Mind over Muscle

Winning a gold medal in air rifle takes more than just standing and pulling a trigger. Much, much more. West Virginia University sophomore Ginny Thrasher — who captured a slice of national glory by shooting her way to the first gold medal awarded at the 2016 Summer Olympics — explains how shooting sports is part-art, part-science, part-brain, part-brawn.

“One of the greatest things about the rifle is the juxtaposition between physical and mental,” said Thrasher, who’s studying biomedical engineering. “People look at us and think all we do is don’t move, but there is a lot more to it than that.”

Here, Thrasher fires away at the mechanics of her sport.

A MENTAL GAME

The basic concept of rifle is simple: Consistency is king. Line up the target in your sights, remain steady and pull the trigger. The hard part is learning to control the mind in harmony with the body.

IN THE ZONE

Just as each athlete has a physical pre-shot routine to check the mechanics of shooting position, each athlete goes through a mental pre-shot routine. Some play a song in their head, some focus on key words, some are meditative, but the goal is the same: get into the best mindset possible for competition.

SEEING AND HEARING THE SHOT

The West Virginia University rifle team uses an electronic target system that scores an athlete's shot based on sound waves.

Computer screens are located at each shooter’s stand so that team members can view the results of their shots immediately. The system also improves match viewing for spectators as they can follow shot-by-shot on a large screen. The team will be raising funds for a mobile range to allow the team to shoot home matches outside the WVU rifle range.

IN THE ZONE

Just as each athlete has a physical pre-shot routine to check the mechanics of shooting position, each athlete goes through a mental pre-shot routine. Some play a song in their head, some focus on key words, some are meditative, but the goal is the same: get into the best mindset possible for competition.

THE STANCE

Although each athlete’s standing position is unique, the general idea is the same. This stabilized position acts as a bone-on-bone rifle stand. “Rifle is a biomechanical sport,” said Jon Hammond, a former Olympian who has been the head coach of the WVU Rifle Team for more than 10 years. “Athletes use the body’s bone structure to support the rifle, because if they relied only on muscle, they would tire in a matter of minutes.”

TRAINING BODY AND MIND

Thrasher and teammates have a repertoire of drills and exercises both in the gym and at the range. They adjust muscle tension and breathing, they tinker with their holds and use a computer program to trace and analyze their rifle movements from approach to triggering to follow-through.

In addition to hour after hour of physical practice, the team focuses on “above the neck” training, from match management and tactics to calming nerves to dealing with both failure and success.

“I work on the mental game arguably as much as the physical game. The biggest pitfalls in competition are usually mental. There are things you can’t control, and you have to find a way to shoot through that.”

— GINNY THRASHER