

TRAINING – Part I

TRAINING – Part I

The Way to Success in Shooting

By Gary Anderson, DCM Emeritus



Eight of the best junior women rifle shooters in the world are shown in this photo of the start of 50m 3x40 Rifle Women Junior final in the 2018 World Championship. These women are all products of elite junior training programs in their nations of China, France, Russia, USA, Iran, Italy and Switzerland. USA athlete Morgan Phillips (4th from right) qualified 1st and finished 4th after the final (1171/434.3)

Virtually everyone who knows anything about the sport of Shooting agrees that Shooting is a sport where ultimate success is determined by training. The questions coaches, junior athletes and parents ask are not about whether training or practice is important, but about how to train. They want to know what the objectives of training are, what types of training should be done, what training strategies to use and how to plan effective training programs. This **On the Mark** article seeks to provide answers to those questions.

Training is such a decisive factor in determining success in the sport of Shooting because it is a sport where precise motor skills must be developed through thousands of correct repetitions. Shooting training is concerned with how to do those correct repetitions. Training for Shooting

athletes thus begins by recognizing that in precision skill sports, and especially in Shooting, champions are determined by how much and how well they train and not by any measure of natural ability or physical talent that they bring to the sport.

What is Training?

Training in Shooting is not simply trying to shoot higher scores by doing more shooting. Doing more shooting will improve shooting scores but it is not the most effective way to train. This is especially true for young athletes in schools or colleges who must balance sports training with the demands of family life, schoolwork and other activities. Moreover, in the world of elite shooter performances at Olympic and World Championship levels, it is no longer

possible to win by simply working harder than everyone else. Today, winning in international championships can only be achieved by combining an incredible amount of hard work with the most advanced, effective training methods.

Sports training is the **systematic repetition of sports skills with the objective of learning and perfecting those skills so they may be performed in sports competitions**. "Systematic" addresses how the variables in this equation are managed. Shooting training variables include 1) the athlete's level of development (beginner, intermediate, advanced, elite), 2) the athlete's dreams, goals and commitment, 3) the training environment (training time, equipment, range facilities, family support, the group environment) and 4) the technical expertise (knowledge and coaching) available to the athlete. Training that produces optimum results is training that takes each of these variables into account and manages them to the athlete's advantage.

Athlete's Level of Development. How an athlete trains must first be determined by their level of development. Training methods and practice volumes that are appropriate for each athlete evolve through four fairly distinct phases of development: 1) **learning** shooting skills, 2) **mastering** shooting skills, 3) **improving** advanced shooting skills and 4) applying **high performance** demands.

• **Beginner – Learning Shooting Skills.** In the learning phase, the emphasis is on instruction and doing practical exercises that apply this instruction. Beginner instruction is given in progressive steps: 1) gun safety and range procedures, 2) shot technique and supported position firing, 3) learning the standing-prone-kneeling positions and 4) shooting full courses of fire. Training volume is generally light in this phase. A typical training session includes 15-20 minutes of instruction and 30 to 60 minutes of dry fire and live fire repetitions to practice what was taught.

Successful training programs for Shooting manage the variables impacting each athlete:

- **Level of Development**
- **Goals and Motivation**
- **Training Environment with the objective of maximizing the athlete's competition results.**

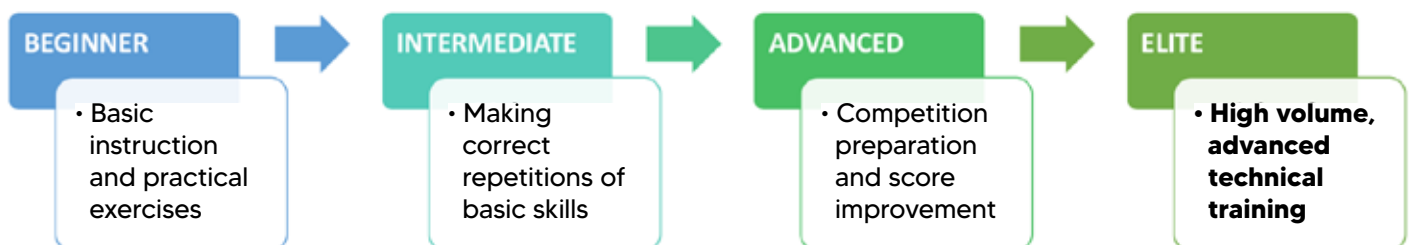
• **Intermediate – Mastering Skills Phase.** In this phase, athletes focus on making correct repetitions of the skills they learned as beginners. Here the coach's role shifts from giving instruction to observing, answering questions and making necessary corrections. As shooters become comfortable with their firing positions and shot technique performances, training volume should increase. An athlete in this phase can handle one to two hours of shooting a day, three to five days a week. Coaches and athletes can evaluate their training loads by determining whether they are putting full concentration and effort into performing each shot correctly.



Training requirements for beginning and intermediate athletes are very different from the training requirements for advanced and elite athletes.

ATHLETE DEVELOPMENT LEVELS

Training demands, technical content, training methods, training volume and coaches' roles change as athletes advance from one level to the next.



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The world's most successful rifle shooter in recent decades, Nicco Campriani of Italy (center), credits part of his development to training and coaching he received while he competed as a member of the University of West Virginia Rifle Team. Campriani (center) is shown here after receiving his third Olympic gold medal in the 2016 Games (50m 3x40 rifle). The silver medalist was Sergey Kamenskiy, RUS (left). The bronze medalist was Alexis Raynaud, FRA (right).

• **Advanced – Competition Participation and Improvement.** Athletes in this phase have perfected their skills and are regular participants in individual and team competitions. Their training has two objectives, 1) to prepare for upcoming competitions and 2) to continually seek ways to improve their scores. The coach's role in this phase is to assist in planning preparations for competitions and to serve as a technical resource to help the athlete find ways to improve. Training volume in this phase depends upon athlete and team goals. An athlete who is focused on enjoying a positive sports competition experience may find that two or three one to two-hour practice sessions a week are sufficient. Conversely, an athlete or team whose goals are focused on achieving major competition success will find it necessary to train five days a week for two to three hours per session.

• **Elite – High-Performance Training and Competition.** Athletes in this phase are not only focused on achieving winning performances, but on doing that at national and international levels. Training here also focuses on preparing for upcoming competitions and on continuing to improve but in much more phased and focused ways. Coaches at this level must have advanced knowledge of high-performance training program management and shooting techniques. Athletes at this level typically have life situations that afford them sufficient time and flexibility

to attend numerous competitions and train three to five hours a day, five or six days a week, 11 months out of a year.

Dreams, Goals and Commitment. One of the biggest variables in sports training is the athletes' goals and motivations. It's one thing to say, "*I want to become an Olympic gold medal winner.*" It's quite another to actually have the dedication and self-discipline to do the hard work necessary to even have a realistic possibility of becoming an Olympic gold medal winner. Most beginners start with little more than a thought that "it would be cool to learn how to shoot." However, as they learn basic skills and more about the sport and its challenges and opportunities, they will begin to dream about what they want to do in Shooting. Many youths will be satisfied to see themselves stay in shooting for a while and have fun finding out how well they can shoot.

Many will want to make their school or club competition teams. Some will dream about trying to win individual or team competitions. A few will dare to dream big dreams about going on to shoot on college teams, making a U. S. National Team or even one day standing on a victory stand at a World Championship or Olympic Games.

Athletes' dreams become goals and those goals define how athletes must train to achieve them. The athlete who just wants to learn how to shoot will find attending weekly shooting club sessions during the shooting season sufficient. The athlete who dreams of becoming a college or national team member needs to commit to doing the types and amounts of training necessary to fulfill that goal. The determining factor, in the words of Lones Wigger, an all-time great Olympic and international champion, "***is not whether you have the will to win, but whether you have the will to prepare to win.***" Dreams may inspire champions, but they don't make champions. **Only when dreams and goals become commitments to do the work and training necessary to achieve those goals do they become effective goals.** It is this commitment or will to train that determines training results.

Training Environment. The environment in which an athlete trains definitely impacts how they train and what their training outcomes will be. Training environments

do not have to be ideal in order for athletes to advance but they do have to be taken into account in designing training programs. When there are shortcomings in the training environment, athletes and coaches must find ways to compensate for those limitations.

- **Time Available for Training.** A practical matter for young athletes in the USA who have responsibilities to their families, schoolwork and friends is that the time they have available for sports training is limited. They are not like young athletes in Chinese sports schools where school hours are limited and shooting training time is greater. Young athletes here must practice time management. When they come to the range to shoot, they need to limit socializing time and spend as much time as possible actually shooting. To train two or three hours a day, they need to reduce or eliminate television or video game time while making sure they still allocate enough time to their studies and family.

- **Equipment.** Most junior shooters start with equipment provided by their club or school. Many of the rifles and shooting clothing provided by these programs have seen many years of use. This equipment likely will still work well for someone who is learning how to shoot, but advancement to the intermediate level will be slowed and advancement to the advanced level will be nearly impossible unless rifle athletes have suitable rifles and well-fitting shooting clothing and pistol athletes have good competition pistols. One key to advancement is when young athletes, with family support, are able to acquire their own target guns, clothing and equipment.

- **Range Facilities.** Today, most juniors have access to 10m air gun ranges through their clubs or schools. A much smaller percentage of juniors have access to smallbore rifle or pistol ranges. But then comes a critical question: How often are these ranges open, supervised and available? Schools and clubs that develop top level teams recognize how their ranges must be available more than one or two days a week if their athletes are going to do advanced training. Schools and clubs should take steps to keep their ranges open as many days during the week as possible. Another solution for athletes who want to train more is to obtain their own equipment so that when their ranges are not open, they can train at home, either on their own 10m ranges or by dry firing.

- **Family.** Families (and friends) play a big role in determining how much and how enthusiastically young athletes train. The ideal situation is when an athlete's family understands and supports an athlete's goals. When family members or friends tell a young athlete, who is motivated to do lots of training, that they are wasting their time, it's pretty difficult to stay motivated. Another negative situation is when parents push their children to pursue sports goals that are the parents' goals, not those of their children. Participation in higher level youth sports competition requires young athletes' families to support their attendance at practice sessions and cover equipment and travel costs. In shooting, especially rifle shooting, equipment costs can be substantial.

- **Group Environment.** One aspect of the training environment that can determine how athletes train is what might be called the group environment (*Gesellschaft* in German). Some school teams and clubs consistently produce outstanding junior shooters because their leaders expect excellence from team members and team members expect excellence from each other. A program that approaches its practices as regular sports team practices will facilitate better training. Champion Shooting athlete or marksmanship history images that are displayed at a range can inspire stronger motivations. Programs that inform their athletes about winning scores, especially at the international level, will raise their athletes' mental standards.



Having a qualified coach plays a decisive role in determining athlete training effectiveness. Here, a coach of India's National Junior Team intervenes with her athletes during a 2019 ISSF Junior World Cup Mixed Team Final.

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Access to Technical Expertise.

Junior athletes who have truly knowledgeable coaches are fortunate. Being taught correct firing positions and shot technique greatly speeds up the learning process. Junior athletes who have competent coaches need to listen and apply what their coaches teach. A big concern arises when junior athletes want to learn more or, worse yet, do not have competent coaches. There are ways to compensate for this void. **CMP Junior Rifle Camps** that take place every summer are a great way to get advanced training.

Attending **U. S. Army International Rifle Team Clinics** is an excellent learning experience. Self-study can be very beneficial. **Coaching Young Rifle Shooters** and selected other publications* can be sources of a treasure trove of technical knowledge. Athletes who want to move up to advanced and elite levels will be wise to accumulate a library of training resources that they study on a regular basis.

What are Training Objectives?

The objective of Shooting training, overly simplified, is to improve one's scores. That, however, is not an especially useful understanding of what Shooting training must accomplish. Coaches and athletes need to know what specific aspects of performance must be developed and improved through training. Training objectives in Shooting are to improve:

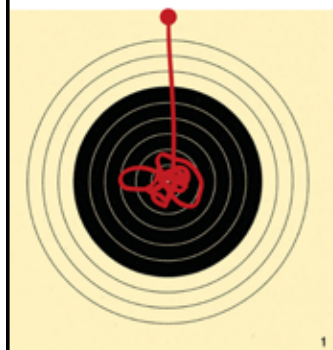
- **Hold Stability.** In both rifle and pistol shooting, scores are directly related to how stable an athlete's hold is. Training must develop stable firing positions that along with shot preparation and position alignment techniques produce the steadiest possible holds. This can be done by making live fire repetitions, but often the most effective training methods for developing hold stability are aiming exercises, holding drills, inner position evaluations and dry

* **Coaching Young Rifle Shooters** by Gary Anderson focuses on the technical training of beginning and intermediate rifle juniors. It can be purchased from the CMP E-Store. English translations of German texts by Heinz Reinkemeier and Gaby Buhlmann titled **Ways of the Rifle, Air Rifle Training and Competition** and **Sport Psychology and Competition** are excellent advanced technical resources. Coaches and athletes may also download copies of selected **On the Mark** technical articles by Gary Anderson (https://thecmp.org/news-media/gary_otm/) to use them as resources.

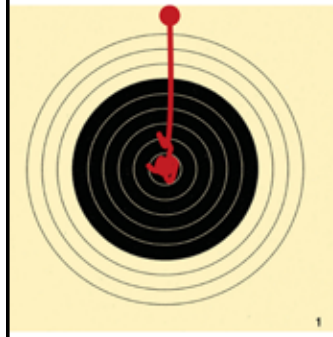
A RIFLE ATHLETE'S "HOLD"



A new athlete's standing position hold on the BMC target will have a large arc of movement.



After one or two years of training an intermediate athlete will have a standing hold like this on the competition target.



After more intense training an elite athlete will have a standing hold like this. Training is what makes the difference.

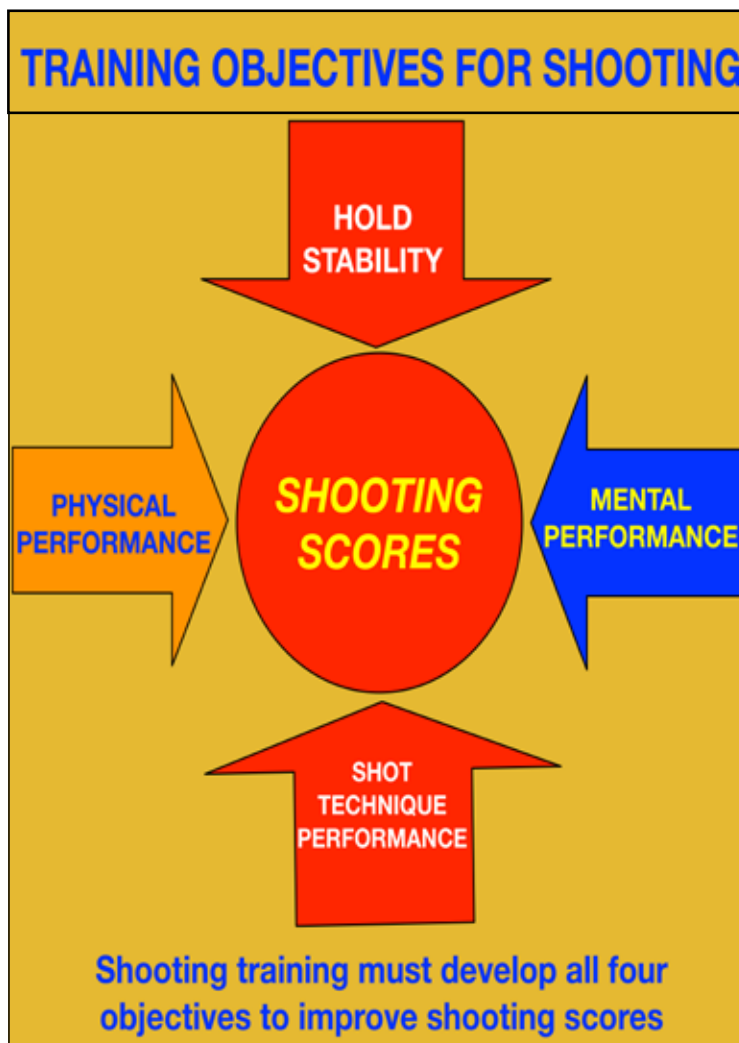
firing.

- **Shot Technique Performance.** Shot technique for beginners is quite simple: Align the sights on the target, stop breathing and smoothly press the trigger. As an athlete advances, shot technique becomes more and more complex; athlete training must support that advancement. Shot technique is developed through shot repetitions. It is improved by establishing a shot plan and perfecting the execution of that plan through dry and live fire training.

- **Mental Performance.** Mental performance impacts shooting results by determining how well an athlete concentrates, how disciplined athletes are in following their shot plans and whether they remain positive and in-control before, during and after each shot.

Even beginners need concentration and self-control/emotional control skills. Advanced athletes must become very skilled at focusing attention (concentration) on selected aspects of performance and on disciplining themselves to consistently follow their shot plans. Mental performance is best trained during dry and live fire repetitions of complete shots when combined with honest evaluations of these aspects of mental performance.

- **Physical Performance.** An athlete's physical performance manifests itself in several different ways. Achieving pistol or rifle stability requires precise neural-muscular coordination. A pistol athlete requires considerable arm and shoulder strength to lift and hold the pistol with maximum stability during multiple repetitions. A rifle athlete requires selective muscle relaxation and tension to maintain stable firing positions and execute shot technique. An athlete's general physical condition impacts their ability to carry out a heavy training load as well as their ability to function well under the mental and physical stress of competitions.



Different specialized training methods help athletes analyze and perfect how their bodies perform while trying to improve hold stability. Here, Olympic gold medalist Ginny Thrasher, USA, warms up before 50m range training by doing holding drills without her shooting jacket.

Training Methods

Training methods are the specific exercises or activities athletes perform during their training. Simply going to the range and shooting an established course of fire day after day is a method of training, but it is not a particularly effective way to train. There are different training methods because different training drills offer different training benefits. An effective training program for any athlete considers the athlete's level of development, goals, and training environment to plan which training methods to use and how much of each training method to use. Training methods used in shooting are:

- **Range Training.** Range training is the firing of live fire shots on an actual 50m, 50 ft. or 10m range. It is also possible to do 50m training on reduced targets at 50 ft. or to do 10m training where shooting is normally done on single bull targets by shooting at 10-bull targets.

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Range training is easier to evaluate because scores are produced, and scores are usually the best indicator of performance. Athletes should record all scores fired and use them to chart progress and improvement. When sufficient range time is available, live fire range training must be the major component of an athlete's training.

- **Dry Fire Training.** Dry firing is performing all phases of firing a shot without loading the rifle or pistol. When done correctly, dry firing simulates the firing of shots and is a very effective training method. Dry firing has the advantage of costing nothing and it can be done on or off the range. Many junior shooters use dry firing to train at home when team or club ranges are not available. Beginners use dry firing to learn basic shot technique and increase the number of repetitions they get in short training sessions. Dry firing often precedes live firing as a way to warm-up and prepare for firing. Advanced athletes use dry firing to perfect shot technique because it increases the number of

possible repetitions. The key to productive dry firing is for the athlete to be absolutely disciplined in performing dry fire shots correctly and honest in calling dry fire shots. Wishful thinking does not suffice. If shots don't really look like tens they shouldn't be called "maybe tens." Being conservative in dry fire shot calling is also a way to increase athletes' mental performance demands.

- **Aiming Exercises** (holding drills). Aiming exercises are done by aiming at blank targets or a blank wall. Athletes use aiming exercises and holding drills to improve control of their body and reduce sight picture (hold) movements. Many pistol athletes use aiming exercises to enhance sight alignment stability. Rifle athletes may do aiming exercises as a way to enhance their inner position performances. They do this by focusing attention on how the muscles and balancing mechanisms feel while they strive to stabilize their bodies.



Aiming exercises on blank walls like these two pistol athletes are doing is becoming a favored way for pistol and some rifle athletes to develop improved hold stability. Aiming exercises are also used to warm up before training or competitions.



A SCATT training system display for one shot. The color changes show hold movements before (green), just before (yellow) and after (red) the shot.

• **Electronic Training Systems.** The shooting equipment market now offers several different electronic or laser-based training systems. There are probably only two commercial systems that are useful for training advanced and elite marksmen, the SCATT (<https://scattusa.com/>) and Noptel (in USA, <http://www.brenzovich.com/>) systems. Both use electronic sensors that trace rifle or pistol hold movements on the target and display hold trace lines on computer screens so the athlete and coach can analyze performances.

This article will conclude in the next *OTM* issue with “*TRAINING, Part II – The Way to Success in Shooting.*” That article will discuss training principles, training strategies and training plans.

See past articles from Gary Anderson on the CMP website:

https://thecmp.org/news-media/gary_otm/

• **Mental Training.** Mental training is usually done in parallel with other methods of training. For example, an athlete who is doing dry fire training may also consider how well they follow their shot plans or concentration sequence during each shot. Mental training is directly linked to Shooting Logbook record keeping where these considerations are evaluated after each shooting session.

• **Physical Training.** Physical training is usually done separate from shooting training. For beginning athletes, physical training is usually nothing more than encouraging them to practice active sports. For advanced and elite athletes, time should be dedicated each day to doing physical training. Stretching exercises are important to warm-up before training and competition. Physical training for shooters should emphasize exercises and sports that build cardio-vascular endurance, flexibility, coordination and strength endurance. Except for pistol athlete requirements for arm and shoulder strength, exercises or sports that emphasize strength should be avoided. Running, swimming, biking and cross-country skiing are all excellent sports for shooters. Workouts using gym equipment are useful if the emphasis is kept on lighter resistances and higher repetitions.

About the Author

Gary Anderson, Director of Civilian Marksmanship Emeritus, retired as the full-time CMP Director at the end of 2009. He continues to work with the CMP as the senior marksmanship instructor. During his remarkable career, he won two Olympic gold medals, seven World Championships and 16 National Championships. He served as a Vice President of the International Shooting Sports Federation (ISSF) from 1990 through 2018. He is a former Nebraska State Senator and Past President of USA Shooting. He served as a Technical Delegate for Shooting during the 2012 and 2016 Olympic Games as well as for the 2014 and 2018 World Shooting Championships.

In 2012, the International Olympic Committee awarded Gary Anderson with the Olympic Order, its highest honor “for outstanding services to the Olympic Movement.”

In 2014, the CMP expanded its world-class air gun center at Camp Perry and renamed the facility the Gary Anderson CMP Competition Center, in honor of Anderson's contributions to the organization and the marksmanship community.



TRAINING – Part II

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The Way to Success in Shooting

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Eight of the world's best junior men rifle shooters are shown here at the start of the 50m 3x40 Men Junior final during the 2018 World Championship. These young men are all products of elite junior training programs in their nations (from left to right: FIN, ROU, HUN, IND, CHN, IRI, RUS and SVK). Amir Nekounam from Iran (3rd from right) became the Junior World Champion in this event.

This article is a continuation of the Part I article on “*TRAINING*” that appeared in the Spring 2020 edition of *On the Mark*. That article began with a fundamental premise that in Shooting “*champions are determined by how much and how well they train and not by any measure of natural ability or physical talent that they bring to the sport.*” In Part I we discussed, what training is, training objectives and training methods as well as how effective training programs creatively manage variables in their training environments. Part II describes training principles and training plans, as well as how to put all of this information together so coaches and athletes can develop the most effective training programs.

THE PRINCIPLES OF TRAINING — CRITICAL SUCCESS FACTORS

The principles of training that guide a program’s training activities establish its overall culture. These principles and the culture they create are the critical success factors that distinguish between good programs and great programs. Coaches must understand these principles and in coordination with their athletes and parents make them part of their program’s culture. Critical success factors in Shooting training are:

Positive Repetitions. Firing shots in range training or repeating dry fire repetitions is the basis for Shooting score improvement, but only when those shots or repetitions are

continued...



Improvement and progress during shooting training come from positive repetitions—making repeated correct performances of shot technique in sound firing positions. The athlete in this photo is Ali Weisz, a member of the 2021 USA Olympic Team.



The intensity of visual and mental efforts to see, reduce and slow sight picture movements is a primary means of increasing performance demands for rifle athletes.

performed correctly. Just putting lots of shots downrange does not work. Each practice repetition must be done correctly and with a mental demand for perfection. Here is how positive repetitions work:

⊙ Correct repetitions of shooting skills are the molecular building blocks of marksmanship performance, just as molecules are the fundamental building blocks of all matter.

⊙ When correct repetitions are repeated hundreds and even thousands of times, they cause changes in the athlete's neuro-muscular system that increase hold stability and shot technique precision, which in turn produce higher scores.

⊙ The number of correct repetitions determines how much and how fast shooting score improvement occurs.

⊙ Changes and improvement in performing marksmanship skills occur slowly and gradually over long periods of time. Shooting progress is almost always slow—athletes must strive for improvement but be patient in waiting for it to occur.

Increasing Performance Demands. In sports that test strength and endurance, there is a progressive overload and adaptation principle that applies when athletes' strength or endurance are subjected to training overloads. Training overloads cause the body to adapt, thereby increasing its strength and endurance. A variation of this principle applies in Shooting where performance overloads are mental and visual. Here are some ways to increase performance demands for Shooting athletes:

⊙ Shot technique instruction that exhorts athletes to focus full attention on sight alignment (pistol) and sight

picture (rifle) movements while mentally striving to make those movements smaller and slower places demands on the neural-muscular system that adapts by producing those changes.

⊙ Performance demands are controlled by the physical environments in which athletes train. Posting photos of champion shooters and the scores they fire on the range helps to inspire higher mental performance standards for the athletes who train there.

⊙ Encourage athletes to study winning scores fired by competitors in matches in the U. S. and in ISSF Championships.



Having record matches with competition between team members is an effective way to increase performance demands on the athletes.

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⊙ Keeping personal records (PRs) for training and competition firing introduces demands to increase those PRs during each training session or competition.

⊙ Add stress to training sessions by conducting periodic record matches where scores are ranked. Shoot practice finals where small prizes are at stake. Shooting one-shot elimination matches is both fun and stressful, especially when eliminated athletes can offer noisy, but safe distractions.

⊙ Add disturbances, loud conversations or music to the training environment to help athletes learn to concentrate no matter what happens around them.

Responsibility. There are two aspects to responsibility in Shooting training. First, each athlete must accept the responsibility for doing the training necessary to reach their goals. Second, each athlete must accept personal responsibility for every shot or score they fire, whether good or bad. Taking responsibility for shooting a bad score facilitates learning from it. Throwing a bad target away and pretending it didn't happen is giving away an opportunity to learn.

Goal-Oriented Work Ethic. The most successful athletes and teams are the ones that adopt goal-oriented work ethics. They believe in training and accept that those who work the hardest in training will advance. In Part I of this article, we summarized this principle by stating, “*Only when dreams and goals become commitments to do the work and training necessary to achieve those goals do they become effective goals.*” A guideline regarding how much training must be done to advance from one development level to the next is shown in the chart “*How Much Training Should Athletes Do?*”

Regular Training. In over-simplified form, this principle simply says it's better to do two hours of training on each of five days a week than to do five hours of training two days a week.

Planning. Planning is a major difference maker in ensuring that the work put into training achieves optimum results. Training programs should have an annual training plan and daily session plans. Annual plans ensure that athletes' training years progress through successive phases that emphasize **1)** rest, **2)** skill development, **3)** skill perfection and **4)** peak performance. Session plans

HOW MUCH TRAINING SHOULD ATHLETES DO?

Development Level	Months per Year	Days per Week	Hours per Day
Beginner	4-6	1-3	1-2
Intermediate	6-9	3-5	1-3
Advanced	9-11	5-6	3-5
Elite	11	5-6	5-8

The amounts of training recommended in this chart are general guidelines regarding the amount of training required to advance to the next level of development. Coaches and athletes may further adjust these training numbers according to their actual shooting goals.

ensure that available training time is allocated according to prioritized needs.

Joy. Becoming a better marksman takes work, lots of it, usually over several years. No one is going to continue to do that much work unless they enjoy what they are doing. Going to matches can be fun, but practice also must be fun. How can athletes find joy in training?

⊙ There should be joy in the simple act of making a good shot or firing a good score. Athletes should learn to feel good about these small successes, even when they occur in practice. Praise from coaches and teammates plays a role in bringing joy to these small achievements.

⊙ Athletes should track and graph their practice scores. When they start to see their averages go up, they gain hope in continued improvement that makes practice something to look forward to.

⊙ Being with a team of athletes who enjoy each other's friendship and support each other is a great source of happiness.

⊙ Teams can use social activities like pizza parties, group outings, social events or personal celebrations to build team spirit and the motivation to support each other.

DEVELOPING TRAINING PLANS — ANNUAL TRAINING PLANS

Shooting training produces the best results when it is managed with goal-oriented planning. There are annual training plans, training phases within annual plans and daily or session plans. The coach has primary responsibility for

preparing training plans for the team or club. Advanced and elite athletes must also have individual annual plans that they develop with guidance from their coaches. Annual plans should be written plans that athletes can make reference to throughout the year.

Annual Goal Match. Annual plans are normally based on an entire year, whether active shooting continues for the whole year or only part of it. The first step in setting up an annual training plan is to decide what is the most important goal for the year. Beginning athletes' goals typically focus on learning and mastering skills and entering in their first competitions. Elite, advanced and most intermediate level athletes' goals will most likely be to achieve excellent performances in annual goal match(es). A team goal match may be a league, state or national championship. An advanced athlete's goal match may focus on a CMP national championship, NCAA championship, USA Shooting national championship or national team trial. Many training plans must deal with needing to have two or three goal matches. A school team, for example, may want to focus on performing well in a league or state championship and later in a national three-position air rifle championship. An advanced junior might aim for success at junior national three-position air rifle championships and also at the USA Shooting Nationals.

The Training Year. Once the goal match is decided, annual plans are built around the goal match, which should be the last event in the plan. Most goal matches are in the late spring or summer. Elite athletes will have training plans that cover the 12 months prior to that match. A junior club or school team may have a six- or seven-month shooting season that begins in the fall and ends with a state or regional championship in March or April.

Annual Training Phases. To develop an annual plan, coaches and athletes should divide the training year into four phases:

◎ **Rest Phase.** Training 12 months a year for several years in succession is most likely a formula for burn-out. Active rest must be part of training too. Even elite athletes expect to take three to six-week breaks from training, in most cases, after their goal match is over. Beginning and intermediate level athletes usually have shooting seasons that run from September or October through March or April, followed by a longer off-season when no shooting is done. The rest phase is a time to rest, recover and find different things to do. The rest phase is also an ideal time to acquire new equipment or place a renewed emphasis on physical conditioning.

PRACTICAL TRAINING TIPS FOR JUNIOR SHOOTERS

- ***Believe in training — practice is what makes you better.***
- ***Correct repetitions make the difference — make every practice shot as good as you can.***
- ***Practice as much as you can, but don't practice so much that it's not fun.***
- ***Keep a Shooting Diary or Logbook.***
- ***Find joy in every good shot you fire.***
- ***Keep your goals oriented on performance — not on winning.***
- ***Study the best shooters to learn how they train and shoot.***
- ***Apply time management to get more practice time.***
- ***Practice at home to gain more training days and training months.***

◎ **Development Phase.** This phase can be an exciting time for athletes because it is when learning and testing new techniques and firing position changes should be worked out. Training sessions should be relaxed and less structured. Technical training volume with range firing or dry firing should be moderate to heavy. If matches are scheduled during this period, they should be approached as developmental matches where athletes are free to test new techniques, not be fearful that their status as team members will be at stake and have some fun. Three-position air rifle athletes, for example, might use the CMP-sponsored air rifle postals or the Orion National Air Rifle League that take place during the fall as developmental matches. This is also a good time to schedule matches where younger athletes can learn how to win.

◎ **Performance Phase.** Athletes should arrive at this third phase of the training year with their firing positions and techniques fully worked out. From this point forward, they should not change unless a serious performance problem develops. The emphasis in this phase should be on intense training and achieving consistency in reproducing the firing positions and performing the shooting techniques that were worked out during the development phase. This is normally the time during the training year when training volume is at its highest. A key training objective now is to gradually increase practice and match scores.

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The Camp Perry Open that takes place each year in January includes both air pistol and air rifle events plus unique "Super Finals." This match is good example of a developmental match that athletes can include in their annual training plans.

Many experienced athletes do this by establishing target scores where, for example, they might try to shoot ten-shot series scores of 95 or better in standing, 98 or better in kneeling and 99 or better in prone. Target scores must be realistic yet challenging with an aim toward the athlete being able to shoot those scores in the goal match at the end of the training year. During this phase, there should be regular competitions where the level of competing athletes is as high as it will be in the year's goal match(es).

© **Competition Phase.** The last phase of the training year is the time for achieving peak performance in the year's goal match(es). The goal match(es) will have been on the team's schedule for the entire year and much thought and effort will have gone into being technically, mentally and physically prepared for this competition. The ability to shoot target scores in both practice and competitions by consistently reproducing firing positions and performing shooting techniques should be well established.

The volume of shooting training and physical training may be somewhat reduced during this period in order to make sure athletes' full energy and spirit are available for the big competitions. If the target scores or targeted performance level are achieved in the goal match(es), it will have been a successful training year.

DEVELOPING TRAINING PLANS — DAILY SESSION PLANS

Daily training sessions are the basic building blocks of sports training. One training session will not make a measurable difference in a shooter's scores, but the aggregate effect of a long progression of properly executed training sessions will almost always be significant score improvement. Each practice session must be governed by a plan that includes a **1)** welcome-orientation-instruction, **2)** physical warm-up, **3)** planned amounts of technical or shooting training, **4)** time to evaluate the session and

prepare a plan for the next session, 5) time for equipment maintenance and, whether part of the training session or at a separate time, 6) sport or physical training. The pie-chart shows an approximate allocation of available training time between the six components of daily training sessions. These allocations will, of course, vary according to the development levels of the athletes.

Training Session Plans.

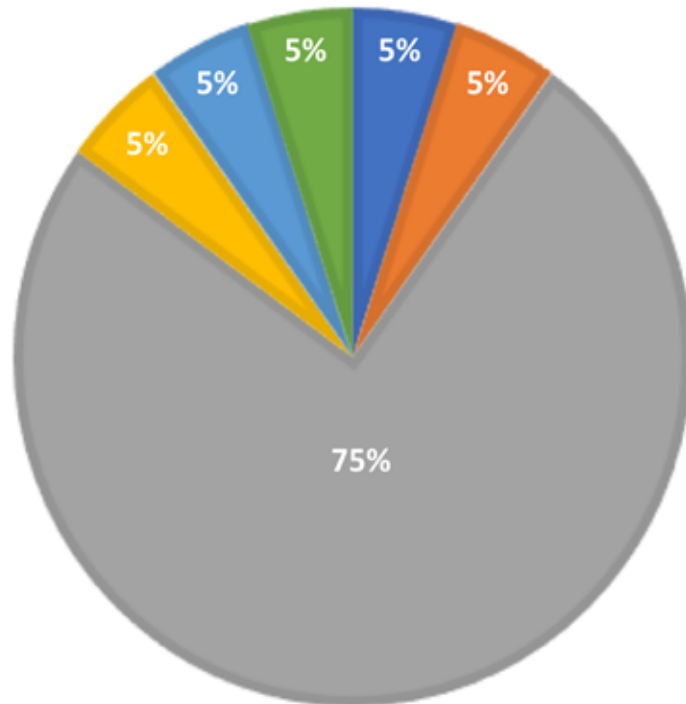
A session plan ensures that athletes gain the most benefit from available training time. The technical training or shooting component, which is by far the largest component, must be mapped out so that athletes know how many repetitions of which types of shooting training they are to do. In rifle training it is also necessary to divide training repetitions between two or three positions. What is included in each session plan is determined both by general requirements in the annual training plan and by details determined during the previous training session's evaluation.

Welcome-Orientation-Instruction. The first training session component varies according to the athletes' development level. A program with beginning and intermediate level athletes may need to devote 20 or 25% of training session time to formal instruction. A team with advanced athletes may need no more than a few minutes at the start of the session to discuss the day's training tasks.

Physical Warm-Up. There is a strong consensus among shooting experts that starting a training session or competition with a stretching routine and light gymnastic exercises is beneficial to overall shooting performance. Daily training sessions should definitely include a brief time when athletes can complete a physical warm-up. Warm-up exercises can also be done with the rifle or pistol. Doing aiming or holding exercises on a blank wall has become a widely recognized warm-up method, especially for pistol athletes.

DAILY TRAINING SESSION TIME ALLOCATION

- Welcome-Orientation-Instruction
- Physical Warm-Up
- Technical Training
- Evaluation-Diary
- Equipment Maintenance
- Sport/Physical Training



Technical Training. By far, the biggest part of each training session is dedicated to technical training. Technical training with the rifle or pistol is usually done on the range with live fire training, dry fire training, holding exercises or working with an electronic training system (SCATT, Noptel, etc.). Daily session plans should project how many shots/repetitions are to be made in each firing position (rifle) or type of fire (pistol). Rifle athletes should prioritize their technical training work by devoting about 10% of this time to prone, 50-60% to standing and 30-40% to kneeling. Depending upon how a training session goes, coaches and athletes should also feel free to modify the types and amounts of shooting training that they do. If an athlete is having difficulty in a particular position, for example, more training time must be dedicated to that position.

Equipment Maintenance. After each day's firing, athletes need to reserve enough time to take care of their rifles or pistols and other equipment. Smallbore rifle athletes, in particular, need to clean rifle barrels after their live fire shooting.

TRAINING – Part II



Training repetitions are only effective when they are done correctly. The coach must work closely with each athlete to identify and correct any errors in position structure or shot technique.

At the end of each session, all equipment must be put away clean and functioning properly. If an item of equipment is not working correctly, this is the time to fix it or make arrangements to get it fixed.

Evaluation/Diary or Shooting Log. One of the fundamental tools for shooting advancement is a well-kept diary or log. Athletes should dedicate time at the end of every training session to record the day's scores and evaluate the technical training that was done by making entries in their shooting diary or log. This evaluation session is normally also the time when plans for the next training session are developed.

Sport/Physical Training. Sport or physical training should also be part of shooting athlete training. Coaches whose athletes have longer training times available each day may be able to include running, calisthenics, light gymnastic exercises or playing a sport like soccer or swimming in their session plans. Coaches whose athletes have limited practice times may only be able to encourage their athletes to run, swim, do gymnastic exercises or practice a sport on their own.

Mental Training. Mental training is part of shooting training, but it is not usually a scheduled activity in training sessions. Mental training does include making shooting diary or log entries. It may include specific efforts during technical training like working out a shot plan. Most frequently, the thought, visualization and mental rehearsals that are part of mental training take place off the range when athletes have quiet time where they can focus attention on these mental processes.

PUTTING IT ALTOGETHER — CREATING YOUR TRAINING PROGRAM

Parts I and II of this article, *TRAINING — the Way to Success in Shooting*, describe the components of training programs that include, **1)** the athletes and their Development Levels, **2)** the Training Environment, **3)** Training Objectives and the Training Methods available to achieve those objectives, **4)** the Principles of Training that constitute critical success factors, **5)** the development of Annual Training Plans and **6)** using Session Plans to guide daily training. The final step in creating a training program that produces optimal results for athletes in a particular situation is putting all of these training components together. The chart on the next page shows how these components fit together and the questions coaches and athletes must answer to establish their training programs.

Starting Point. The focal point of any training program must be the athletes in the program. Therefore, the first questions coaches must answer in developing training programs concern athletes and their development level(s). Next the coach, athletes and parents must decide what their program goals are. Those can vary from “we just want to learn new sport skills and have some fun” to “we want to become a really good competitive shooting team.” After answering those questions, they must evaluate their training environment, so they know what resources they have to work with and manage to achieve their goals.

What and How. The next steps in establishing an effective program are making sure the coach and athletes have a clear understanding of training objectives that apply in Shooting, that is, systematically increasing scores by improving hold stability, shot technique performance, mental performance and physical performance. Then must come a full understanding of the training methods that can be employed to produce score improvements including range training, dry fire training, aiming exercises, mental training, physical training and electronic training systems.

Critical Success Factors. This article described a series of critical success factors that determine whether

CREATING A TRAINING PLAN

STARTING POINT	WHAT & HOW	CRITICAL SUCCESS FACTORS	ANNUAL TRAINING PLAN	TRAINING SESSION PLANS
<p>Athletes: What are the development levels of the athletes in our program?</p> <p>Goals: What are our team or individual athlete goals?</p> <p>Training Environment: What training resources are available to us?</p>	<p>Training Objectives: What must our training program accomplish?</p> <p>Training Methods: What training methods can we use to achieve our objectives?</p>	<p>Training Principles: How do we make sure vital training principles become part of our program culture and make it possible for our athletes to benefit from these "critical success factors"?</p>	<p>Goal Match: What is our goal match for this year?</p> <p>Training Year: When does our training year start and end?</p> <p>Training Phases: How much time should we allocate to each training phase?</p> <p>Matches: Which matches should we schedule?</p>	<p>Technical Training: What training methods will be used? How many repetitions of each type of training will be made?</p> <p>Tasks: What specific tasks must be accomplished?</p> <p>Other Training: What other training is to be included?</p>

a team or individual athlete achieves high performance levels. As the training program is implemented, the coach and parents must work together to make sure these training principles become part of their program culture. They should be taught to every athlete in the program and every athlete should be encouraged to adopt them as personal criteria to guide their training.

Annual Training Plan. Successful training programs use planning to organize their training endeavors. Each training year should have an annual plan that is built around an annual goal match and match schedule. The best plans divide the year into training phases that begin with rest, and subsequently progress through development, performance and competitions phases to end with the goal match.

Training Session Plans. In the same way, every athlete's training day should be governed by a session plan where athletes begin each session knowing what they will do on that day. Session plans should be flexible but still generally identify the types and numbers of technical training repetitions as well as the training tasks and other training that athletes are expected to complete.

When training programs are properly structured by program coaches and leaders and faithfully carried out by its athletes, the result will be the fulfillment of goals identified at the beginning of the training process.

About the Author

Gary Anderson, Director of Civilian Marksmanship Emeritus, retired as the full-time CMP Director at the end of 2009. He continues to work with the CMP as the senior marksmanship instructor. During his remarkable career, he won two Olympic gold medals, seven World Championships and 16 National Championships. He served as a Vice President of the International Shooting Sports Federation (ISSF) from 1990 through 2018. He is a former Nebraska State Senator and Past President of USA Shooting. He served as a Technical Delegate for Shooting during the 2012 and 2016 Olympic Games as well as for the 2014 and 2018 World Shooting Championships.

In 2012, the International Olympic Committee awarded Gary Anderson with the Olympic Order, its highest honor "for outstanding services to the Olympic Movement."

In 2014, the CMP expanded its world-class air gun center at Camp Perry and renamed the facility the Gary Anderson CMP Competition Center, in honor of Anderson's contributions to the organization and the marksmanship community.

