

Developing Speed in the High School Athlete

Boo Schexnayder, Schexnayder Athletic Consulting

www.sacspeed.com

Most coaches would probably classify speed as the most critical of all athletic abilities. Yet in spite of this importance, in many programs speed abilities go largely undeveloped. This is often because of the faulty assumption that speed cannot be improved, or simply because so many training systems follow traditional yet ineffective means for developing speed. Sometimes coaches think they are developing speed, but due to misconceptions about speed development they really aren't.

Improving your training program to enhance speed is often not so much a matter of changing what you do as it is taking a different philosophical approach to what you are already doing. It is not the purpose of this article to describe specific, detailed workouts for speed, but rather to examine gross premises and concepts around which the speed training program should be organized.

Following are some key concepts for speed development, and also some common misconceptions about speed development that will help the coach to form this philosophy.

- **You Can't Train Speed Slowly.** In order to effectively develop speed, a significant portion of the athlete's training program must consist of high speed movements. Runs must be fast. In the weight room, some of the work must involve the bar travelling fast. Jumping exercises and medicine ball work must be done explosively as well. You train athletes to be fast by having them express speed in many forms of training.
- **Wind Sprints Don't Cut It.** While wind sprints might be a useful tool to develop anaerobic fitness in athletes, they don't serve as a speed development tool. To insure the development of speed, athletes must run at maximal velocities. While an athlete in a wind sprint session might feel fast on the first couple of sprints, fatigue quickly sets in and velocities become decidedly submaximal.
- **Identify Types of Speed.** Acceleration and Absolute Velocity are both components of speed, but they are quite different. Acceleration represents an athlete's ability to move the body from rest, while absolute speed refers to an athlete's top velocity once acceleration has been done. These are both critical components in sports performance,

but are often confused. They are different qualities, are trained in different ways, and should be trained separately.

- **Make the Entire Program your Speed Development Program.** Speed development should encompass every aspect of training. The best planned run training program will not effectively develop speed if the weight training, strength training, mobility work, jumping exercises, etc. are not done consistently and in accordance with the principles of speed development training. Speed development cannot take place in a vacuum, so doing run training designed to improve speed without including all of these other components is doomed to fail in the long run.
- **Be Careful with Endurance Work.** Endurance work by nature is typically slow. Many speed training systems fail because the endurance training component is overemphasized. Speed qualities are easily destroyed by the chronic repetition of slow movements. These chronic slow movements erode fast muscle contraction qualities, wrecking speed abilities when this type of work is overdone. In addition, high lactic acid levels can interfere with the function of the nervous system, making gains in speed, power, coordination, and skill tough to achieve. As a general guideline, prioritize speed and power development first, and focus on endurance later.
- **Don't Mix Speed with Endurance.** Even a well done endurance program can limit gains in speed development in certain situations. If endurance training must be done, schedule it apart from speed and power related activities. Don't combine speed and endurance in the same training session.
- **Rest for Quality.** In order to train speed effectively, training must be intense. This means runs must be at maximal intensities, jumps and medicine ball work must be explosive, and power oriented weight exercises must be performed with speed. In order to guarantee that the intensity remains high, athletes must be given adequate rest between sets or repetitions. This rest insures that the athlete is capable of performing maximally on every set or repetition, from the first to the last. Good training programs typically devote approximately half of the training days to high intensity – long rest work.
- **Keep Runs Short.** Speed cannot be developed in an environment of fatigue. For this reason, when designing run training for speed development, it is far better to run shorter distances. This prevents the accumulation of fatigue that could potentially destroy the session. Good training programs typically use runs of 10-30 meters in length to train acceleration, and runs of 40-60 meters to train absolute speed.

- **Keep Volumes Low.** When speed development is your concern, it is always better to underdo it. Quality of training is key. It is far better to do fewer repetitions at high intensity than to allow fatigue to creep in and prevent the athlete from performing with intensity at the end of the workout. Some speed oriented run training sessions may contain as few as 3 or 4 repetitions.
- **Keep Power Outputs Up.** Over the course of a workout, a set, or even a repetition, it is important that the athlete's intensity and power output remains high. The coach's job is to observe, note the athlete's intensity, and adjust sets, repetitions, distances, and recovery times to insure that quality of training is maintained. For example, if an athlete is doing single leg hops over 20 meters and struggling in the final 5 meters, it would be better to hop a shorter distance and perform more repetitions in compensation. This principle should be applied to all run, jump, and weight training.