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The Female Knee, the Athletic Knee

By Bob Jodoin

For www.EliteFTS.com

“Girls are stronger. Boys are stinky” This is what my 6-year-old little girl says when asked who is stronger. I want her to understand from a young age that women are not second-class athletes. My baby girl is never going to be sent over to the pink dumbbell rack and the treadmill and told to lift light while the boys are overtraining the [squat](#). She’ll be under the bar with the boys, and if they give her a hard time, she will only have to say, “Don’t make me call my Dad!”

Sports opportunities are on the rise, and female athletes keep gaining more recognition. It isn’t near enough, but it’s slowly getting better. There are many incredible role models out there. Female athletes are my heroes because they do things with their brains and heart that the males need testosterone to do. They are fierce! This is all a good thing.

The bad thing is that female athletes are tearing up their anterior cruciate ligaments at an alarming and epidemic rate. This is sad, wrong, and most likely preventable, at least to a much greater degree than what is currently happening. Any sport where female athletes need to decelerate and change direction on their feet shows an ACL injury rate some eight times more than in male athletes.

The whole issue really came home to me when a good friend of mine, Dr. Jack Barnathan, DC (ISSA director of fitness sciences), gave his talk on female ACL injuries. I found the problem to be absolutely outrageous, especially when I learned what the medical community was doing about it.

I’m going to do something about it. I’m doing something about it right now. My strength does not lie in the lab or in the halls of academia. I do my work in the gym. I teach women how to [squat](#).

First, I want to identify one of the problems. Bodybuilding is a sport. I give my iron brothers and sisters respect because they work hard and are more dedicated to diets than probably any other group of athletes. There are techniques used in bodybuilding that serve a special purpose for correcting issues of symmetry and proportion. Their primary goal is isolation. However, these techniques typically have no place in athletics. The human body is not meant to work in isolation but is rather a remarkable machine that does its best work when working in concert with different aspects of itself.

One of the biggest demons rears its ugly head in the name of isolating the quadriceps muscle group. This is the sinister and malevolent creature known as the leg extension machine. Since the

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predominant media force comes from the bodybuilding magazines, the public has learned all of its technique and terminology from them. Unfortunately, this includes our athletic and fitness community.

The bodybuilder, when posing in the mirror, is very concerned about the biceps, quads, rectus abdominus, and the pectorals. These muscles are not, however, the most important for athletic human movement. The more important muscles are those of the posterior chain, the ones that you cannot see in the mirror. The posterior chain starts at the heel and continues up the back of the leg right into the muscles of the lower back. As a group, they are under trained. This is one problem.

The other problem is one of ignorance and tradition. Women are simply trained like “girls.” This is unacceptable. Even when female athletes are trained, coaches often use a hodge-podge of techniques driven by “that’s what I did when I was on the team.” Many are taught to be weak. Way too often, sports coaches just throw excessive endurance training at their athletes in the form of long distance running because they simply do not understand the energy system requirements of their sport. They don’t actually know what to do so they just dismiss it as “running far builds endurance.” Unfortunately, it is rarely the type of endurance required unless you happen to be a track or cross country athlete involved in the sport of distance running. Most often you only get bored, fatigued, overheated athletes with overuse injuries and muscles that are too worn out to perform the explosive elements required in most sports.

Things don’t get any better in the weight room. Everyday I fight the notion that “I can’t do that; I’ll get bulky.” Many women have absolutely no idea of the wonderful things they are capable of obtaining in the gym. Those who are involved in sports are often mistreated and under coached. My dream is for everyone who trains to use the same science and the same care and attention regardless of gender and regardless of how many advertising dollars their pro career will be worth. I want to see athletes trained like athletes, plain and simple.

One of the first things I do with all of my athletes, male or female, is to teach them to [squat](#) correctly. Just the simple neurological programming of learning to squat with the posterior chain while pushing the hips back gives females a better choice of technique to use in landing. Women tend to decelerate a landing with their quads, which is the opposite of the male tendency to use the hamstrings/glutes to decelerate. I always ask people if they have ever seen a toddler deep-squatting to play with some toys on the floor. Watch them. Head up, chest up, hips back, and the knees are over the ankles. We spend our lives unlearning what is a very natural squatting position. I want all of my athletes/clients to relearn it.

Once people learn to use the posterior chain properly and strengthen it to previously unconceivable levels then landing and decelerating with it become natural. With the exception of the [squat/deadlift](#) and its variations, the all time best weapon against knee injuries is the hamstring bulletproofing movement know as the [Glute-Ham](#)-Gastroc raise. Many people, even the strong ones, cannot do a single rep at the beginning with the footplate set on its easiest position. This shows you right away how grossly under trained the hamstrings are.

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In my years of coaching athletes, I've encountered many people with tremendous quad strength, weak hams, and, of course, knee pain. Once they bring up their posterior strength, the knee pain usually disappears. The posterior chain is engaged in this exercise from the bottom of the toes all the way to the back of the head. The large calf muscles cross the knee joint along with the hamstrings from the other direction, and a stronger muscle-tendon junction here would help with increased knee stability.

Training should come at knee stability from other angles as well. Knee valgus, or being knock-kneed, is fairly common and dangerous to the medial collateral ligament. One of the best ways to shore up the knee and prevent, or even potentially alleviate this condition, is to strengthen the muscles on the upper/outer side of the hip. Specifically this would be the gluteus medius/minimus, tensor fasciae latae, and the I.T. band (iliotibial). There are several great athletic movements to help these muscles. No angle should be ignored. The structure of the knee demands that it be strong in all directions. This means making all of the muscles of the lower body strong and ready for action.

One of the biggest things differentiating my training from others is that I don't consider women to be second-class athletes. They are different, to be sure, but are capable of unbelievable heroics, athletic grace, and beauty. I'm lucky in that I get to see women doing amazing things in the gym and on the field all of the time. I'm not interested in hearing about estrogen and menstrual excuses for knee problems. Furthermore, there have been differences noted in landing technique between male and female athletes. These can be addressed by proper training and are therefore not a huge issue.

I've often said that female athletes use brains and heart to accomplish things that testosterone makes much easier. Smarter training will prevail. The real issue lies in the lack of proper coaching. People need to be educated. Our little girls deserve it. Our moms deserve it.

Bob Jodoin is an ISSA master trainer, a New York strength master trainer, a NBFEE fellow, and a former director of strength and conditioning at Total Performance Sports. He is now a strength and conditioning coach as well as a personal trainer in sunny Orlando, Florida. Bob serves as a strength and conditioning advisor for youth sports to the Winter Springs Pop Warner Midgets, the Wild AAU 13U baseball, and M-PACT Sports. He can be reached at bobjnys@aol.com.

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