

The Specificity Principle for Sports Training

The Specificity Principle is key to developing effective fitness training programs for sports. Specificity also underlies how athletes learn sport skills. However, the principle is sometimes misinterpreted.

Specificity and Sports Fitness

Specificity refers to the type of changes the body makes in response to sports training. Very simply, *what you do is what you get*.

When an athlete trains, he or she repeatedly performs activities to prepare for the exact requirements of the sport. In time, the athlete's body becomes better able to meet the demands of the sport as it adapts to the training regimen.

Adaptations to training are most evident in elite athletes. For example, the effects of years of rigorous training clearly distinguish the bodies of distance runners from throwers.

For distance runners, major adaptations from the demands of sustained running include a larger, stronger heart and increased blood vessels to supply oxygen to the specific muscles involved in running. In contrast, adaptations to training for throwers include increased size and thickness of specific muscles of the body that are trained to improve power.

This principle applied to sports fitness training means that the overall energy demands of the sport determine which fitness components (e.g., strength, power, endurance) should be developed so that the requirements of the sport are matched.

For example, basketball fitness training should include some distance work with intermittent speed and agility training. In contrast, golfers would require little distance work, but train for power and flexibility.



The Specificity Principle and Sport Skill Learning

Sport skills are unique to each sport. Competitive sports require athletes to command an arsenal of options for executing skills so that they can make split-second adjustments in a variety of competitive situations.

Specificity for learning sport skills involves performing a variety of closely related movements. Rather than practicing and perfecting any single skill or movement only, specificity of skill learning means that athletes must develop variations of skills so that they can quickly adapt to the different conditions they will encounter in game play. See [Training Variation](#)

Early in learning, athletes tend to benefit from practicing skills with little variation because they are just beginning to understand what the skill requires. This is called the *cognitive* or *mental* stage. However, as learners progress, adding variation to practice better matches the specific demands of competition.