

6.7. PRE-DRAW

6.7.1. Complementary Knowledge:

A large number of novices have a short pause at the end of the bow raising or a visible slowing down; this is known as the "Pre-Draw".

Type:

Preliminary action.

Objective:

This step allows for refinement of the pre-setting of the entire body; mainly the alignment of the upper body and the arrow in the shooting plane. Hence it refines the pre-positioning of the shoulders and scapulae, the head, chest, body verticality and height of the bow.

Form:

There are a few changes to the form described at the end of raising the bow. The string is now pulled back further than the bow elbow (refer to the illustrations further down).

The pre-draw can occur at different heights, depending on the height at which the novice raises the bow. The most popular ones are:

- Higher than the level at which the arrow will be while at full draw, up to eye level.



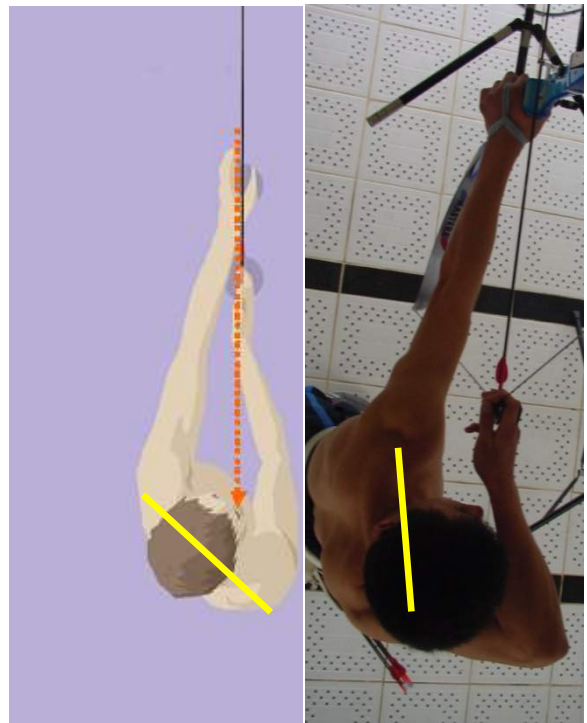
- Up to the level at which the arrow will be while at full draw.



Rationale:

During this step the efforts are transferred to the back of the novice and the pre-setting of the "Draw Force Line" is improved.

Note: The Draw Force Line (DFL) is the line of forces represented below by the archer's forearm and the elastic band.



Without a pre-draw.

With a pre-draw.

The two above illustrations show that the string is brought to the pre-draw position through a body twist made in order to pre-align the two shoulders with the bow arm. Hence it is not only the muscles of the arms that pull the string back, nor is it only the muscles from the back. Many muscles in the upper body are used to draw the string back to the full draw position. An important goal of the pre-draw is to pre-align the entire body as closely as possible to the shooting plane.

Due to better body alignment achieved through a longer pre-draw, it is then easier to draw further back than with a shorter or no pre-draw.

From this position the string (in fact the aiming eye – see the explication under “String alignment”) should already be aligned, i.e. viewed at the same spot on the riser or sight.

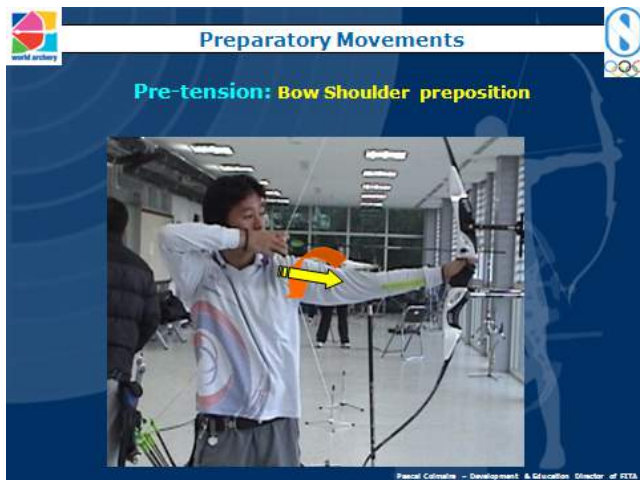


The Pre-draw is a critical step for properly positioning the bow shoulder.

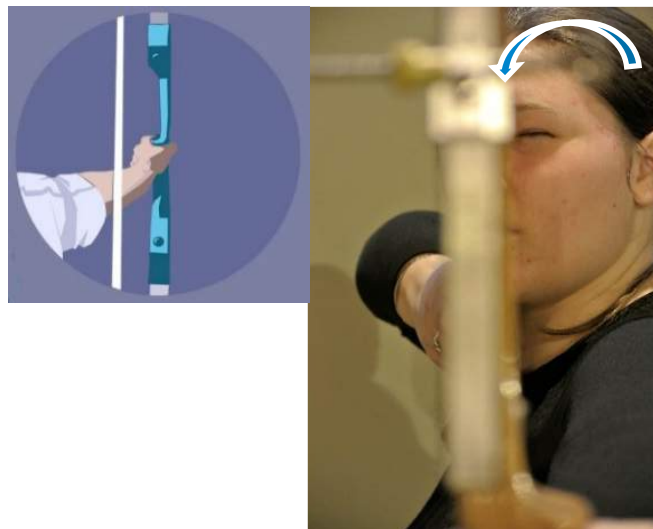


Common string alignment at the edge of the sight window.

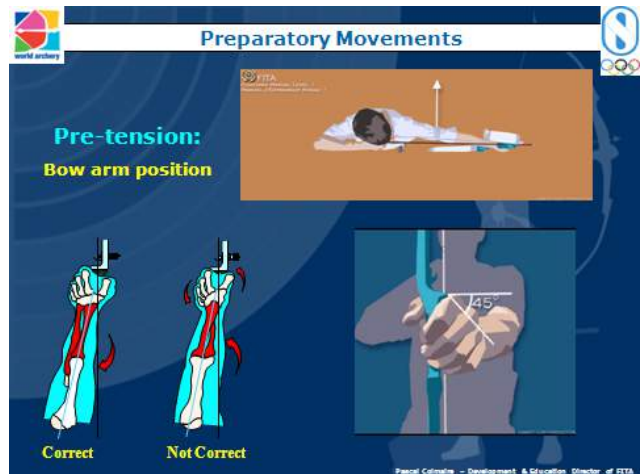
With a different head canting, the location of the aiming eye changes; hence the string is seen at a different place



When the humerus (upper arm) bone is properly rotated, the bow elbow should be also properly set and ensure proper string clearance. Furthermore the bow hand should also be properly set on the bow grip.



Head canting toward the toes to get the string aligned on the left hand side of the bow window.





Head canting toward the heels to get the string aligned on the right hand side of the bow window.



From the pre-draw, the novice's head is above the centreline of the body.

6.7.2. Exercises

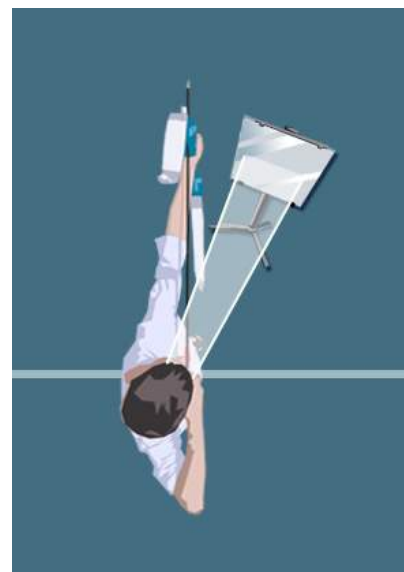
Pre-Draw and Body Pre-Setting – Exercise 1

1. Have the novices watch themselves by using a mirror as illustrated below.



Maintain body monitoring in a mirror.

Note: For all exercises with a mirror, the mirror should be placed in such a way that the novice can see them self without having to move their head.



Therefore, the mirror should be at the level of the archer's face and very close to the aiming plane - about 10" (25 cm) between the arrow shaft and the edge of the mirror. A mirror on a tripod (or any type of stand) is ideal; otherwise an assistant can hold the mirror.

2. Same as above but with eyes closed to focus on the feel of the shot.
3. Same as above but with eyes open, shooting at a blank butt.
4. Same as above, but shooting at a target face.



The head is kept stationary and centred over the body.

Pre-Draw and Body Pre-Setting – Exercise 2

This exercise helps novices who use too much energy in their upper body and has already been suggested in the "Body Pre-setting section.

Use a stick about one metre long, pressing on the belly. The other end of the dowel can be pressed against a wall or a partner – as shown in the "Powerful Belly" image below, or the stick can be placed between the novice's belly and the ground - depicted below in "Centre of gravity pressed down on a stick".



Powerful belly.



Centre of gravity pressed down on a stick.

Another way of achieving this is by putting a small ball (e.g. a squash ball or a golf ball) behind the archer's belt in the area of the navel.

Pre-Draw and Bow Shoulder – Exercise 1

To make the students aware of proper bow shoulder position, ask them to place their bow hand against a solid support (a pillar, door frame, etc.) while in their usual archery stance. The coach gently presses on the string shoulder.



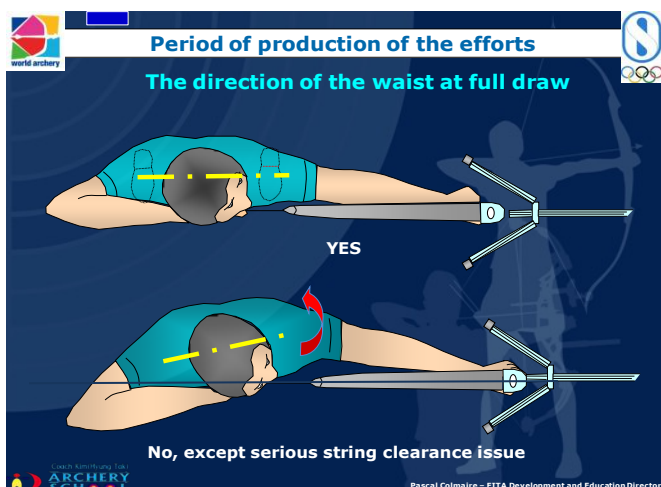
Instead of a solid support, these coach candidates have chosen to make a chain, a funny alternative.



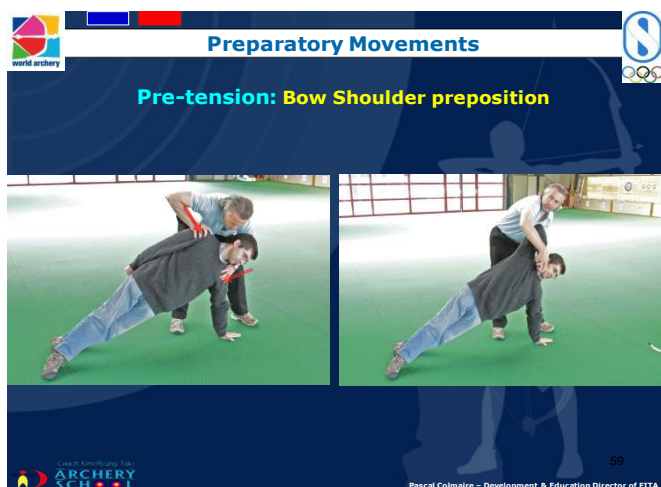
Same exercise with a bow, and the assistance from a coach who applies extra pressure to check if the shoulder has found the strongest position.

Ask the student to adopt two upper body alignments as shown in the next illustration:

- First, with the two shoulders aligned with the bow arm;
- Second, with the two shoulders not aligned with the bow arm.



The novice should be able to feel how strong the first position is when compared to the second one.



A tougher alternative on the floor.

Pre-Draw and Bow Shoulder – Exercise 2

Ask the student to put their bow hand on the assistant’s shoulder and keep their bow arm relaxed.

Have the assistant take the top part of the beginner’s arm as shown below.



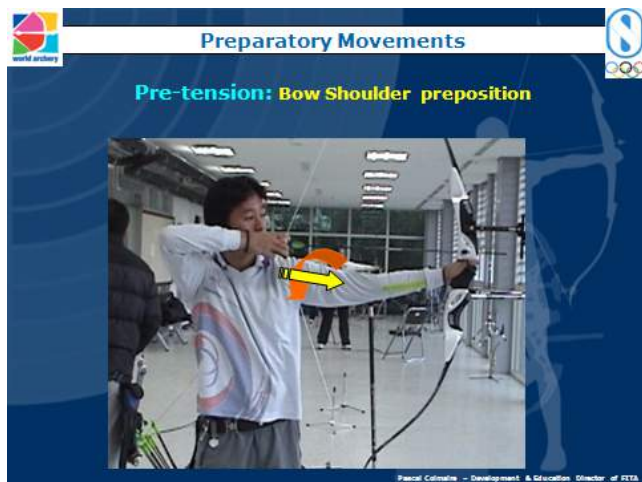
Rotate the upper bow-arm counter-clockwise (for a right-handed archer).



Then help them achieve a slight extension forward and down of the bow shoulder by pulling the arm and pressing the bow shoulder down.



This should help the student feel the bow shoulder positioning illustrated in the next picture.



Pre-Draw and Bow Elbow – Exercise 1

If the previous exercises on the bow hand and arm have been properly done, the elbow is probably well positioned. If so, fine. If not, propose this exercise to the students.

Volleyball player:



Simulate the volley-ball player position as shown above.



Now have the novice rotate their elbows so that the points are directed away from each other. This is the proper position of the archer's bow elbow while shooting. Repeat, with decreasing reliance on the linked hands, until they are able to do it with their hands separated.

Against a support:



For most people, an elbow pointing down generates poor string clearance. Have them rotate their arm, with help if necessary, to bring the bow elbow to the vertical position shown below.



This elbow position provides the optimum string clearance. Have the novice repeat the turning of the bow arm him/herself multiple times, decreasing the amount of assistance given. Let them continue the exercise with their eyes closed to better learn the feeling of the proper bow elbow position.

Next do it using a support and an elastic band. If properly done, the novice should be ready to adopt a correct bow elbow position on their bow.