

Incoming Female Athletes by:

Devan McConnell is the Sports Performance Coach for Women's Basketball and Men's and Women's Volleyball at Stanford University.

As a collegiate strength and conditioning coach working with two high profile female teams, there are some trends, which I have observed regarding the level of athletic development of many incoming females. I believe that the participation in a proper strength and conditioning program at the high school level would prove incredibly beneficial to the female athlete, especially those who wish to pursue athletics at the college level.

First off, it must be said, that specific talent and skill of a particular sport or position is not the same as overall athletic ability. Many of the young women whom I work with are unbelievably talented basketball and volleyball players. They are capable of feats on the court that constantly amaze me. However, their lack of general athleticism never ceases to surprise me as well. I currently coach a young woman who has dunked in practice, yet when she first came to school was unable to do a proper push up!

Is this the result of early specialization? How about a typical lack of understanding of the importance of a proper strength and conditioning program at the high school level? Perhaps no one ever took the time to teach them the proper habits and debunk the myths of good training. I say more often than not, yes to all three.

While the training habits and lack of sound technique of incoming male athletes leave something to be desired, this group of athletes almost always is far ahead of their female counterparts when they arrive at Stanford. It is unheard of for a male athlete to make it to the DI level in just about any sport, who has never participated in some kind of strength program. But this is more often than not the case with even the highest level female athletes I see.

You may be wondering why it is important for a female athlete to participate in a strength and conditioning program, especially one who plays her game at such a high level. Aside from the performance enhancing aspects (remember at the DI college level, teenagers are now pitted against young women), the number one reason is injury reduction. It is no secret that strength training creates adaptations to the muscles, tendons, and ligaments. At its most basic premise, a stronger muscle is a healthier muscle. The rigorous demands of a collegiate season wreak havoc on the body, and a proper strength and conditioning program can counteract some of the breakdown. In addition, the stronger an athlete, the better prepared their bodies are to withstand the forces which are forced upon them day after day, practice after practice, and game after game.

When the players arrive on campus at the beginning of the year, I look for common issues amongst all the players. I implement the Functional Movement Screen, as well as several performance standards to develop a baseline and a starting point for the training program. I also make sure to spend some time getting to know the players and asking questions about their training background. Several commonalities amongst the freshman arriving on campus are relative weakness, a higher likelihood for

injury during sport due to an inability to absorb force, an unfounded fear of gaining muscular size, and most of all, great potential to increase their athletic ability through a proper strength and conditioning program.

First, let's take a look at relative strength. In very basic terms, if an athlete, any athlete, increases strength relative to bodyweight, they have increased their ability to accelerate and decelerate. This is akin to putting a bigger engine and better brakes on a car. The car can now speed up and slow down more efficiently and effectively. What team sport athlete would not improve their ability just by getting to where they need to be faster, and being able to stop and/or change direction faster? If you were a head coach and had to pick between two basketball players with equal skills, but one could get up and down the court faster, which one would you pick? Obviously the faster athlete. That is just one area which is greatly influenced by relative strength.

Second, is the stigma that lifting weights, especially heavy ones, will cause an increase in muscular size with the female athlete. This is a myth which unfortunately still perpetuates the "fitness" industry, and because of this, high level female athletes are still very worried that they will end up looking like the football players if they participate in a structured strength and conditioning program. This could not be further from the truth. Heavy weights performed at low reps, exactly the prescription for increasing relative strength, is the opposite of what is needed for an increase in muscle mass. In fact, light weights moved with high repetitions is exactly what bodybuilders do to make their muscles grow (and the opposite of a performance enhancing strength program).

Third is the injury component. What female athlete is not concerned about the dreaded ACL tear? This injury is unfortunately at epidemic levels, and although there are many factors which play into the occurrence of this injury, relative strength has been shown over and over to be the factor which can be controlled, and which has a direct impact on injury reduction. Quite simply, as relative strength increases, the ability to decelerate or absorb force increases. Think about the "better brakes" analogy. The stronger the muscles, tendons, and ligaments of an athlete, the more efficient they are at decelerating. And this is where most ACL injuries occur. Now, technique is a critical component of this as well. It is not good enough to be strong but have poor movement mechanics. The key is to get strong the way the body is supposed to move. This is what a good strength program will be centered around.

Lastly is the great potential the female athlete has for improving their athleticism through proper training. In my experience several factors give the female athlete an advantage over their male counterparts. First, they are starting from scratch. Because of this they will see significant progress more quickly. Secondly, they are not hampered by poor exercise habits which usually plague the typical young male athlete. The ego doesn't play a role in female training the way it does with males. Guys will always look at the person next to them to see how much they are lifting. In a controlled setting, this competition can be beneficial, but in the real world this results in terrible technique and injuries waiting to happen. High school males are more concerned with how much they can bench press than perfecting technique and improving performance. Females on the other hand, will be much more concerned with their technique than what their teammates are doing. As a strength coach, it's much easier to get an

athlete with great technique to increase performance than an athlete with terrible technique and an ego to go with it.

The fact is any athlete will benefit from a good strength and conditioning program. This could not be more true than for the female athlete. The potential for injury reduction and performance enhancement through proper training is huge for this group. With the competition for college scholarships so intense, why would you not want to train to be a better athlete? Most females in high school athletics, and especially those heading into the collegiate ranks are not very good "athletes". They may possess a high level of skill in particular area, but they are lacking the overall qualities which make up athleticism. Participating in a strength and conditioning program will go a long way toward developing those qualities and improving performance while decreasing the likelihood of injuries while participating in their sport of choice.