Relationships between strength and technique

The relationships between strength, technique and game performance are somewhat complex. As a result there is often confusion as to the effects of strength training not only in relation to the athlete's technique and level of performance, but also to his or her age and maturation level.

Because of the many variables, the effects of strength training on these factors coaches and athletes are seeing mixed results. Most noticeable is that increased strength can affect technique – and game performance – in a positive, negative or neutral manner.

Increased strength is believed to enhance technique and the ability of the athlete to execute his skills. However, greater strength can enhance technique only in the pre-and post-puberty years and in the early teen years. For adult athletes increased strength can have a positive effect on technique only if the exercises are specific to skill execution.

For bona fide and especially elite or high-level athletes, general strength usually has a negative effect on technique. It is more pronounced when very heavy weights or high volume training is used. The effects are usually noticed during game play when the athlete does not execute his skills as well as usual or simply cannot play up to his usual abilities.

This occurs even when the athlete is well conditioned and is stronger than he has ever been. Such performances are usually chalked up to being off days or some other poor excuse. Instead of looking at how well the athlete performs on the field, coaches usually look at how well he does on fitness or performance tests.

For some reason it is thought that as your physical abilities especially strength, increase, you will be performing better during game play. What is forgotten here is that the increased levels of strength have a negative effect on technique and often on endurance, which is directly related to execution of the game skills. The only exception is if the athlete does a great amount of practice on execution of the game skills as he or she is developing greater strength or after the strength training phase.

Technique should always be worked on throughout the athlete's career if strength training is used in the workouts. The reason for this is simple: anytime there is a change in strength levels there will be a change in technique. This is why after completion of a strength training program technique must be worked on to accommodate the increased levels of strength.

In other words, technique must be adjusted to the newly developed levels of strength. This is why strength training in-season is not recommended for athletes who must maintain good execution of skill during game play. For these athletes there is not enough time to make the necessary adjustments in technique.

Many athletes have a tendency to ignore technique but it is necessary to understand that technique is as important, if not more important, than improvement in physical abilities. How well the athlete executes his skills is the key to effective game performance. This becomes obvious if you watch most any game or individual performance.

For example, being the strongest man on the team is immaterial if the athlete cannot tackle his opponent. If he is a quarterback he must be able to throw the ball to the receiver who in turn must have the ability to elude his opponents so that he is free to catch the ball. Being the fastest person on the team in football, baseball or basketball means little if he or she cannot also execute quick cuts or changes in direction.

If a baseball player cannot hit or throw the ball well he will never become a great player. If he does not have good speed he will never be able to be a good outfielder. As should be obvious, execution of game skills is paramount. How much strength the athlete has is not as important. The better the athlete's technique the better the player he can be. When coupled together with enhanced physical abilities, the athlete will be able to execute his skills on even higher levels.

Instead of working on strength or technique separately, there is a way of developing strength to enhance strength and technique at the same time. The secret lies in doing strength exercises that duplicate the neuromuscular pathway used in executing the competitive skill.

For example, to enhance running technique, improve the ability of the athlete to drive the thigh forward forcefully and through a full range of motion. To do this the athlete would do the knee drive exercise with Active cords. If the objective is to improve the ability to drive the thigh forward through the same range of motion over a long distance as for example in cross-country, or in events such as the mile, a higher number of repetitions are used to develop more muscular endurance rather than strength.

As the athlete does these specialized exercises, he or she should visualize the exact execution used in performing the competitive skill. As a result, you get maximum transfer of the exercise to the skill execution. This in turn improves technique as well as the physical abilities as they relate to technique. This improves the athletes' performance much more than if only technique or improving physical capabilities were the objective of the workout.