

General and Specific Exercises in Sport

Part I

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In recent years there has been a debate among coaches as to the validity of training specifically for an athlete's sport. Many coaches have taken the line that only general strength exercises (squat, bench, etc.) are needed to enhance sport performance for all types of athletes. On the other side, "performance-enhancement specialists" are recommending "sport-specific" training be done on a variety of specialized implements (Swiss balls, wobble boards, etc.). Unfortunately, both sides are missing the boat entirely.

General strength exercises are important for athletes, but used alone they will not optimize performance. If general strength exercises alone were the answer for every athlete, then powerlifters and Olympic lifters would dominate every sport.

Likewise, the use of so-called "sport-specific" training by way of Bosu balls and similar implements will also not optimize athletic performance. Unless you are a surfer these training implements are not sport-specific in the least.

To not only improve, but optimize athletic performance, general strength exercises must be used in the initial phase to build a base. Once a strength base is in place, exercises that are truly specialized (sport-specific) can be incorporated in the next phase. In this phase general strength exercises are still used, but much less than in the initial phase. In this way, maximal strength is developed in the initial phase and then used to develop specialized strengths (explosive strength, speed-strength, etc.) that can be incorporated into the sport action in the following phase.

General exercise must be used to build a base before getting into the specialized exercises.

What Makes an Exercise Specific?

For an exercise to be specific it must fulfill one or more of the following criteria:

1. **The exercise must duplicate the exact movement witnessed in a certain segment of the sports skill.** For example, an exercise to duplicate the exact ankle, knee, hip, or shoulder joint action in running.
2. **The exercise must involve the same type of muscular contraction as used in the skill execution.** For example, in the knee drive exercise, the muscles undergo an explosive concentric (shortening) contraction (after being pre-tensed) to produce maximum force and resultant running speed. After the initial contraction the limb continues on via its own momentum until the antagonist muscles undergo a strong eccentric (lengthening) contraction to slow down and stop the limb before an injury can occur. The special exercise can also duplicate the speed of movement.

3. **The special exercise must have the same range of motion as in the skill action.** For example, in running, doing an exercise with the arm raised above the head and then pulling it downward may use the same muscles, but it does not duplicate the same range of muscular arm action. A more specific exercise is to move the arm backward and upward so that it duplicates the exact range of motion which occurs in the running stride.

General-Specific Exercise Continuum

Exercises typically are described as either general or specialized (sport-specific). In truth, there is a continuum along which all exercises fall. Because of this continuum, it is more accurate to describe exercises as either more or less specific in relation to one another. Where a particular exercise falls on this continuum depends upon how well it meets the above three criteria.



As you can see, the most specific exercise that can be done is the sport skill itself. Specialized exercises are the next most specific. General strength exercises and GPP, while important for other reasons, are not very specific. On the diagram, general strength exercises are placed to the left of the middle of the continuum. Due to the wide variety of general strength exercises this placement is not entirely accurate. Some general strength exercises may fall further to the right or left on the continuum. However, by definition, a general strength exercise can never be as specific as a specialized exercise.

For more information on this topic please check back at UltimateAthleteConcepts.com for the next installment in this article series. Also, be sure to check out the seminar in February for a complete discussion of this topic, with hands-on demonstrations.