

Posture and Position

During the training camp before the World Shooting Championship in Munich in August, National Pistol Coach Sergey Luzov and I spent a lot of time talking about the training process, the specifics of the 25m pistol disciplines and

the benefits of sharing knowledge and opinions of coaches, psychologists, physiotherapists and athletes. So, where to start? Perhaps we should begin with the discovery of powder. So, powder was discovered in ... just joking. Those interested may enjoy reading Wikipedia.

Shooting is a complicated process with many elements and connections. In my practice, I have always tried to follow the principle: Simplify - Rationalize - Improve. As an individual sport, shooting lacks a unified “gold” recipe for success. In this article, I will offer my personal opinion on aspects of Rapid Fire, Sport, Center Fire and Standard Pistol disciplines. There are three major aspects of the shooting preparation: technical, physical and mental readiness. All are equally important and should not be ignored or underestimated. In a series of short articles, I would like to entertain the essential elements of technical preparation: position, posture, grip, gripping, gun lift, aiming and trigger work.

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Shooting is a stationary sport but one should not negate the importance of the physical elements in the sport. Many simplify the role of the shooter to grasping the gun, aligning the natural point of aim with the target and firing. The perceived road to success is to shoot as much as possible and wait for improvement. This is only true if one shoots either for pleasure or to be no more than “good.” An athlete who strives to compete at a top level and reach for the stars needs to take advantage of all opportunities to get closer to perfection. “Good enough” is not good enough for elite shooters. That is why we need to analyze and optimize every element of the shooting process. For pistol events, athletes are not allowed to wear any special attire or accessories (with the exception of low-profile shootings shoes) that could improve the shooter’s body/pistol connection and stability. Therefore, it becomes even more important to utilize all possible recourses to train our bodies to serve us best when shooting.

All athletes work hard to perfect their position and movements, and shooters are no exception. Shooters cannot accept whatever is convenient or “natural.” When observing athletes on the firing line, there are many varieties in posture and position. So, which position is right and which is wrong? How

to choose what is best for us? I believe that based on our individual anatomical characteristics, we need to modify the posture that best suits our goals, then train repetitively to create muscle memory, so that it becomes natural. The purpose is to ensure continuous stability and control in order to achieve precision.

In order to achieve the best posture and position, let’s begin with the foundation. The feet should be shoulder-width apart. While holding the pistol, the dominant arm rises comfortably. The upper body should be tilted in the opposite direction of the hand in order to secure balance. The non-dominant hand must stay relaxed in the pocket or rest on the belt. The dominant eye should align with the sights and the target. And this is only the beginning ... the rationale for improvement is based on the rules of physics and biomechanics. The closer the center of gravity is to the geometrical center of the supporting area, the more stable the posture. For example, the supporting area is ABCD with a geometrical center M (Figure 1). The main point is to keep the Projection of our Center of Gravity (PCG) and the Center of Gravity (CG) itself, as close as possible to the geometrical center (M). For the purpose of further explanation, we will use

the geographical orientation North to South for the supporting area. We need to maintain a delicate balance between muscle work and stability. However, the harder the muscles work, the more the body tremors, which translates into less stability.

All 25m disciplines, in contrast to the Free and Air Pistol, have one thing in common. In each 25m discipline, at least half of the shooting is dynamic, requiring movement and active compensation of the recoil.

Rapid Fire Pistol also includes aiming at different targets in a short period of time. Therefore, the attention to posture and position is of paramount importance. How can we meet this demand? The most critical step to achieve this is consistency. We have to become meticulous and be able to replicate our ideal posture until it becomes natural. Once consistent, the posture will be easier to control. This will result in improved



Figure 1



Figure 2

precision, consistent aiming and a controlled and quick arm lift.

One way to optimize the position is by keeping the feet almost parallel or at a small angle (Figure 2). This slight inward twist, compared to the natural positioning of the feet, will increase the stability of the ankles, knees and pelvis. The exact degree of the angle should be determined on an individual basis in collaboration with the coach.

Even though neutral balance is necessary for precision shooting, 25m disciplines will find more success by bringing the weight a little in the direction to the toes (Figure 3). This will create a very slight imbalance that can be leveraged by both feet in the direction of north to south. This will move the Center of Gravity (CG1) and the Projected Center of Gravity (PCG1) to new positions (CG2 and PCG2.) Consequently, the tension in the lower extremity (abdominal and back muscles) will increase and augment the support of the arm and contribute to improved balance control. Forward bearing weight will also help the body accommodate changes in position caused by lift and recoil. Too much imbalance is undesirable, since it will activate more muscles and increase body tremor and fatigue.

Many argue about the best orientation of the body in relation to the target. In my opinion, when shooting 25m disciplines, it is best to have the feet, the hand holding the gun and the target in a straight line. It will be easier to compensate the



Figure 3

movement of the Center of Gravity which will stay on the same line while executing the hand lift for the rapid-fire stages. Another benefit of this orientation is that the main direction of recoil will align with the position, which will allow maximum leverage of the (north to south) supporting area and ensure better ability to keep the balance and recover from the recoil. Better control of the aiming position can be achieved by raising the shoulder to touch the cheek (Figure 4). If doable, the whole extremity can serve as a rifle stock and add stability while providing an additional reference point for replication of posture and aiming. In a "ready" position, when the arm is lowered at 45 degrees, the shoulder does not necessarily touch the cheek. Once the arm is raised to aim, everything comes back in place. Athletes who cannot bring the shoulder and cheek together should continue replicating their best position until it becomes natural.

We shoot at different ranges, levels of physical readiness and endurance during competitions. Therefore, we must fine tune our posture and position. The goal is to keep the aligned sights in the aiming area with minimum effort. It is important not to change posture or adjust the aiming point by moving the hand. Correction and verification of position will suffice.

For any rapid fire series, it is important to check and adjust one's position prior to each string. More details will come in our discussion regarding the hand lift. Left and right adjustments can be achieved by moving of the leg in second position slightly to right or to the left for right-handed individuals, and vice versa for left-handed. Increasing the span between the feet will raise the arm, while decreasing it will lower their position. For right-handed shooters, left and right adjustments of the aiming point can be achieved by moving of the left foot. Whereas moving it forward, the aiming point moves to the right; with moving backward, it goes to the left. Left-handed individuals have to use the same principle by using the right foot. Increasing the span between the feet will raise the arm, while decreasing it will lower its position.

I wish everyone straight shooting and good luck!

▪ Vladimir Chichkov



Figure 4