Exercise for Osteoporosis: What You Need to Know

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Exercises for Osteoporosis

If you're reading this, you probably already know osteoporosis is a disease that causes weakening of the bones. This can lead to fractures anywhere in the body, with the spine and the hips being particularly susceptible.

Although there are diet modifications and medications that can help with osteoporosis, an exercise routine may be the best way to reduce the chances of injuries.

Benefits of Exercise

Regular exercise as a child and into adulthood maximizes bone growth, which occurs until the age of 35. Continuing the exercise routine after the age of 35 decreases the chances of developing osteoporosis.

Exercise strengthens muscles and bones, which in turn leads to increased balance and coordination. This can decrease the chances of falls, which can lead to fractures.

An exercise routine also can maintain or improve the posture. If osteoporosis is causing back pain, exercise can also help to decrease pain.

However, if you did not have an organized exercise routine, are at high risk for developing osteoporosis, or already have osteoporosis, it is not too late to reap the benefits of beginning an exercise routine.

What the Research Says

- One new study out of the University of the Basque Country Leioa, Bizkaia, Spain, finds that women in their late 50s with osteoporosis who exercise shown improvements in balance and strength and decreased risk for falls.
- A 2014 report out of the Federal University of São Paulo, São Paulo, SP, Brazil, aimed to determine the effect specific exercises had on postmenopausal women for preventing and treating osteoporosis. What they discovered was postmenopausal women can benefit from a variety of exercises, including weight lifting, walking, swimming, and water aerobics, 2 to 4 times per week. The researchers further noted the importance of taking precautions to avoid injuries and fractures. Moreover, post-menopausal women should not start any exercise program without discussing any specific concerns or risks with their doctor or a physical therapist.
- A 2016 article in the *Journal of Yoga & Physical Therapy*, reported on a study of antiosteoporotic medications and physical exercise to determine whether combined treatment could help with bone formation, mass and bone strength. The researchers concluded the combined effect of exercise and medications produced better results than either treatment alone.

International Osteoporosis Foundation Recommendations

The International Osteoporosis Foundation (IOF) recommends exercises that target “posture, balance, gait, coordination, and hip and trunk stabilization” for people with osteoporosis.

- Aerobic fitness is not recommended for people with osteoporosis. Patients who are pain-free should warm up, do their exercises and do a cooldown.
- Warmups should last at least 10 minutes and include a gentle range of motion exercises. The warmup can end with walking or simple activity that achieves a heartbeat of at least 110 beats per minute, but no more than 125 beats.
- A workout can consist of strengthening and stretching exercises. Exercises should help to improve posture, balance, and coordination.
- Cooldown activity should last five minutes and include relaxation techniques, such as deep breathing, muscle relaxation and visualization to music or other relaxing sounds.

Medical Evaluation Before Exercise

Before beginning an osteoporosis exercise routine, you’ll probably need to be cleared by your doctor. A bone density assessment measures the mineral composition of your bones, which gives an estimation of the strength of the bones. Three different tests can perform this:

- **Dual-energy X-ray absorptiometry (DXA) is the most accurate way to measure the strength of bones.** X-ray beams are passed through bones — strong bones allow less light to pass through.
- **Peripheral dual-energy X-ray absorptiometry (P-DXA) works similarly to DXA but is used for peripheral bones, such as ankles and wrists.** It is helpful because it can be used in outpatient clinics, such as doctors’ offices.
- **Dual photon absorptiometry (DPA) uses radioactive iodine.** The doses of iodine are slow, but the scan does take a longer time than DXA.

Exercise Recommendations for Osteoporosis

Once the doctor determines that you are safe to begin exercising, it's time to decide which exercises for osteoporosis you should incorporate into your new routine.

Typically, a combination of weight-bearing exercises and muscle-strengthening exercises should be included. Each has its own benefit.

Weight-Bearing Exercises

Examples of weight-bearing exercise for osteoporosis include dancing, aerobics, hiking, jogging, using an elliptical machine, and walking. Some of these examples are high-impact, while others are low-impact. However, all examples can keep bones strong.

Your doctor may advise lower-impact exercises if you are at a higher risk of falls.

Muscle-Strengthening Exercises

Examples of muscle-strengthening exercises include weight lifting, using resistance bands, lifting your body weight, and functional bodyweight training. Strength training builds muscle and also maintains bone density.

It is advised to seek assistance with creating a strength-training program from a professional.

Flexibility Exercises

Stretches can help your muscles move well. It is best to stretch after your muscles have already been in motion — either at the end of the workout or after you have warmed up. You should, however, avoid stretches that flex the

spine.

Balance Exercises

Building balance is also important. Building balance, along with strength, will help with fall prevention.

Balance exercises do not need to be complicated; simple exercises such as alternating standing on one foot can build balance.

Yoga and Pilates

Preliminary research is showing that performing yoga regularly may improve bone density in people with osteoporosis. Further research is needed to prove this; however, performing yoga under the instruction of an instructor who understands the limitations of those with osteoporosis can help build strength and promote balance and flexibility.

Pilates is known to melt belly fat, and a recent study shows that women with visceral fat have decreased bone density levels. This study is correlating a reduction in visceral fat with increased bone density levels.

Some Exercises Are Not Suitable

Some exercises may not be suitable for people living osteoporosis as they can increase the risk for fractures or put too much pressure on weak bones.

You should also stay away from exercises that require sudden and high impact movements. Activities such as jogging and jumping are considered to be high impact and can lead to fractures in weak bones.

Activities that require excessive bending and twisting at the waist, such as touching your toes or sit-ups, can cause fractures and should be avoided. Other activities requiring twisting or bending at the waist forcefully include golfing, bowling and tennis.

The Bottom Line...

Exercise can benefit anyone living with osteoporosis, but it is only one part of an extensive treatment program. Make sure you are getting plenty of calcium and vitamin D, maintaining a healthy weight, not smoking and not overconsuming alcohol.

It is also possible you may need osteoporosis medication to help maintain bone mass so make sure you take all the medications your doctor has prescribed.

Last, continue to work with your doctor and ask questions about the best ways to keep your bones strong and to avoid injury.