
THE CrossFit JOURNAL

Sport-Specific Training Using CrossFit Fundamentals

Kevin W. Cann experiments with adding sport-specific movements, agility work and lateral drills to the CrossFit program.

By Kevin W. Cann Jr.

May 2011



Photos courtesy of Kevin W. Cann Jr.

I have been personal training for five years and a fitness enthusiast my whole life. I played college soccer and am a competitive boxer and mixed martial artist. It seems I've attempted every workout known to mankind and seen the greatest gains since starting CrossFit two years ago. I've increased my capacity in all 10 fitness domains: accuracy, agility, balance, cardiovascular endurance, coordination, flexibility, power, speed, stamina and strength. And I did this while dropping body fat.

1 of 4

My love in training has always resided in working with athletes. CrossFit does a better job than any program at getting the average person ready for whatever life throws at him or her by making the athlete a generalist. With the results I had seen and my love for training athletes, I began to think CrossFit had a place in sport-specific training as well.

Many athletes, both amateur and professional, use CrossFit to increase performance, and the many variations of the program give athletes a lot of training options. CrossFit Endurance and CrossFit Football are but two variations, but athletes around the world are finding success uniting CrossFit fundamentals with sport-specific movements. I've been experimenting, too, and found I was able to get good results by adding in a few movements.

CrossFit does a better job than any program at getting the average person ready for anything With the results I had seen and my love for training athletes, I began to think CrossFit has a place in sport-specific training as well.

Side-to-Side and Single-Leg Movements

First, I added more single-leg movements. These include variations of the power lifts done on a single leg, various lunges, and various single-leg squats and skater hops. In sport, a lot of jumping is done off one leg.

Let's take a basketball player, for example: When running full speed and jumping up toward the rim, in most cases the athlete will take off from one foot. This requires single-leg power and stability to increase the height of the jump. Actions such as rebounding are done from two feet; the power clean, hang clean and snatch are great for this. Single-leg lifts also can help increase an athlete's acceleration and deceleration while sprinting.



Single-leg movements such as pistols and skater hops can be used in sport-specific unilateral training.

I've added more emphasis on lateral movement, too. Baseball and basketball put a huge emphasis on these movements. Acceleration and deceleration are important factors in all sports. Breaking runs into shuttles or placing more emphasis on shorter sprints can help improve these areas. No major sport requires athletes to run long distances. To accommodate all these movements, I've added in agility drills such as five-cone agilities, three-way shuttles, shuttles and various sprints in place of cardio exercises.

I've also added movements like continuous broad jumps and max-effort box jumps into workouts. I keep rep ranges for the jumps and power lifts around six or fewer to further emphasize power gains. I follow dynamic warm-ups with dynamic prep exercises that allow the glutes to be loaded in all three planes of motion. This is essential because to unload the glutes maximally, they need to be loaded in all three planes of motion. Dynamic prep exercises are centered on various lunges and squats that shift the center of gravity. The dynamic warm-up and dynamic prep include hurdles and agility-ladder drills.

Another sport-specific concept is reaction time. Being the first to react can help offset differences in speed and agility. A good example of this is NFL rookie Brandon Spikes. During his time at the University of Florida, he was the first player out of his stance on almost every snap. A slow 40-yard dash time shows he probably won't be a sideline-to-sideline tackler, but his reaction time will allow him to fend off blocks and make tackles in the middle of the field much more easily.



Reaction times also are important in boxing and mixed martial arts. To train this component, I add in chaos agility drills. This is usually done during the dynamic prep stage of the workout. Chaos agility drills force athletes to react to audible or visual commands. This can be done with 5-10-5 drills, box drills and even on a straight-away where the athlete is asked to change directions forward, backward, left and right.

What CrossFit Gives Sport

The CrossFit movements are all relevant to sport. The Olympic lifts and the power lifts are necessary to increase power and strength, respectively. Also, the gymnastic movements of CrossFit have a great effect on athletic ability. In sports, an individual is constantly pushing, pulling and jumping with his or her own body weight. Those movements will increase the athlete's ability to do all of them. Benchmark workouts such as Fran, Grace and Cindy are great to test our work capacity and our ability to perform these movements.

The CrossFit principle of constantly varying exercise is similarly great for sport. No movements in sport are ever repeated in the exact same way from game to game. This concept prepares the athlete realistically for sport. The National Strength and Conditioning Association breaks down periodization differently. It gives training protocols for every part of the season and off-season. In a perfect world, maybe this is the best way to train. However, this is not a perfect world. Realistically, the athlete will not train with you for an entire year. Even if he or she does, shouldn't the athlete try to improve upon all aspects of sport year



Rotational movements and balance drills can be used to challenge athletes who have to swing an implement in their sport.

round? With CrossFit keeping the intensity high, it allows the volume to stay low enough so the athlete is not overtraining. The amount of days the athlete trains can be scaled back if needed.

By tracking times of all the workouts, CrossFit has a method for monitoring work capacity. Increased work capacity should be a constant in a sport-specific training program.

By tracking times of all the workouts, CrossFit has a method for monitoring work capacity. Increased work capacity should be a constant in a sport-specific training program. From a physiological standpoint, the increase in work capacity shows the athlete's energy systems are being taxed and are adapting to a higher exercise demand. This will lead to increases in lactate threshold and maximal oxygen consumption, known as VO₂ max. CrossFit, of course, is less interested in those metrics and focuses instead on increasing the amount of work that can be done in a set amount of time.

An increase in work capacity also will mean an increased capacity in the 10 fitness domains. The athlete will be stronger, more powerful, faster, more agile, and so on for longer. Outlasting your opponent is sometimes all it takes to win.

Still, I would argue there is an 11th fitness domain: mental toughness. CrossFit will push comfort levels like no other program and help athletes develop confidence and determination. Greg Glassman has said, "The greatest adaptation to CrossFit takes place between the ears," and numerous *CrossFit Journal* articles talk about how the program affects athletes mentally. This mental toughness, learned in a CrossFit workout, can help drive athletes through challenges on the court or the field.

CrossFit produces great generalists, but I believe the program can also produce elite athletes. CrossFit's fundamental principles apply to all sports, and by integrating some sport-specific movements, I'm confident the program is well suited to the average person and the top-level athlete.

For my part, I've seen my broad jump go from 7 feet 6 inches to 8 feet 4 inches, and I can average 10 feet on three consecutive broad jumps. My vertical jump increased 2 inches, and I was able to cut 0.1 seconds from my 40-yard dash. I've upped the weight on all my lifts, demonstrating an increase in strength and power. I am walking proof that CrossFit can work for sport-specific athletes.

Spread the word!



About the Author

Kevin Cann has a bachelor's degree in health and wellness, with an emphasis in nutrition. He has received a state-approved diploma for completing a 500-hour program in exercise science, nutrition and practical application from the National Personal Training Institute. He also received a nationally accredited advanced certification through the state. He is a CrossFit Level 1 trainer and a CrossFit Endurance trainer. Cann owns [CrossFit Genetic Freak Fitness](#) in Stow, Mass.