The Truth About Balance Training

By Gary Rothbart

The purpose of this article is to examine the impact of balance training on sports performance, rehabilitation of sports-related injuries and the prevention of sports injuries for elite and amateur athletes.

Before we can determine the impact of balance training on the above mentioned, we should define the term balance. Balance is what allows humans to maintain an upright position throughout the day. When in an upright position, the body is constantly moving. These movements for the most part are subtle and are referred to as postural sway.

The fact is that even when you try to stand as still as you can, you are actually swaying a little bit - back and forth, side to side. This is both natural and normal. If you did not sway at all, you could not react to a sudden change in balance. A little bit of sway is good, but it is important that it be controlled. If you sway a lot, or experience uncontrolled sway, you have poor balance. A more scientific explanation of balance is: Balance requires the person to maintain a position, to stabilize during voluntary activities, and to react to external perturbations (Brody, Dewane 2005).

Now that we have an understanding of what balance is, we can look at its resulting effects on sports performance, rehabilitation of sports-related injuries and the prevention of sports injuries for elite and amateur baseball/softball players. For the past number of years, there has been a significant increase in the implementation of balance training in the field of sports fitness training. The question is “does balance training provide athletes with the best possible training adaptation?” A recent study on the effects of lower-body unstable surface training on markers of athletic performance gives us some insight into the answer to this question. The purpose of the study was to determine the effects of 10 weeks of lower-body unstable surface training (UST) on performance in elite athletes.

The experimental unstable surface (US) group supplemented their normal conditioning program with lowerbody exercises on inflatable rubber discs; the control group (ST) performed the same exercises on stable surfaces. The ST group improved significantly on predicted power output, while no significant changes were noted in the US group.

We know that proprioception and balance training play a key role in the rehabilitation of sports-related injuries. It was previously thought that an injury to the ankle area (sprained ankle) would continue to repeat itself from time to time after the initial injury took place. The use of proprioception and balance training allows for a simple solution to this problem. There is a common belief that, since proprioception and balance training are successful in the rehabilitation of sports related injuries, this type of training will translate into improvements in the prevention of sports injuries. This does not appear to be the case. As a matter of fact, the opposite seems to be true.

A study on balance training has concluded that both male and female volleyball players that are involved in a balance training program are at increased risk of sustaining overuse knee injuries. As a single intervention, balance training has been shown to significantly reduce the recurrence of ankle ligament injuries in soccer, volleyball and recreational athletes; however, it has not been clearly shown to reduce ankle injuries in athletes without a prior ankle injury.

Balance training on its own has also been shown to reduce anterior cruciate ligament injuries in male soccer players. Surprisingly, it was also found to be significantly associated with an increased risk of major knee injuries in female soccer players and overuse knee injuries in male and female volleyball players (Hrysomallis 2007).

The two studies in this article support the fact that balance training is not recommended for elite and amateur athletes. The fact that balance training does not provide athletes with the best possible adaptation is one area to reconsider, but the fact that it increases the risk of overuse knee injuries in both male and female athletes should be a concern to all athletic trainers.

Consultant: Dr. D. E. Greenberg, M.D. Sports Medicine.

About The Author:

Gary Rothbart is the Canadian Director of the Tudor Bompa Institue. He is a certified personal trainer, educator and sport-specific training consultant. Gary resides in Toronto, Ontario, Canada. You can check out his other articles at www.optimumfit.ca

OPTIMUM FITNESS
416-256-6226

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