

On the Firing Line (Fifty-fifth in a series)

Physical – Technical – Mental – Emotional – Part 1

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**“I thought it was an engineering problem:
Equipment, ammunition, positions, training, and done.
That was only the beginning!”**

Many athletes, coaches, and parents believe that purchase of good equipment and ammunition, range time, and some hard work on the part of the athlete and coach will lead to great results. This is certainly a good start, though not enough. Eventually, the athlete experiences “match nerves” in various forms and the game changes. Athlete and coach struggle to find the “secret” to success. The quote above is from a parent (an engineer) who had finally discovered this dynamic.

This problem is much more common in our sport since we have fewer participants who understand the principles of training and competing that are more broadly known in a number of other sports. We are improving; though have further yet to go. Even in those other sports, only small percentages reach the highest levels of performance and score. Why is this?

Our culture is all about taking control, making things happen, strength, speed, being the best, and winning. We emphasize science, technology, engineering, and math (STEM) in our education system. We talk about teaching students to think critically, yet make them memorize static facts and then test their memory. We follow celebrities and the media castigates the slightest mistake without benefit of fairness or critical thought. We train the active thought part of the mind and we feed our ego.

Lost in all that noise are the techniques and methods of utilizing the majority of our inner power, hidden and untapped in the deeper part of our mind. Lost in all that noise are the keys to thriving under pressure, achieving exceedingly high levels of performance, enjoying the moment, and receiving top scores as a result.

Even in the areas where we place great emphasis and have great knowledge, we often thrash around with constant change. The positions need tweaking, the equipment needs perpetual adjustment, the ammunition isn't good enough, new accessories need to be added, and so on. This constant change destroys the “program” deep within us that allows ultimate performance.

A comprehensive program that covers all the important factors is needed to provide athletes and coaches with a broad view of all the important factors along with depth of content that provide both what is important and how to teach or implement the factors.

While studying this sport as practiced outside this country, and while studying applied sport psychology as it is practiced outside this sport, a number of factors emerged, which fall roughly into four major areas: Physical, Technical, Mental, and Emotional. This article provides the very briefest of introductions to the physical areas as they apply to our sport. The next three articles will explore the technical, mental, and emotional aspects.

Physical

The physical parts of this game encompass a number of areas, some obvious and others less so. Certainly physical training is important, as are sound positions.

The lowest level of the physical foundation includes breathing, sleep, hydration, and nutrition. All four of these areas generally have plenty of room for improvement, and they do have a profound impact on a shooting athlete's performance.

Next is general fitness. Can you run a mile without gasping for air? Can you stand on your firing point or stations for a couple of hours without any pain and with minimal fatigue? Can you hold the firearm up with no shakiness or strain at all? Are you flexible or stiff in your movements and/or when in position as appropriate?

Physical training must be appropriately designed for the sport and for the specific athlete's situation. Rather than building bulky, fast, coarse, anaerobic muscle, one must build toned, slow, smooth, aerobic muscle. This is done with lighter resistance or weight and many more sets and reps. Instead of the vein-popping bodybuilder look, one ends up with natural musculature that is easy to maintain, is conducive to high performance in this sport, and has a side benefit of helping prepare for swim suit season (for those who care).

Work with coaches and physical trainers if you have access to them, and refer to reliable sources of information. If starting a physical training routine, make sure your doctor gives you the OK. Start slowly and simply.

Body core strength is important for all athletes and is frequently overlooked. One set of exercises designed specifically for this sport is known as "Ambercise" because it was developed for and by Amber Darland (one of the best rifle athletes in the nation when she was active), along with a member of the USOC training staff several years ago. Copies of one version of the program are available on my Pilkington's web page and via my blog (URLs below). Some of the routines seem a bit "odd" to some folks and they won't do them. "How good do you want to be?"

Additionally, most female athletes need to pay special attention to enhancing upper body strength and endurance while most male athletes need to pay special attention to enhancing lower body strength and endurance.

Overall fitness has a huge effect on an athlete's performance (including basics such as balance), and possibly most importantly, physical fitness is the foundation of mental toughness. If for no other reason than this, physical training is critically important.

Another important aspect of the physical part of this sport is the topic of positions, which encompass the concepts of outer position and inner position.

Outer position is that which the coach or spectator can see from their point of view. Where are the feet placed? Why? How are the hips positioned? Why? And on and on and on ad nauseum. The details are limitless. Fundamentally, the positions must depend upon the bones, ligaments, and where appropriate, the sling. Muscles and tendons should be removed from the equation as much as is possible. (Well trained rifle athletes often discover that they need almost no muscle to stand still.)

Often, athletes will have positions that are contorted or twisted, which are very "springy" and full of movement. Sometimes this is due to lack of knowledge and other times it is due to a belief that this is what is needed for that athlete.

We are constantly told that "everyone is different" and that is used to justify sometimes odd and counterproductive positions and techniques. Are we different? Of course! Are we the same? Before answering, think about the similarities. When, as a middle-aged male, I stand next

to a petite teenage girl, and ask if we are different or the same, the group laughs because the answer is obvious: we are very different. Then we discover that she and I have one head, two eyes, two hands, two legs, and so forth. For all our differences, we share many similarities.

While not every athlete is or should end up with a “textbook” position, that is the common starting point. Start with sound fundamentals, then understand when and why to “break the rules” before doing so. Too often we just change things with no sound reason.

Another important aspect is the effect of the position on the athlete’s long term health. Too many rifle athletes complain of lower back problems. In many cases, this is due to a position that is contorted more than it should be or it is due to body core weakness. Frequently, both factors are at work. Coaches must look carefully at each athlete and work with them to establish sound positions that are not damaging. For example, many standing rifle athletes use a position with way too much twist, bend, and slouch in the mistaken belief that this helps their steadiness. Quite the opposite is true.

Inner position is something only the athlete can sense. Feelings of and awareness of balance and steadiness, and sensations of muscle tension or relaxation are all components of the inner position. An athlete can develop their awareness of these cues and use them to great advantage to establish exactly the same position and balance for each shot or series. These seemingly subtle differences have a huge effect on performance for the elite athlete.

The physical aspects of the game seem obvious. Yet we overlook the importance of actually being fit and flexible. More importantly, we overlook the negative impact on performance when we do nothing in the physical area.

Seek out good reference materials and local experts. Your physical fitness, and your positions, will benefit.

The “On The Firing Line” series is published by the national governing bodies for Olympic shooting in Japan and the USA, and has been adapted for archery as “On the Shooting Line” published by USA Archery. Olympic Coach Magazine, the National Association of Soccer Coaches, and others have referenced selected articles. The entire series is available online at www.pilkguns.com.

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Sidebar:

This series of On The Firing Line articles began thirteen years ago and ran for 54 installments through 2011. After a three year break, the series resumes with this 55th installment. Parts of the series have been adapted for archery as “On the Shooting Line” published by USA Archery and many articles have been translated into Japanese and published by their Olympic shooting national governing body. Olympic Coach Magazine, published by the US Olympic Committee, the National Association of Soccer Coaches, and others, have referenced or reprinted selected articles. Readers are encouraged to review the archive of previous articles for many ideas on how to improve their performance and results.