NUMEROUS PROFESSIONALS IN the strength and conditioning field believe seniors should be involved in explosive weight training. However, explosive weight training has been developed primarily for athletes who want exercises that will make them more competitive than others. In fact, many seniors do not want to become a competitive athlete or have such specific athletic goals. Seniors, as a whole, do establish their goals to relate more with the ability to maintain their current fitness level, acquire a basic level of fitness, or reach a fitness level they had at a younger age. They want to continue to be in good physical shape and remain active in their daily activities without any competitive or explosive-type training.

Muscle power declines significantly with age because of the loss of neural conduction speed, as well as the loss of muscle strength from selective atrophy of the high force/fast twitch fibers. The loss of muscle power is, in many cases, the main reason seniors cannot prevent a fall. Unfortunately, power is not improved significantly without some form of explosive training that focuses on the neural aspects of muscle power because the movement is performed rapidly. Regular resistance training methods address the strength component of muscle power so both training methods should be employed in a well-rounded training program. Explosive weight training may also help improve bone mineral density, another physical trait that declines extensively with age, as bone responds not only to the loads placed upon it, but how quickly that load is placed upon it. Because osteoporosis affects millions of individuals worldwide, the issue has greater overall health care implications as well.

Finally, the main erroneous assumption about explosive training is that injury rates are high. However, the cause of injury is not performing a fast lift or a heavy lift, but performing a technically imperfect lift. Therefore, as long as proper technique is emphasized and monitored closely, seniors can safely and successfully engage in explosive weight training.

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In fact, seniors can experience several problems with explosive training. Injury is the first issue that is always discussed. Because most seniors are generally not as strong nor as coordinated as a younger client, they are at a higher risk of injury. Other factors, such as improper instruction, poor technique, and/or inappropriate progression of explosive training, places the older adult in a high-risk situation. Repetitive trauma and excessive biomechanical loading on the musculoskeletal system of the older adult can also contribute to the risk of injury.

Many studies support and show strength gains in seniors with low-to-moderate intensity and high repetition either on weight machines or using free weights without the higher risk of injury of explosive training. The low-to-moderate intensity/high repetition of resistance training has been shown to result in an improvement of strength and functional mobility in the older adult. Other considerations are that weight machines offer back support and a predetermined range of motion for seniors. Free weights, again used with low-to-moderate intensity/high repetition, assist with balance and coordination, critical issues for the senior. Weight machines and free weights are also easier to monitor with the senior than explosive training. In addition, seniors do seem to have many chronic diseases and disabilities that if not taken into account when designing a weight-training program would be contraindicative, especially when participating in explosive training.

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