

Natural Point of Aim

You must promise to keep this a secret since some shooters may think I am teaching you how to cheat your way to shooting success! This is how to score maximum points every time you shoot – it's not complicated.

Assuming that your sights are set correctly and you are shooting indoors (no wind), put the sights on the centre of the target and squeeze the trigger without moving the sights. If you can do both of these things at the same time, you will always hit the middle!

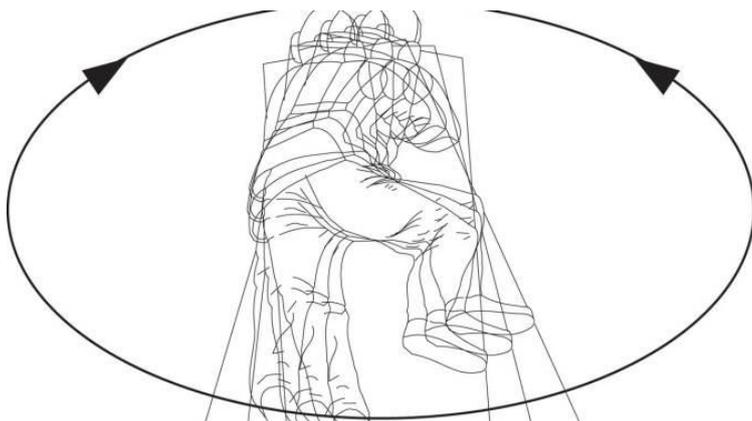
So why don't we do this all the time? Well, it's easy to say but difficult to do. It is this that challenges all target shooters from beginners to Olympians. So how do we get there?

To answer that question we need to understand the term 'natural point of aim' or 'natural alignment'.

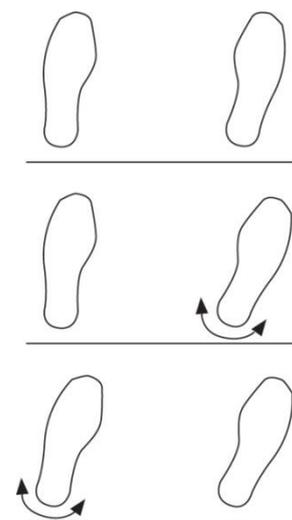
The natural point of aim is the direction in which a rifle or pistol is aiming when the shooter is as relaxed as possible.

In this instance, being relaxed is a function of our muscles. If muscles are doing work, they are not relaxed. To achieve a natural point of aim, we must use the smallest amount of muscle power as possible. Pistol shooters must use some muscles to raise the pistol. Prone shooters must use some muscles even if lying down. LSR shooters have to use muscles to maintain a steady position. The key here is to use the **minimum muscle power possible**.

When looking through sights our instinct is to see where the pistol / rifle is pointing and use our muscles so that the sights align with the centre of the target. WRONG!! The over-use of muscles is a main reason why group sizes are too big. It is the whole body that needs to move to achieve a natural point of aim, not individual muscle blocks which quickly get tired.



In prone shooting (rifle), the whole body can move to achieve your natural point of aim



For standing up shooting (pistol, LSR or air rifle), one or both feet can be moved to achieve your natural point of aim.

Try this:

Pretend you have a bow like the one the lady has in the picture.

- Locate an object slightly to your left to act as your target
- Close your eyes
- Raise the bow and pull back the imaginary bow string until it reaches your ear
- Open your eyes
- Now move **only** your feet until your bow hand points at the target
- You have now reached your natural point of aim



Now repeat the same sequence but this time, keep your feet in the same place and move the rest of your body for the fifth bullet point. Notice how your muscles are straining to return to the natural point of aim. This is not what you want to happen when you are shooting. Of course, things are a bit different if you are prone shooting, but this example serves to demonstrate a natural point of aim.

Achieving a natural point of aim

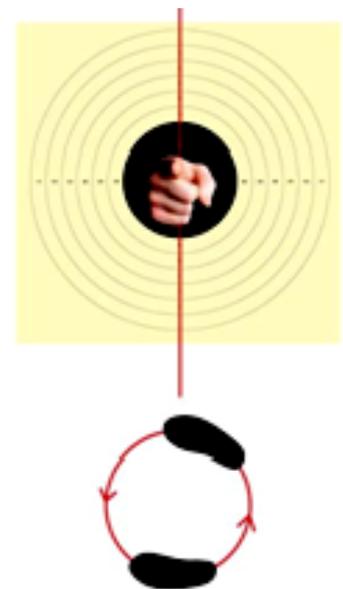
Pistol:



To achieve consistent results takes practice so for a while it may help you to try this routine a few times without a pistol, and then *every time* you set yourself up to shoot. After a few weeks you should be able to adopt your natural point of aim without thinking about it because of muscle memory. Here is the routine:

Get a buddy to read the instructions below for you while you carry them out

1. Make sure your pistol is not loaded.
2. Stand comfortably in front of your target. You could be sideways to your target or square on. Usually your position will be somewhere between the two.
3. Close your eyes and raise your shooting hand to point with your index finger. Don't try to point at the target. Just find the position that is most comfortable for you. This will be your natural point of aim. Keep your eyes closed. Comfortably turn your head towards your shooting hand and open your eyes.
4. If you are not pointing at the centre of the target, move your rear foot in the direction of the error. *e.g.* If you are pointing to the left of the target, move your rear foot to the left and *visa versa*.



5. Ask your buddy to place a pistol in your hand and test that after the raise your sights are on target. Adjust your feet as necessary. Try not to lower your head during the raise: find your sights by lowering your eyes. Dry fire.
6. Repeat the process as many times as you like and eventually take control of the pistol from the start.

This will soon become routine for you every time you prepare to shoot your pistol.

Prone rifle:



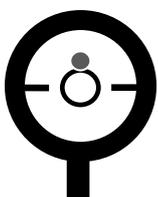
If you are reading this, it is likely that you will have progressed from using a shooting rest to wearing a jacket and sling. Your jacket and sling considerably reduce the need to use your muscles to hold the heavy rifle. To achieve your natural point of aim your jacket and sling need to be fitted correctly. Spend some time with one of our instructors or an experienced prone shooter to make sure this is the case. **This can take some time so be patient with yourself.** When looking through your sights your natural instinct will be to use your arm and shoulder muscles to adjust your aim so that it points at the centre of the target. **WRONG!!** This is one of the main reasons for group sizes being too wide. If you use muscles to hold the rifle on target, they will get tired and give up doing what you are asking them to do. If your first shots are good, but then wander away from the centre, it is likely that you are 'pulling' your rifle into position using tired muscles. You have not achieved your natural point of aim.



Get a buddy to read the instructions below while you carry them out.

A shot pattern like this is could be caused by tired muscles pulling your rifle from your natural point of aim.

- Put a target in place and set up your firing point
- Do not load your rifle. Keep the flag in place
- Get into a comfortable firing position
- Aim at a target
- Close your eyes and take a couple of breaths
- Open your eyes but do not move your rifle. **This is your natural point of aim.**
- If your rifle is not aiming at the centre of your target you will need to adjust your position.



Position adjustment needed



Position adjustment needed



Position adjustment needed



Position adjustment needed



Position perfect

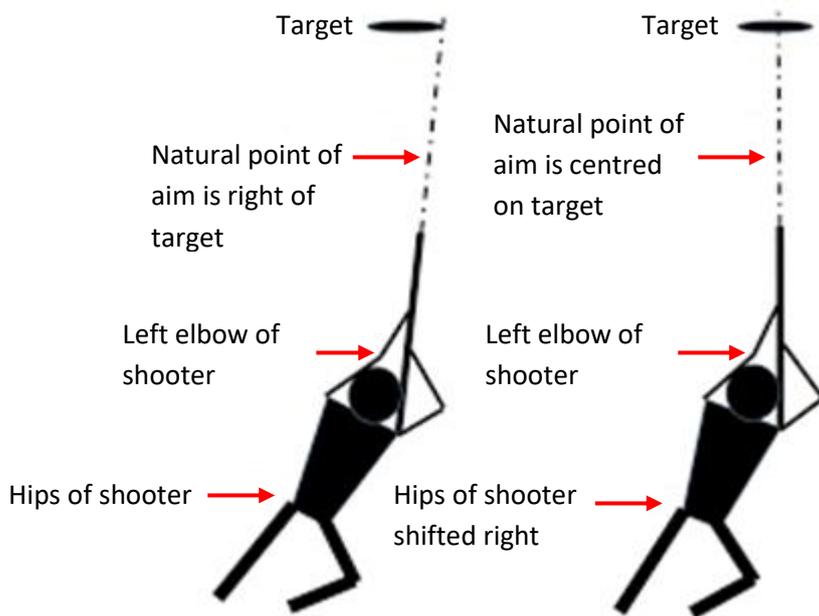
To ensure your natural point of aim is in line with the target, you need to alter your body position. You should be aware that a tiny movement of your rifle at the firing point makes a massive difference at the target end, 25yards away; so any body movements you make should be small. There are a variety of ways to adjust your body position. To keep things simple, I will only describe one way of adjusting your body position here. If you are left-handed, reverse any movements described in the diagrams.

Imagine that your sight picture looks like this. your **left** to centre on the target. In order to your **right**, whilst pivoting on your left elbow. you do this.



Centre of target

Clearly you need to move the rifle to do this you should move your hips to Do not move your left elbow while

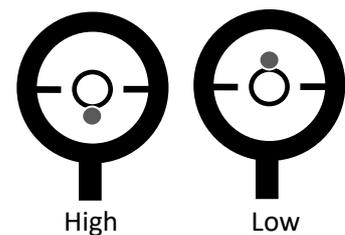


The key point here is to pivot on your left elbow, NOT move it left of right.

The diagram is for a right-handed shooter

You may need to repeat the process until your natural point of aim aligns your sights with the centre of the target.

But what should you do if your natural point of aim is high or low?



If your natural point of aim is too high, rock back slightly on your left elbow. This will raise the barrel of your rifle. Again, use your left elbow as a pivot – don't move it from its position.

If your natural point of aim is low, rock forward slightly on your elbow. This will lower your barrel.

You will need to practice this routine little and often without ammunition, until your muscle memory returns you to your natural point of aim each time you lay down to shoot.

Light sport rifle / air rifle:



Shooting over 20 yards can be achieved using an air rifle or a light sport rifle. Both disciplines require similar techniques, including finding your natural point of aim. Both require holding a rifle into your shoulder in a standing position without any support apart from your own body. The standing position is the most demanding of the shooting positions. It places far greater pressure on the shooter's ability to remain still in order to release the shot. The main reason for this challenge is that the position uses more muscles to keep the body in its natural point of aim. The key to success is **getting your position stabilised** as you attempt to find your natural point of aim. Achieving a stable position for light sport and standing air rifle is a subject outside the scope of this introduction to the natural point of aim. However, a brief outline may help you at this stage. The picture below says it all in a nutshell. You don't have to dress like the lady in the picture!

Head held upright and slightly tilted forward



Left arm and shoulder relaxed

Pelvis tilted upwards to provide elbow support

Leg angle vertical or greater

60 -80% of weight on front foot

Both legs straight but relaxed

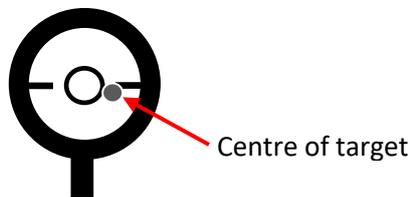
Feet turned square (left foot may be turned outwards)

Feet greater than shoulder width apart

Get a buddy to read the instructions below for you while you carry them out

1. Make sure your rifle is not loaded and with a flag in place. Get yourself into a comfortable position as if you were about to shoot at a target. Try to make your position close to that shown in the picture on the last page. Take your time with this as some of it may be new for you.
2. Align your sights with the centre of your target.
3. Relax your body, close your eyes and take two slow breaths.
4. Open your eyes and look through your sights.
5. If you are still pointing at the centre of the target you have achieved your natural point of aim.
6. If you are not pointing at the centre of the target adjust your position as follows:

Aiming LEFT



Move your back foot slightly backwards

Aiming RIGHT



Move your back foot slightly forwards

Aiming HIGH



Slightly move your non-shooting hand backwards or forwards.
Move your feet slightly closer or further apart.

Aiming LOW



Slightly move your non-shooting hand backwards or forwards.
Move your feet slightly closer or further apart.

You will need to practice this routine little and often without ammunition, until your muscle memory returns you to your natural point of aim each time you prepare to shoot.

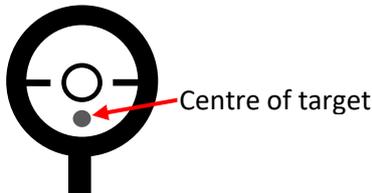
Benchrest:



Awareness of your natural point of aim when shooting mostly matters to “position” shooting. Position shooting is any means where the rifle is not in a rested position *e.g.* prone, LSR and pistol. Benchrest shooting involves resting your rifle on some sort of adjustable support. There are various ways of doing this, but in our club and for competition shooting, the rifle can only be **supported by a rest and your shoulder**. There is one exception to this which allows you to use a jacket and sling as in prone shooting, except that you shoot from a bench. So the benchrest shooting we do at our club is semi-position shooting. Benchrest shooting will involve you in taking time to get the rifle centred on your target, and the front sight or optic crosshair sitting dead centre. You will achieve this by adjusting height and horizontal aiming by moving the rifle and its rest. The idea is to sight the rifle with **no muscular input** to stabilise the shot. Ask a buddy or an instructor to help you set up your rifle so that it is in a position for you to shoot comfortably. Here is what Ian, our Head of Section advises on your position:

“I would say much the same applies with BR as applies to the other disciplines, except you are moving your upper body from side to side.

Vertical alignment is achieved by your gloved non trigger hand under the stock, by twisting the hand and or clenching your fist to raise or lower the rear of the rifle. The front rest height is set so that you can aim from the top rings to the bottom target rings by this movement of your fist. With the stock positioned in your shoulder you can move your upper body which is leaning on your elbow so that when relaxed the sights are aimed at the bull.”



Aiming **HIGH**: either twist your supporting hand or clench your fist to raise your point of aim.



Aiming **LOW**: either twist your supporting hand or relax your fist to raise your point of aim.



Aiming **RIGHT or LEFT**: move your body and your supporting fist to move your aim horizontally.



So having got your position sorted, back to your natural point of aim.....

Get a buddy to read the following instructions to you a couple of times before you shoot so that you get familiar with the process.

1. When you have sighted your rifle on the centre of your target, close your eyes
2. Take two slow breaths
3. Open your eyes
4. If your rifle is still centred, you are ready to shoot

5. If your rifle is not centred, follow the advice above to reposition yourself. Do not just 'muscle' your rifle into position. This will not work. Muscle tension will move the rifle away from the centre of the target.

You will need to rehearse this process each time you prepare to shoot. Eventually your muscle memory will do most of the thinking for you and it will become less of an effort.