 18 warm-up arrows + up to 115 arrows for tuning = **133** arrows.

**Note:** The above number of arrows can vary a lot pending your need of tuning and adjustment. Strive to complete the session up to **133** arrows, for instance by better matching your back-up equipment to the equipment #1, or by scoring rounds, match simulations, skill development, ...

**Session: Strengthening (maintenance).**

# of sessions: 1

**Maximal Eccentric Contractions Method**

**Goal:** to increase your maximal strength (neural adaptation with little muscular mass development).

*Description:*

- \* # of sets: 3
- \* of repetitions: 3 to 6 (5 is a good number)
- \* Intensity: As heavy as you can, up to 150 % of your maximal R.M. You can ask the help of an assistant for the concentric motions, but should implement the eccentric part of the effort (at least most of it) by yourself;
- \* Rest between sets and repetitions: 3 minutes
- \* Tempo: natural

Do not hesitate to introduce variations in your exercise in order to make your muscles working differently, which will:

- avoid excessive muscular hypertrophy,
- make your sessions more enjoyable,
- maintain / increase your muscular coordination, and by consequence your strength efficiency (power),
- make your muscles able to control any type of effort.

**Recommendations:**

- *To priorities:*
  - . exercises with free weights (barbell and dumbbells) – to oblige yourself to control the weights and efforts;
  - . the stand-up position (apart from some disabled persons) - because this is the basic shooting position which requires a balance control during the effort like while shooting;
  - . control of the effort/motion – because effort control is one key of the success in archery. Control should also be ensured during the eccentric part of the strengthening exercise because this is a very intense muscular contraction;



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- . variation in the choice of exercises, grip, type weight (barbell, dumbbells), tempo and strengthening methods - to get yourself used to provide a control effort whatever the type of task, and for a broad strength development;
- . breathing out during the effort (concentric part) – for physiological reason;
- *To avoid:*
 - . the machines, which guide your motions - in archery we have to control and direct our action;
 - . positions that reduce body's involvement, like seating, lying.. – in archery the entire body participates to the body stability during the effort (draw and full draw);
 - . jerk, bounce and momentum movements – high level archers implement a smooth action. During jerks and bounces there is a low control of the effort, furthermore jerks in strengthening increase the chance of injury;

Nevertheless machines and other working positions can be used once in a while in order to make the muscles working differently (see rational above).

Machines include: pulley systems, hydraulic / pneumatic / elastic resistance...

Be aware that quite often one exercise develops muscles of more than one body part, for example some publications state that the posterior fly is for shoulders, while others state that it is for back.

Session: Relationship with partners (sponsors).

Contact your partners to:

- inform them of your needs for your final preparation to the World Junior/Cadet Outdoor Target Championship (or your competition-goal), and how are you currently shooting;
- know their expectations from you at the World Outdoor Target Championship (archery wise and representation wise);

be proactive, don't hesitate in proposing some services that they do not expect from you, for instance to distribute their catalogue, to handle some samples

...

SATURDAY

Session: Mimics / Visualization.

of sessions: at least 6 reps at each "session". Repeat at least 3 sets per day.

Description: Introduce changes in your sessions: with & without mimics, without & with an elastic band, watching at different things, implemented at different speed, internal / external visualization, Despite the title of this session, feeling your shooting sequence is at least as important as seeing it.

- * *External visualization = see yourself as through a video camera or as someone else observing you – hence you can see your face, back, and so on.*
- * *Internal visualization = you just see what you can see while shooting, i.e. your hands, feet, but not your face, back...*

One Zazen session is recommended.

SUNDAY

Session: Shooting.

of sessions: One (with 3 exercises).



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General warm-up and shooting warm-up including **18 arrows** .

Exercise #1:

**EFFORTLESS**

*Objective:* Implement a fluid sequence with a minimum of tensing of any sort. Balanced efforts will help a lot. Stay in control. You can simulate one round of the World Indoor Championship in order to make you used to the coming tournament.

*Task:* Update your sequences form all the session long.

Exercise #2:

**RELAXATION “IN SITUS”.**

Use the relaxation technique(s) that you have learnt in the following situations:

- waiting in the rest area your turn to shoot – usually sitting on a chair;
- going to grab your bow on its stand;
- waiting the Judge’s call to step the shooting line – bow in hand;
- walking to the shooting line and stepping this line;
- before the first arrow (judge’s signal allowing the shot), and between arrows;
- walking back and forth to the target for scoring purpose.

You can score as many arrows as you want as final test.

*Volume:* 18 arrows of warm-up + 153 arrows over the 2 exercises = about 171 arrows over the session.

