Improve performance by learning to slow down

Acceleration and top end speed are two of the most sought after and measured attributes of athletic performance. Time and time again in sport we see how separation or closing speed can make a significant impact on the outcome of an athletic contest.

In my strength & conditioning work, improved speed and acceleration are often high on the list of improvements athletes wish to make. Too often in our quest for speed, however, a critical third component in athletic performance gets overlooked, that component is deceleration. The ability to slow or stop quickly, with control, and without injury is also an important skill in sport performance. The good news is that deceleration is one of the aspects of athletic performance that, with proper training, can be enhanced and yield improvements in agility and resistance to injury. This article will touch on some of the aspects of improving deceleration to help you improve at whatever sports you do.

Speed is a product of our muscles shortening rapidly with great power this is known as concentric contraction. The consequent action the muscles make to lengthen is the eccentric element of the movement. Muscle contraction that produces no shortening or lengthening is known as isometric contraction. All three types of muscle contraction are critical to high performance and remaining injury free. Here again the weakest link of the chain limits the capacity of the chain to the strength of that weak link.

I break deceleration training down into these aspects:

- Base strength
- Eccentric strength
- Static (or isometric) strength
- Technique
- Flexibility

The aspect or aspects I address first will depend on the individual. Often only one or two aspects require attention and at times lack of knowledge with regards to good technique is apparent. Often an athlete may not realize that proper body positioning is not being achieved during deceleration. Once aware of proper technique improvements can come quite rapidly unless is there are difficulties due to lack of flexibility or strength. Lack of flexibility (sometimes at the ankles for instance) may be preventing the athlete from being able to lower their center of gravity quickly while maintaining good position and proper balance. In this case ankle flexibility work might be in order. A lack of eccentric strength is indicated if the athlete struggles while trying to decelerate to a “stick and hold” position when coming to a quick stop or performing altitude drops from a box. Strength work with an emphasis on a three-second eccentric (or lowering) phase of the lifts performed is often the most direct way of addressing this particular strength need.

Steve Howard is the owner/operator of Steve Howard Fitness in Rapid City and can be contacted though his web site a www.stevehowardfitness.com