Overview

Someone once said that the finalists who line up for the 100-meter dash in the next Olympics will have been determined at birth. While there is an element of truth to that statement, genetics alone will not get any athlete to the Olympics, and natural-born speed is not enough to elevate anyone in any sport to the highest level possible.

There have been lots of speed merchants who never became good wide receivers in football, base stealers in baseball, or point guards in basketball. And thousands of relatively slow athletes improved their running speed enough to become elite performers in a variety of sports. When it comes to speed, it’s not what you were born with, but what you do with inherited genetic advantages or limitations.

The greatest change in thinking regarding how to improve speed is how much other physiological forces come into play. Perhaps the best two examples are strength and power. Strength is the ability of a muscle or muscle group to produce force. Power is the ability to exert maximum force in the shortest period of time. It is the coordinated combination of both strength and speed of movement.

“There is no such thing as pure power,” says Gene Coleman, EdD, Strength and Conditioning Coach for the Houston Astros. “You can be strong but unable to apply the force quickly (no power). Speed is directly related to your ability to apply force. You cannot be weak and fast.”

Improving Sport-Specific Speed

“Regardless of the sport, there are only five ways to improve playing speed over short distances,” say George Dintiman and Bob Ward in Sports Speed (Human Kinetics Publishers):

1. Improving starting ability and acceleration
2. Increasing stride length
3. Increasing the number of steps taken per second (stride rate)
4. Improving speed endurance
5. Improving sprinting form and technique.
The five areas are not equally important in all sports. Starting, accelerating, stopping, and cutting are at or near the top of any sport’s priority list, while sprinting form is at the bottom in sports such as baseball, basketball, football and soccer. On the other hand, sprinting form is critical in events such as the 100 and 200-meter dashes. Following is a summary list of the need for speed in the four sports previously mentioned, according to Dintiman and Ward.

**Types of Activities**

To improve starting/accelerating/stopping/cutting, a training program (according to Dintiman, Ward, Coleman, and others) should include sport-specific form, developing or correcting muscle imbalance, speed strength (horsepower reserve), sport loading (carrying extra weight while running), and sprint-assisted acceleration (examples: running downhill, running on an accelerated treadmill).

- To increase stride length, the training program should include speed strength, muscle balance, **plyometrics**, sport loading, sprint-assisted activities, running form, and flexibility.
- To increase the number of steps taken per second (stride rate), the program should include sprint-assisted training, quick feet training, muscle balance training, and speed strength training.
- To improve sprinting technique (not a high priority in most sports), the program should include form training and speed strength training.
- To improve speed endurance (maintaining speed while running longer distances or after multiple short-distance sprints), the training program should include pick-up sprints, hollow sprints, interval sprints, sport loading, maximum effort training, and ballistics (the ability of the body to deliver, transmit, and absorb energy).

**Your Speed Potential**

All of us are born with a built-in range of speed potential. Some have ranges that are not exactly fast and some have the potential for developing world-class speed. But everyone, regardless of genetic predisposition, has the ability to improve speed within that basic range.

With the right training, work habits, environment, nutrition, technique, and mindset, everyone can get faster. Some can even move from the top of a less-than-fast category to the bottom of a higher class of speed.

Getting faster depends more on the individual than your genetic makeup. And even when you can’t move up a notch in running speed, you can compensate for the lack of speed by excelling in other aspects of a sport.