



SPORT-SPECIFIC CONDITIONING CONSULTANTS

'Sport-Specific Conditioning is our Focus, Performance is our Goal'

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Power Training & Injury Prevention

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Power training can help reduce sport related injury. One of the most common sports injuries is muscle or tendon strain and tearing. By regularly incorporating low-intensity plyometric movements (bounding, jumping, pushing etc.) you can increase your resistance to these types of injuries. The stretch shortening responses of these movements train the muscles through longer lengths, and increase the length-tension relationship within the muscle, myotendinous junction and tendon.

In addition, training programs that utilize plyometric based movements have shown to improve active joint stabilization through increasing muscle spindle fiber afferent neural feedback, increased rates of force development, increased motor unit size, the correction muscle imbalances within limb segments, improved recruitment and synchronization of muscle contraction patterns, and increase bone mineral density.

Collectively, these morphological adaptations reduce varus and valgus loads within a joint, and lead to greater force absorption during landing and directional changes. Further, research indicates that repeated plyometric training can induce changes in muscle fibre composition, to favor greater Type IIX contractile properties, and increase the number of Type I and Type II fibres. All of these adaptations lead to a stronger more responsive muscle, which makes the competing athlete faster, stronger, more efficient, and more resistant to injury.

Before beginning any type of Plyometric training program be sure to consult a strength and conditioning professional to check your movement mechanics and to develop a program appropriate for you.

To learn more about Power for Sport Performance check Vol. 1, No. 2 of *SPORT&EXERCISE SCIENCE*, or check our Power Training page on our web site at www.performancetrainingsystems.net/PowerTraining.php

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