

Smart Training for Improved Agility

by Brock Leggins, MA, CSCS

As with any other physical quality, agility requires a holistic approach to the training program. That is, all parts of the training work in unison, and are designed to make athletes stronger, faster, more explosive, leaner, and more injury resistant. Too often, we think of each part of training as being distinctly separate from one another. Speed, agility, strength, injury prevention, conditioning – we think of them as being all different. However, we simply cannot segment our training, as everything impacts one another. As an example, one may think of perhaps rotator cuff exercises as being injury prevention, and pushups as strength training. But all the rotator cuff work in the world will not save your shoulders if your pushup technique stinks. In regards to agility, if we teach athletes the proper landing and cutting positions, they will not only be faster, but safer. Additionally, I will share some numbers with you that show that being leaner likely improves explosiveness and agility. Therefore, nutritional counseling not only provides better fuel for the athletes to perform in their training and in their sport, but also improves body composition, allowing them to perform better that way as well. Many places will try to sell you on how hard their workouts are and how tired the athletes will be at the end. But the greater question to be asked is, how much better did they make them? Going back to the issue of technique – piling a bunch of bad reps on top of one another may make you tired, but it's also going to make you much more injury prone. Every part of the training process must work together to promote performance and health. Warm-ups, strength training, technique, stretching, energy systems development – it all works together to make a better athlete.

Here is a bit of what I am talking about. Andrew Paul, the strength coach for the Missouri Tigers' football team, showed that strength training and diet may actually play far larger parts in the improvement of athletic ability than perhaps even previously thought. As a bit of an experiment, coach Paul had one group of players practice 2 specific drills a few times per week, and another group did not practice specifically those drills. Both groups trained the same otherwise. They found that the group that did not practice actually improved their times more! Furthermore, a PhD in their athletic department crunched some numbers, and this is what he found:

- 82% of improvements in agility times were explained by the combination of strength improvements (squat) and body composition improvements (getting leaner).
- 71% correlation between vertical jump and agility times
- 92% correlation between body composition and vertical jump

What this all adds up to say, is that getting stronger and leaner makes you a better athlete! And if it happens at the collegiate level, you darn well better believe it happens in younger athletes,

and likely to a larger magnitude. Keep in mind, also, that “stronger” is always a relative term – it simply means getting the athlete stronger than they currently are, not turning them into world-class weight lifters. One beautiful thing about the quality of strength is that it, literally, improves pretty much everything else. Need to improve your running speed? Creating more force into the ground is a pretty good start. Need to get in better shape? How about making everything you’re doing a little bit easier (by being stronger), requiring a little bit less energy. Need to lose fat? Getting stronger signals your body to hold on to muscle mass, meaning that, assuming an appropriate diet, your body is more likely to get rid of fat.

Another key component of our training system is the teaching that goes into it. For instance, we aren’t simply trying to get stronger for the sake of getting stronger. If I tell an athlete we need get better at squats, their goal becomes getting better at squatting. But if I tell them that the goal is to get stronger at squatting so we can put more force into the ground, and therefore jump higher and run faster, their goal changes from simply “get a bigger squat” to “drive harder into the ground.” This important distinction extends to everything we do. We train a certain way not only to improve performance, but reduce injury, by using sound teaching progressions and techniques.

One final thing to consider is time investment. In the course of a typical speed and/or agility training session, they have likely gone through drills and run ragged for 45 minutes, but they have done little to strengthen muscles, tendons, and ligaments, learned little about how to properly move and position their bodies in space, and likely not learned proper technique in basic movement patterns such as squatting, pressing, pulling, and lunging. In all likelihood, the benefits they gain in that session probably could have been realized in about 1/5 the time, leaving plenty of time to focus on the rest of their development.

Agility consists, largely, of 3 things:

- **Strength** – and more specifically, relative body strength (that is, strength compared to body weight). Speed, agility, power, jumping – you name it, and it likely starts with strength. Speed, agility, and jumping in particular are all products of producing force into the ground. Often you will hear coaches talk about being quick off the ground, particularly in sprinting. While this is sound advice for advanced runners, athletes of lower levels simply do not produce enough force into the ground to propel themselves forward. Teaching them how to produce force and use their body as a whole, in sequence, goes a long way toward improving speed, agility, and power production.
- **Body Positioning** – as a quick demonstration, stand straight up. Now try to take a quick step to the right. Now, go back to your original position, but sink your hips a bit, and spread your feet to about shoulder width. Now take a quick step to the right. Chances are you were much faster. This is a very crude example, but still very telling. Teaching athletes proper positioning allows them to change directions much faster. Unfortunately, due to muscle imbalances and weakness,

as well as simply running through drills without being properly taught, many athletes do not know what position their bodies should be in to properly and safely cut and change direction.

- **Kinesthetic Awareness (Awareness of where the body is in space)** – many athletes, due to a lack of exposure to a variety of sports, muscle weakness, and puberty, just to name a few things, lack the body awareness to move themselves well through space. If an athlete has a good grasp on where their hands, arms, legs, and feet are at any given time, their ability to position themselves properly and quickly is much improved. It sounds silly, but we all know the kids who we talk about as being clumsy, having two left feet, etc. These are all ways of saying, they have poor kinesthetic awareness. While there is no quick fix for this, things like tumbling and gymnastics movements tend to help a lot in this regard.

What I have, hopefully, demonstrated in this short article is the importance for using a well-rounded, directed training program to create well-rounded athletes, as opposed to thinking about training in a segmented manner. While young athletes will literally benefit from almost any type of training at first, these gains will quickly dissipate, and in fact may put them at greater risk. A goal-directed and well-organized program with a long-term focus will promote injury resistance, and improve body composition and performance.