

Things to Know About Diagnosing and Treating Osteoporosis

Endoscopic Spine Surgeon Dr. Kaixuan Liu with Atlantic Spine Center shares the most important aspects about treating osteoporosis.

WEST ORANGE, NJ, UNITED STATES, November 7, 2023 /EINPresswire.com/ -- It might not be obvious at first, but bones are living tissues just like muscles and organs. Just like all living tissues in the human body, the cells age and die over time and must be replaced with new cells. If someone has [osteoporosis](#), the cells in their bones are being lost at a faster rate than they are being replaced, leading to more empty air-filled pockets within the structure of the bone. This leads to a general weakening of the bones and can also lead to slower healing when bones are damaged. But this doesn't mean that it's necessarily obvious if someone has osteoporosis.



Dr. Kaixuan Liu

"Osteoporosis is a silent disease," explains [Dr. Kaixuan Liu](#), an endoscopic spine surgeon and founder of [Atlantic Spine Center](#). "Many people don't have any noticeable symptoms, and indeed might not be aware they have osteoporosis until they suddenly break a bone."

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Anyone can have osteoporosis, but some people will be more likely to develop this disease than others. It's more common among adults over the age of 50, and it's about 4 times more likely to occur in women than in men. Other risk factors for osteoporosis include:

- personal history of broken bones
- family history of osteoporosis or broken bones
- reduced sex hormones such as estrogen or testosterone
- increased thyroid hormone
- taller height, lower weight, or lower BMI

- Asian or White ethnicity

- smoking
- heavy alcohol use
- poor nutrition, especially decreased calcium, vitamin D, and protein
- low activity level or immobility
- certain disorders, diseases, and medications

“A doctor will generally take all of these factors into consideration, and if they suspect someone is at risk of developing osteoporosis, they may recommend diagnostic testing,” says Dr. Liu.

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“A DEXA scan is a noninvasive, painless, and relatively quick procedure that most people would equate with any other type of routine X-ray scan,” says Dr. Liu.

This type of scan uses two different types of X-rays; one is absorbed by softer body tissues, and the other is absorbed by bones. By calculating how much of each is absorbed and comparing the difference, doctors can determine bone density.

The results of a DEXA scan will take the form of two numbers: a T-score and a Z-score.

A T-score is a comparison between the patient’s bone density and that of an average of all young, healthy adults of the same sex. Because this score is a comparison to someone at the peak of physical development, it’s generally more useful for diagnosing osteoporosis. A score of -1 or greater is considered normal, while -1 to -2.5 is below average, and less than -2.5 indicates osteoporosis.

A Z-score, on the other hand, compares the patient’s bone density to that of their peers, taking into consideration age, sex, and BMI. Scores below -1.5 indicate below average bone density compared to peers and is potentially an indicator of secondary osteoporosis.

“Secondary osteoporosis is still osteoporosis, but it’s the result of some other condition that needs addressing. Examples might be certain autoimmune conditions, GI diseases, or even some types of medication,” explains Dr. Liu.

There are several different ways to treat osteoporosis, and often they’re used in combination. Firstly, there are a number of medications that can help treat osteoporosis. Bisphosphonates are the most commonly used and can be either taken orally or injected. This class of drug aims to slow and prevent bone loss.

Other medications instead aim to increase the rate of bone regrowth. Hormone therapy—generally estrogen therapy for women and testosterone therapy for men—may also be

an option, although these might come with different risks from other medical treatments, so they're not well-suited for everyone.

Other treatments for osteoporosis include dietary and exercise routines. A diet that includes the right amount of calcium can contribute to bone health. Vitamin D is also important, as vitamin D is needed for the body to absorb and use dietary calcium. Adequate amounts of protein, magnesium, vitamin K, and zinc are also useful for maintaining healthy bones.

Weight training and resistance training, when used appropriately, put small amounts of stress on bones which then encourages the bones to strengthen in response. A doctor can help advise on the types of exercise that may be useful in treating osteoporosis versus which should be avoided.

"The best treatment of all, though, is always going to be prevention. A healthy diet and an active lifestyle can go a long way towards preventing or slowing the progression of osteoporosis. Of course, there are numerous other health benefits as well, so being thoughtful about diet and exercise is generally a good recommendation for everyone," says Dr. Liu.

Kaixuan Liu, MD, PhD, is a board-certified physician who is fellowship-trained in minimally invasive spine surgery. He is the founder of Atlantic Spine Center.

Atlantic Spine Center is a nationally recognized leader for endoscopic spine surgery with several locations in NJ and NYC. www.atlanticspinecenter.com

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