Dynamic Chiropractic

THE SPORTS DC

Old Trend, New Risks: Heavy Weight Training

Carmine Gangemi, DC, CSCS

With more opportunities to exercise than ever, a greater selection of exercise options, and the subsequent opinions supporting and challenging their merits, it's easy to be confused as to which approach is best. Ironically, the health benefits sought from an exercise activity can also lead to injury from improper choice of activity, inadequate preparation for the activity, or poor technique related to the activity.

As a DC, you are inevitably going to be faced with the "exercise paradox" of subsequent injury and dysfunction that occurs from the pursuit of healthy exercise activity. Thus, your role may require rendering guidance to the patient to assist with their recovery and restoration of function, as well as to avoid future injuries.

This can be a challenging task, in part because the patient may view our opinion as a conflict to their exercise goals. This doesn't have to be the case if we are informed on the activity and can provide reasonable alternatives that promote both the well-being of the patient and achievement of their goals.

The Resurgence of Intense Lifting

An "old" exercise activity that is now being practiced by a new crowd is intense weight-training. Many individuals seeking to tone and strengthen their bodies are using techniques and principles previously utilized only by competitive athletes, bodybuilders and powerlifters. The result: Some of your patients may regularly perform intense and heavy resistance exercises that put them at risk of injury.

The weight-training exercises being performed often include barbell squats and deadlifts. Both of these exercise movements are safe and provide excellent potential for conditioning *when performed correctly*. The key is proper technique and a realistic schedule of exercise frequency to allow adequate recovery between sessions.

This is where things can become problematic. In the past, exercise regimens of intense bouts of heavy weight-training undertaken by athletes were generally designed and monitored by coaches and those familiar with strength and conditioning techniques. Many individuals now pursuing such activities don't have a staff of experts at hand to design their program or monitor their progress. These same individuals may rely purely on the "more is better" principle, which typically results in overuse injuries.

Injury Risk: Overloading

"Heavy" weight-training refers to performing an exercise set in the 2-4 repetition range. The main goal of such training is strength (versus *moderate* weight-training: performing a set in the 8-12 repetition range), with the primary goal being muscle hypertrophy.[1] There is significantly more effort required per repetition for heavy vs. moderate weight training in a given exercise set.

With heavy weight training, when the individual is unable to complete a repetition (failure), there is greater potential to apply improper loads to the musculoskeletal system (as well as stresses to the nervous system) compared to moderate weight training, where less weight is generally utilized.

Injury Risk: Improper Technique

Improper loading of the musculoskeletal system can be avoided when proper movement techniques are applied. Consider that the weight encountered during the exercise set is only part of the risk for injury. The typical cause of injury is poor execution of lifting mechanics.

The message that you as the doctor of chiropractic should stress with this patient group is to not neglect exercise technique during the pursuit of progressively heavier weights.

The inability to perform an exercise with proper technique can also be an indication of muscular imbalance. Evaluating the individual's movement patterns while they perform the exercise can provide great insight into such imbalances.

Once recognized, these imbalances can be addressed with proper exercises to enhance the deficient muscle groups. Presenting your patient with an exercise regimen that promotes improved technique and enhances the goals of their training routine can better validate your chiropractic care.

Injury Risk: Overtraining

Consistently poor technique may also be a sign of overtraining. Another role we can play is identifying the signs and symptoms of *overtraining syndrome*. Intense bouts of exercise often include attempts to overreach previous levels achieved (amount of weight or repetitions). Inadequate recovery strategies from such bouts can lead to overtraining syndrome.

The presentation of this syndrome is often varied and ill-defined.[2] However, symptoms including persistent fatigue, mood swings, unexplained exercise underperformance, sleep disturbances, and loss of appetite may relate to such a syndrome.[3]

Takeaway Points

The insightful nature of chiropractic care can complement and enhance the effects of heavy weight-training exercise regimens. We should recognize that the diversity of individuals now pursuing such activities requires an expanded understanding of their perspective on exercise and the exercises they are performing. Consider that the next patient facing you may squat 200 lbs or more during a typical exercise session – and may not be the typical 24-year-old male athlete.

References

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3. Kreher JB, Schwartz JB. Overtraining syndrome: a practical guide. *Sports Health*, 2012;4(2):128-138.