

The Mental Side of Shooting - Relaxation

Guest Tip #2 by Dr. Mike Keyes, MD: Relaxation

Last time we pointed out how the problems of Match Stress, Cognitive Dissonance and Negative Feedback Loops could keep you from achieving your shooting goals. This article will give you a major tool to combat these effects.

This basic tool is *relaxation*. Without the ability to relax your body and mind, good scores will never be achieved no matter how much you practice the other aspects of shooting. Relaxation is an essential ingredient for good shooting performance.

Lets start by defining "relaxation". In the simplest sense it refers to achieving a state of decreased tension in your muscles. The "normal" state of our body is to have equal tension in opposing muscles (flexors and extensors.) The problem we have comes from the fact that target shooting isn't a "normal" activity. Pistol shooting in particular is an "extension" sport - which means that the flexor muscles must be quiet (with the exception of the gripping and trigger fingers) during shot execution. So, just decreasing tension in *all* our muscles isn't quite what we need.

Ideally, the only muscles that would be working are those needed to hold our position for a brief time and those needed to release the shot. The fewer muscles in use, the steadier our position will be. In real life, however, most shooters are unable to control the flexor-extensor conflict in the muscles used for these acts. Extensor/flexor conflict results in less strength for the extensor and thus more effort is needed to hold our position. With this excessive effort, the position becomes less stable due to early fatigue. To increase stability then, instead of "trying harder", we should actually "try less" and learn to relax! With training, we can determine which muscles must be involved in executing a shot and which have to be "uninvolved" in order to deliver the shot correctly. By learning selective relaxation, we can monitor the shooting effort and relax at will those muscles that should be "quiet".

There is an additional physical benefit to relaxing our body: lowering the center of gravity and decreasing the "lever" effect of a stiff body. To illustrate this effect, try a simple experiment: Stand as stiff as possible and extend your arm. Have someone try to rock you back by pushing on your outstretched arm. It is very easy to rock you because you have provided the "pusher" a rigid lever and you have raised your center of gravity. Now try the same thing after relaxing as much as possible - letting yourself sag into your shoes and having your arm extended but not rigid. Obviously, a relaxed body is much more stable! Staying loose - relaxing as needed - is good strategy.

This type of "stiffness" is also the main cause of "chicken finger" or the inability to press the trigger smoothly when you are delivering the shot. By relaxing, you will allow the small muscles that flex the finger to pull the trigger without interference from the larger muscles doing the gripping of the gun. Relaxing the body will also let your mental program to do its' job. You can't have a tense mind in a relaxed body!

So, the third benefit of relaxing is that it will help you deal with match pressure. One of the first effects of mental stress is muscle tension - especially with the flexors which are the "fight or flight" motors. Even subtle tensing changes the way you shoot, usually for the worse. Stress releases hormones, glucose is sent out, heart and respiration rates change, and all these cause you to become even more tense due to the increased "fight or flight" messages to your body. Once these chain reactions are started, it is often very difficult to reverse the course of their

effects, so if we learn to relax BEFORE this occurs, (maybe starting even the NIGHT before!) we will be much better off. (Actually, we can get TOO relaxed – if you are essentially asleep, you won't perform well either, but that is maybe another article.)

The fourth major effect of relaxation is that it allows you to enter what is called the "alpha state". When you relax, you change the way the brain works. In deep relaxation your brain gives off alpha waves that indicate that you are in an altered state of consciousness. Some of the benefits of such a totally relaxed brain are a sense of total control of the situation, automatic actions that are precise and accurate, and a perception that very little energy is being used. (Many record setting performances have been described by the shooter later as having been "effortless"!) This is sometimes called "being in the Zone" and is well known in many sports. Relaxation allows you to better concentrate on the sights, for example, and they often appear larger and clearer than normal. A relaxed shooter often has an expanded sense of time: a 4 second rapid fire string might seem much longer. Studies have shown that elite shooters are able to achieve the alpha state in their "right brain" while the "left brain" (critical and thinking "side") is suppressed. This leads to the "automatic" shot (really a controlled, rehearsed action performed by the subconscious.)

With all these benefits, one would think that relaxation would be a major goal of all shooting programs. Some shooters don't work at relaxing because they think they are pretty good relaxers naturally so they never learn to develop the technique to full potential. However, if you don't practice this skill like any other, when it is needed the most, the ability to relax just won't be there! So, let's learn the mechanics of relaxing that we might practice them just as we do holding, sighting and trigger release:

I teach a technique used in Europe in which you progressively tense and relax muscle groups. You begin by holding the tension – as hard as you can - for about 10 seconds and then *suddenly* releasing the tension and letting the muscles relax to whatever point they will. It is important to release suddenly as the muscle group will relax past your present state of tension only if a sudden release occurs. This will not happen with a slow, gradual release. This exercise can be learned by having the shooter get in a comfortable, well-supported position (lying down or in a chair.) Start with the head/neck group and then with groups (shoulders, hands/arms, stomach, buttocks, etc.) progressively on down to the lower legs and feet. After each muscle group has been tensed and suddenly released, let it rest for at least 20 seconds before starting the next group. Once each group has been relaxed, I usually have the shooter tense the WHOLE body and then relax it suddenly with the image of sinking into the bed (or floor or chair) and further induce relaxation by saying, "relax", each time they breathe out. Even the tensest person will relax some by doing this (some shooters even fall asleep!) Once learned, this can be used even when on the firing line.

By practicing this regularly, you will learn to relax on each expired breath and eventually will be able to relax with just the breathing *cue*. Thus, as you shoot, you will find you *automatically* relax on the half breath out while you are lining up your shot. By combining these elements into your shot program and practicing them during your regular training, you will become more aware of your body, control its' reaction to stress and thus become more consistent in your shot delivery. And consistent, relaxed shooting will lead to much improved performance.

Next: Visualization.

Don

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