

# Battling the Aging Process with Fitness

*By Todd Bender*

One of the most overlooked aspects of shooting, especially as we age, is physical fitness. Most people think that it just isn't important in shooting. Given the minimally required physical excursion of our sport, why is fitness important? Obviously, in today's competitive environment, with long days of competition including sometimes grueling marathon shoot-offs, the shooter who is in shape has the definite edge.

That being said, the importance of physical fitness in shooting is critical, and even more important in advancing years. In athletics, physical preparedness forms the basis of technique, and it's just as true in shooting. Your shortcomings in one area will form the limit to your abilities, and can become the ceiling of your technique. Many view workouts as useless unless you want to lift weights. While it's true that "specificity," pinpointing actual movements in specific sports, should govern most of the training we do, there are a host of other positive changes that training and fitness induce, ranging from aging better, retaining muscular qualities, and being able to breathe efficiently. Also there's better bone density and other physical changes which allow you to just plain feel better.

Anything we do with structure stands a greater chance of success. So in the beginning you should start asking questions that will govern what you do. This is a starting point for a physical fitness regime. "What do I feel I could do better? What is coming between my best scores and me?" If it's mental focus, don't forget the mind depends on the body for energy, so general improvements in fitness pays dividends to your mental game.

The first step is to take stock of where you are now, and where you want to be in a time frame you set. It's very easy to remember how fast you could run a mile, or how much you could lift when you were in college, but the rule of thumb is if it happened six months ago, you need to start back at zero.

Even if you are already physically active, varying an existing routine can very often enhance a program that has reached a plateau. The body has to be forced to adapt and change, so after six to twelve weeks, give it something new to adapt to. When beginning a fitness program, all muscles should be targeted as part of an overall program, certainly at the beginning, to ensure good overall development before specializing.

Your first training venture shouldn't be too specific; aim to bring everything up to speed at the same rate. What will likely happen then is you can start to target your problem areas, where does it ache after a day's shooting for you? There's a good place to start.

Good consistent shooting technique comes from the lower body, so it makes sense to get some good work in on the quads, hamstrings, glutes, and the calves. Also, don't forget to work in some lower back work as the amount of forward lean your individual technique has will govern how strong you need to be.

This is where the specificity idea comes into play. Not all training pays dividends for all sports. So the closer the action you do in the gym looks to your sporting movement, the more it will pay you to do it. In shooting, we have weight over the front leg, and some rotation. We have a lot of isometric force coming from the lower back and abdominal areas, as well as from the biceps and deltoids (shoulder) stressed when mounting the gun.

The following are exercises in the gym that can benefit shooters. You can find full illustrations for these exercises in the fitness section at [bendershima.com](http://bendershima.com):

- Lateral lunges
- Good mornings
- Wrist curls
- Squats
- Standing calf raise
- Shooter's raise
- Bicep curls

A little is better than nothing at all. So if a shooter doesn't have time or access to gym facilities or equipment, there are exercises that can be done in a hotel room to increase strength and endurance for shooting. Everyone can benefit from a few back to basics sessions, good on the road exercises include:

- Push-ups
- Sit-ups

Isometric towel work for the biceps and triceps  
Body weight squats  
Body weight good morning  
Lateral lunges

Alternate upper and lower body exercises with no rest intervals, but keep momentum going and you'll get some cardio-vascular work done at the same time. It's like a circuit-training program, which is great for keeping you from going stale.

Dr. Bill Dannenmaier is a nationally respected orthopedic surgeon, and also a fair shotgun shooter in his own right. He is also one of my clients, so I sat down with Bill to discuss how physical training can enhance performance, but also, from an orthopedic standpoint, what shooters can do to protect the body during the rigors of competition shooting in the long-term.

"The shoulders, knees, upper back and neck all provide bracing for the gun and shooting stance," commented Dr. Dannenmaier. "The trunk, hips and feet are the foundation and provide motive power. Recoil hits the shoulder in the anterior deltoid, biceps groove and pectorals insertion. These are all areas which can endure a lot of impact without much direct structural deterioration. Structural damage to the biceps tendon and rotator cuff comes from impingement and longitudinal stress. Impact, such as recoil, only causes bruising and pain."

Dannenmaier added, "However, anything which makes a joint hurt can inhibit muscle function and cause atrophy." He also stressed, "Strength in the anterior shoulder musculature increases robustness and will increase endurance in shooting sports."

So in short, do shoulder exercises. But in the long term, are shooters at risk of damaging their rotator cuffs/shoulder joint?

"The rotator cuff is not as essential to shooting sports as it is to a throwing sport because skeet shooters really don't get their arms past 80 degrees of flexion or abduction unless they climb the ladder to load the (skeet) high house. The important parts of the shooting shoulder, it seems to me, are the big muscles around it. These are the deltoids (shoulder), pectorals (chest), rhomboid and traps (upper back). I would add rowing and shrugging to help the upper body foundation of your exercise list. Strength in these muscles makes the turret stronger so the motor of the trunk, hips, thighs and legs can point the gun without any sloppiness."

The key to protecting any joint in the body is to strengthen the muscles that support and control movement of that particular joint. That covers the upper body, which provides a stable platform for gun mount. But what about the legs, which for some shooters (as a coach I'd prefer all shooters) use to provide more controlled and efficient movement with the target?

"As far as a quadriceps (leg) exercise, I think your program is great. After seeing those nail kegs you are walking around on, anyone would be crazy to give you quad advice." Dr. Dannenmaier continued, "Having said that, a lot of exercises which build big legs in young people, can hurt old people. An arthritic knee or patella-femoral joint can make the Bender stance difficult as you age. Lunges, leg presses, knee bends, stair and hill climbing are OK for college kids, but they hurt 50 year-old knee caps on a regular basis.

"The patellofemoral joint, where the kneecap rides and rubs in the femoral groove, experiences three to five times body weight force in a normal stair climb. A semi-squat which you (Todd) use so effectively to make a living can be painful and maybe difficult for many middle-aged shooters." So, accepted modifications may be necessary.

"There are a couple of exercises to improve quadriceps strength. Straight leg raises are good for arthritic knees. And they have the added benefit of toning the abdominal musculature. Short arc quad work is good too. Biking is alright, and works the legs well, but for the arthritic knee, you want the knee almost straight at the bottom of the stroke. This puts pressure on the seat, so if you worry about erectile function, a recumbent stationary bike is best."

Thanks for the bonus advice, Doc.

Cardiovascular training is another vital component of a well-balanced program, and for shooters and a general overall health, maybe the most important aspect of any fitness program. And it is important to make sure again, that what we do in the gym is going to be relevant to what we do on the field. Your training should resemble your sport. What do you suppose your heart rate is during competition? And for how long must you maintain this? That's how you should work. Being able to keep up a brisk pace with a slight incline will not only make your legs stronger, but will help keep weight down, and will help you recover from your other exertions. Cardio means better transport of oxygen, which will improve the function of everything, from the eyes, to your mental ability to focus.

In preparation for the day's event many find that light cardio is helpful in preparation for the day's event. This is a key to my shooting. Forty-five minutes to an hour on the treadmill on the morning of a competition gets my blood pumping. It clears my mind and allows me to focus on what I need to accomplish during the day, and I am energized for the remainder of the day. Others may not want to do this. The key, as is with so many aspects of your game, is to see which you feel more comfortable with, and have the most success with.

When discussing an activity, especially any cardio-vascular work, equipment and more to the point, shoes come to mind. I asked our orthopedic specialist about shoe wear for training and for shooting.

"I have always been interested in feet," said Dannenmaier. "Shoes or ankle boots with stiff soles, a good shank (longitudinal shoe stiffener), along with arch support and heel cushioning are comfortable, and good for the feet of big men. They baby and protect the feet, allowing them to bear the load of hiking from station to station. Also, look for a blucher sole with an out-flared heel, extending

out wider than the upper part of the shoe. This aids tremendously in stability. This is a perfect base for shooting. Many running shoes and good work shoes such as Redwing have these features.”

Once you're done training, and actual shooting and competition comes, nutrition during the day is also a concern. So is there a diet that can improve your performance? The last thing you want to be thinking about is what you've just eaten, so you may want to pass on the greasy chlidog with cheese that will sit in your stomach for hours while you're shooting.

Anything high in sugar should be avoided also, as it will provoke an insulin response, which will affect the eyes, and make you tired and sluggish. You need a good stable stream of energy being delivered throughout the day with no peaks and valleys. Stay away from heavy carbohydrates in favor of lean proteins. You'll need energy to shoot, which is why you might stick to fruits and nuts, and lots of water during the days of competition.

It is generally accepted that the first part of target flight is picked up in the saccade (peripheral vision), which is a survival reflex. This can be focused on more acutely if the shooter is borderline hungry. If you had to opt for being nearer stuffed, or nearer hungry—opt for hungry!

As mentioned above, hydration has become an integral part of my regime, especially as I have gotten older. Generally a shooter's water intake is less than desirable in hot or cool weather. The worry is, as events last all day, and sweating isn't usually profuse, few recognize the need to keep fluids topped up. Drink smart and use a drink with some electrolytes, as this is the important stuff we lose when we sweat. But be wary, many of the popular energy drinks come loaded with glucose, which we don't need. Often the high levels of carbohydrates in certain sports drinks can cause blood glucose fluctuations, which can affect the eye function.

The most difficult part of any fitness program is getting started. The first day is the toughest, but after a few days, and getting in the habit of going to workout, you'll need to go to the gym...you will physically need to work out, and not only will your shooting get better, but the rest of your life will improve also. You will shoot better in the long run with better health and endurance, and probably shoot better for longer. That means a longer and healthier life, which is a nice bonus.

*For information about BenderShima Worldwide and for Todd's 2011 clinic schedule, go to [Bendershima.com](http://Bendershima.com) or contact Todd Bender at [bendershima@aol.com](mailto:bendershima@aol.com). For Todd's newest videos on skeet shooting, contact Sunrise Productions at 800.862.6399.*