# The Front Arm

This session will be focusing on what is probably the most critical part of any technique – *the front arm.*

Archery, as we all know, is a game of two halves. The front half and the back half.

The back half pulls throughout the shot (to be dealt with in more detail in another session) enabling the archer to move through the clicker. The front half is raised in line with the target as the back half moves through the shot.

Lets look at what happens in more detail – and then move into how to do it. The arm is held straight (for recurve) with the elbow rotated out slightly. The bow is held in the hand in a relaxed grip (angle and position discussed later) with the wrist relaxed (the wrist being more important than the hand here). As the arm is raised focus should be given to ensuring that nothing other than the shoulder is moved in elevating the arm. As the bow is drawn the arm compresses. I'm going to differ from the usual description here and state that when the string is released the pressure/force on the whole front arm ***increases*** while the arrow is still attached to the string. And finally when the arrow leaves the string the force is removed from the arm and it extends towards the target.

The things to focus on here are the increase in pressure, the wrist and the shoulder. Out of these things my personal belief is that the shoulder is the most important with the wrist being next important because if these are correct then the sudden increase of pressure on the arm is naturally controlled by your skeletal structure.

The shoulder: the front shoulder should be held in a relaxed position, in the socket and not rotated at any odd angles. To get the feel for how to reach this relaxed position (which seems to be only the realm of great archers) stand with your arms at your side, palms flat against your legs. Now raise your bow arm out from your body until your arm is horizontal with your palm facing the ground. Feel the angle of the elbow (you can place a ruler on the 'flat' part of the elbow and it would point straight to the ground), how your shoulder moved, the height and position in the socket, a slight stretch along the underside of your upper arm (feels like your triceps, but is actually the ligaments in the arm). Now rotate your hand (nothing else) round about 45 degrees (anti-clockwise for a right handed archer and clockwise for a left handed archer). Feel how the stretch under the arm increases slightly as you do this – but nothing else changes – no undue stress, no body contortions, no pain. This is the ultimate front arm position, it is relaxed, dynamic, and easily repeatable which means that with a little practice you can have a great left arm. I'll call this the horizontal point – for no other reason that lack of imagination and time since my lunch break is about to run out.

As you begin to draw the bow the shoulder will have forces that are slightly out of line from this ultimate position so it is at this point that the archer must be wary and 'work' for their good arrows. You must ensure that the shoulder remains at the position it was at in the 'horizontal point'. Tips to ensure this happens are;

- Raise the bow arm up slightly above the target when drawing and then as you draw gently let the arm drop into line. This ensures that the shoulder ball and socket joint are actually compressed into each other allowing for a more accurate and repeatable (less muscle intervention) alignment.
- Have a large pre-draw. By this I mean when you raise the arm up to the target, the back end moves so that there is little movement required for the actual draw. This means that when you do start to draw, you are automatically more in line and therefor there is less force pulling the shoulder out of line.

From the shoulder you should try and keep the elbow straight (at least for recurve, compound archers normally have a slight bend) (remember the direction the elbow flat faced when you had your arm out in the 'horizontal position'). The whole arm should be relaxed as much as possible but focus should be given especially to the wrist. Normally the advice is given that the hand should be as relaxed as possible, but again I will differ from common wisdom and state that the wrist is more important than the hand.

The reasons for this are many but essentially the hand is what has contact with the bow and so if inconsistencies occur here then it will have a direct relationship as to how the bow reacts as the arrow is shot. However, the hand is connected to the arm through the wrist, and as has been previously mentioned there is a point in the shot where the force through the arm suddenly increases as the arrow is shot. Now having a relaxed hand at this point is great because the hand always reacts the same. If you look at the wrist though, many people have tension here whilst maintaining a relaxed hand. Why is this important????

When you look at the construction of the forearm there are two bones that connect the elbow to the wrist and hence the hand. Now these two bones allow for lots of torque over the hand (and hence the bow), especially if one end of the two bones is under tension. So small variations in wrist tension create huge variations on the forces over the hand. A small change in the wrist may mean that huge changes are occurring in the hand to compensate. Where as small changes in the hand normally don't make much difference in the wrist. And it is the wrist which affects high and low shots more than any other part of your technique.

My advice is to focus on holding the bow rather than aiming for a completely relaxed hand in which the bow merely sits, gently grip the bow and then concentrate on the wrist being relaxed. This will mean that what ever pressure on your hand should remain constant through out the shot because there is no outside influence (e.g. the wrist) to add pressure to the hand.

The bow should be held in the hand at a slight angle (normally recommended to be 45 degrees). This is because the hand naturally wants to face the ground (remember the 'horizontal position'), but the bow grip is vertically orientated. So to have a middle ground which is acceptable 45 degrees is always stated. I think that the exact angle your hand sits at will depend on your bone structure in the wrist and hand. The best way of finding the angle is trial and error (annoying I know). However, things to be aware of are that the hand is to be rotated along the axis of the forearm and not the bow (along a horizontal axis not vertical). Wherever you place your grip, the wrist should be in as relaxed position as possible, whilst maintaining relaxation along the rest of your arm.

After the shot try and keep the arm reaching towards the target for as long as possible as this helps create a good follow though and hence a good shot. The best way of doing this is by feeling that stretch under your upper arm (from the horizontal position) and then during the shot try and feel that stretch reaching out towards the target. This will encourage a powerful shot which doesn't drop away sharply. After the arrow has left the string the arm will extend out until muscles and ligaments reach the end of their travel, at which point the arm tends to drag left (for right hand archers). It is generally recommended to limit this leftward drift, because when it is repeated over a period of time then the subconscious will associate the movement with the shot and start trying to force this movement *before* the arrow has left the bow.

That about covers it for this section. Remember and have fun shooting. Good luck