

MORE SHOOTING FUNDAMENTALS

By

Dick Domey

Former Olympic Biathlon Coach

Last issue we talked about the mechanics of the front and rear sight. This time let's look at the complete act of sighting.

Aiming-Sight Alignment: The most critical element of sighting is sight alignment. This principle has several elements. It includes the relationship of the eye to the rear sight, the rear sight to the front sight and the front sight to the target. Proper alignment is when the circle of the bulls eye is centered in the circle of the front sight, which in turn is centered in the center of the rear sight, all of which is seen through the center of the eye. A very small error in sight alignment will cause a dramatic change in the placement of a shot on the target.

Aiming-Sight Picture: With the aperture (circle) front sight, sight picture is simply centering of the bulls eye in the middle of the front aperture. A line of white should be easily seen all around the bullseye while it is centered in the front sight. If the line of white is not easily seen, the front aperture is not large enough. Most biathlete's will use the 3.4 mm to 4.0 mm aperture.

Fixed Vision: Do not stare at the sight picture for more than 4-5 seconds. When the eyes are focused on a single image for a longer period, the target image can be temporarily burned into the retina. This is especially critical under the harsh lighting conditions of the winter biathlon. This image may be mistaken for the true sight picture and will impair the shooting performance. To avoid fixed vision, blink or slightly shift the vision every four or five seconds. And, of course, do not hold your breath longer than 5-6 seconds. Holding your breath longer causes the vision and your hold of the rifle to deteriorate.

Shoot with both eyes open: The best vision will be when both eyes are open while firing. The eyes work as a team and when one eye is squinted or closed, the other eye will have a tendency to do the same. When they cannot work as a team vision suffers due to fatigue of the eye muscles. A patch should not be placed over the eye as this will place the non-shooting eye in total darkness causing that pupil to enlarge. Since the eyes work as a team, the pupil of the shooting eye will also enlarge causing the acuity of the shooting eye to be decreased. A buff colored blinder fastened to the rear sight can block out the image in the non-sighting eye yet still allow both eyes to naturally respond to light.

Head position: The head should be placed in a natural position to see through the sights without causing muscle strain in the neck, the shoulder or especially in the eye itself. If the vision is out of the top or the side of the eye, the eye muscles will be strained and the sight picture will not be consistent. Eyes function best in their natural, forward-looking position. In the standing position, be sure not to raise the shoulder in order to get the stock up to the cheek. This will induce muscle strain into the position and cause movement. If the stock does not reach the cheek when held to the shoulder you can adjust the butt plate or you can move the butt of the rifle higher on the shoulder.

A good head position is also necessary to provide for a balanced shooting position. The best position will be when the head is relaxed down and slightly forward resting on the stock. Do not tilt the head sideways to get the eye behind the sight. If tilted the body's natural equilibrium system will cause the body to sway.

Most good shooters will tilt the rifle into position to allow the head to relax naturally and to bring the sight to the eye. Canting the rifle is entirely acceptable. The shooter must simply insure the cant is consistent from shot to shot. The distance from the eye to the sight will normally be at least one inch and also must be consistent.

Richard Domey, Ph.D. is a former National Guard biathlete and 16 year member of the U.S. All Guard International Shooting Team. He was a member of seven U.S. National Championship winning rifle teams and five national record setting teams. He coached biathlon at the XV Winter Olympics and was an active shooting coach at the U.S. Olympic Training Center, Colorado Springs. His book, "Mental Training for Shooting Success" is sold worldwide.