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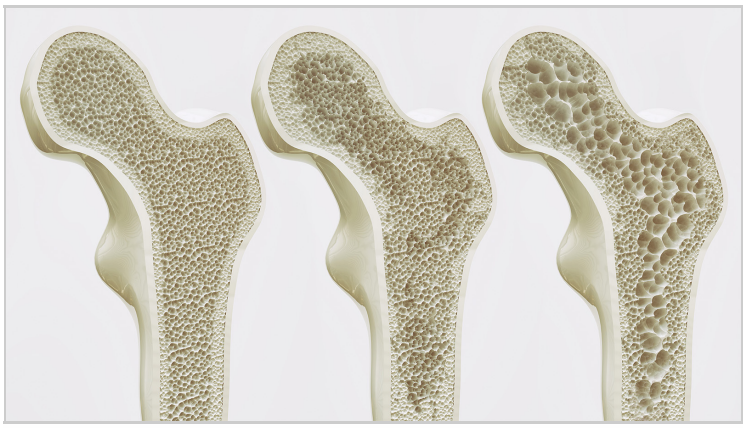
Benefits of Resistance Training for Bone Health Explained



What is Resistance Training?

Resistance training involves using weights, resistance bands, or your own body weight to challenge your muscles. This type of training makes muscles work harder, and the increased effort stimulates changes in both muscles and bones.

How Does Resistance Training Benefit Bones?

- Stimulates Bone Growth and Density: Resistance training, especially when performed at higher intensities, puts stress on bones. This stress signals the body to build and strengthen bone tissue, increasing bone mineral density. The increased density makes bones more resistant to fractures.
- Builds Muscle Mass: Resistance training helps build muscle mass, which provides support for bones and improves overall strength and balance. Larger, stronger muscles help to protect bones during falls and also generate higher forces during movement, further stimulating bone adaptation.
- Improves Bone Geometry: Resistance training, especially exercises like squats and deadlifts, can improve the geometry of bones, making them more resilient to bending forces. This means that even if bone mineral density doesn't increase significantly, the structural changes from resistance training still contribute to stronger bones.

Key Considerations for Resistance Training:

- Proper Form is Crucial: Using correct technique during resistance training is essential to prevent injuries, especially for individuals with osteoporosis or other bone health concerns. Working with a qualified physical therapist or a certified trainer experienced in working with individuals with bone health conditions can ensure you're using proper form and minimizing risks.
- Gradual Progression is Key: Starting with lighter weights and gradually increasing the intensity as you get stronger allows your body to adapt safely to the demands of resistance training. This progressive overload principle is essential for making consistent progress and minimizing the risk of injury.
- Focus on Compound Exercises: Compound exercises that work multiple muscle groups, such as squats, deadlifts, and overhead presses, are particularly beneficial for bone health. These exercises engage large muscle groups and create higher overall forces, leading to greater stimulation of bone growth and density.

Additional Advice from the Sources:

- Even Maintaining Bone Density is a Win: While increasing bone mineral density is ideal, even maintaining bone density while others experience age-related decline is a significant benefit of resistance training.
- Reduced Fall Risk is a Major Benefit: The improved strength, balance, and coordination gained through resistance training significantly reduces the risk of falls, which is especially crucial for older adults who are more susceptible to fractures.
- Resistance Training is Superior to Many Bone Drugs: The sources suggest that resistance training provides a wider range of benefits for bone health and overall well-being compared to many pharmaceutical interventions for osteoporosis.
- Finding a Qualified Trainer is Essential: If you have osteoporosis or are at high risk of fractures, it's crucial to work with a trainer who has clinical experience and understands the specific needs and precautions for individuals with bone health conditions. The ONERO program, developed by Belinda Beck and discussed in the podcast, is a licensed program specifically designed for this purpose and is delivered by accredited physiotherapists and exercise physiologists.

The information provided in these handouts is inspired by The Drive Podcast by Peter Attia, episode #322, which covers topics that may extend beyond traditional physical therapy practice. Patients are encouraged to listen to the podcast for a deeper understanding. Matt Pechacek, PT, cannot be held liable for decisions made based on this information.