Everything You Need to Know About Osteoporosis

by JOSH DUVAUCHELLE

What Is Osteoporosis Exactly?

One in four women over the age of 50 and more than one in eight men are affected by osteoporosis. Shockingly, half of these people have no idea they have osteoporosis and haven't received a personal diagnosis for this potentially life-threatening disease.

If you want to avoid what many in the medical field refer to as a "silent disease," it's important to understand what is osteoporosis, who this bone disorder effects, and – most importantly - how you can prevent it, diagnose it, and manage it.

What Is Osteoporosis?

Osteoporosis is a bone disorder where your bones slowly become thinner and thinner. This may be due to a wide range of factors, including genetics, lifestyle choices, medications, and more.

As your bones thin, they become more brittle and fragile. This leaves you with a higher risk of fracturing or breaking a bone. In fact, in advanced cases of osteoporosis, people have been known to fracture a bone doing small, everyday movements like sneezing or couching.

What Causes Osteoporosis?

The causes of this common bone disorder are extremely varied. In general, the underlying causes of osteoporosis can be broken down into a few key categories.

1. **Lifestyle**

Poor diet, especially malnutrition or excessively low levels of minerals like calcium in your food, can contribute to osteoporosis. Other diet factors that may raise your risks of bone mineral loss include excessive sugar, alcohol, and caffeine.

Additional lifestyle choices that may impact bone health include smoking and lack of exercise.

2. **Diseases**

Some diseases have been linked with a higher risk of bone loss. These include liver disease, kidney disease, and diabetes.

3. **Medications**

Some medications that you may be taking can cause your bones to lose some of their thickness and strength. This includes steroids, aromatase inhibitors, anti-seizure medications, etc. It’s important to talk to your doctor about how different drugs you’re on may impact other areas of your health.

Osteoporosis Risk Factors

Besides the causes mentioned above, there are four key risk factors to be aware of.

1. **Gender:** Women are at a higher risk than men.
2. **Age:** While age doesn’t cause bone loss, there are higher rates among older men and women.
3. **Race:** Men and women of Asian or Caucasian descent have a higher risk of bone loss.
4. **Familial history:** If it runs in your family, or if your parents or grandparents experienced fractures, you may be at a higher risk of bone health problems.

Popular Osteoporosis Myths

Because osteoporosis is so pervasive and so misunderstood, it’s important to counter common myths about this bone disorder.

The most dangerous myth is that it's normal for your bones to get weaker as you age. While it's statistically true, it's not inevitably due to age but rather due to other factors that have built up over time. By knowing that it's not your destined fate, you can be empowered to take back control of your bone health and the aging process.

Likewise, many people - especially those in their 20s and 30s – link osteoporosis with big benchmarks in life, such as menopause. It's true that your risks of bone health problems go up after menopause, but that doesn't mean there aren't things happening right now in your body that you can take control of.

Finally, many people think osteoporosis is untreatable. The good news is that a combination of preventative lifestyle changes, as well as modern medications, can keep you moving, active and happy for many years to come.

Common Symptoms of Osteoporosis

Many men and women do not get an osteoporosis diagnosis until they go to the doctor after experiencing symptoms. Some of the most common symptoms of osteoporosis that accompany bone loss include changes in your posture, changes in your height, back pain, and fractures.

1. **Changes in Your Posture**

A report published in the American Journal of Epidemiology noted that when bone mineral loss occurs, one of the first places that it shows up is in the vertebrae in your spine.

As you lose bone density in your spine, your spine can start to curve. That can be due to weakening/collapsing vertebrae, fractures, or even vertebrae in your spine that has become displaced.

2. **Changes in Your Height**

As the bone density in your spine changes, it can also impact how tall you stand or sit. The effects can be subtle, but it’s one of the largest red flags, especially if you notice a difference of several inches since when you were a young adult.

Next page: More common symptoms of osteoporosis, how osteoporosis is diagnosed, and what osteoporosis treatment options are available.

Common Symptoms of Osteoporosis

3. **Back Pain**

Back pain affects millions of people, and its causes can be varied. While muscle tension is one of the primary causes, a sore back – especially if the pain involves your lower back – can be one of the first early signs of osteoporosis.

One of the easiest ways to tell if your lower back pain is due to bone health or another issue is by paying attention to when it hurts. If your back primarily hurts, and gets worse, after you've been standing for extended periods of time, it may be due to spine strength and bone health.

4. **Fractures**

When your bone loss goes untreated for too long, you'll experience bone fractures. This might happen when you're doing a small, everyday movement like bending over. Loss of bone strength from osteoporosis is one of the most common reasons behind unexpected fractures.

How Doctors Diagnose Your Osteoporosis

There are many ways that your doctor may analyze your bone health and determine whether you're experiencing osteoporosis. In general, these exams aren't ordered by a doctor unless you meet one of the following criteria that marks you as a potentially high risk for the bone disorder if:

- You're a woman over the age of 65.
- You have one of many risk factors, such as hyperparathyroidism.
- X-rays reveal irregularities in your bones.
- You're using medications linked to bone mineral loss, such as steroids.

One of the most reliable ways that your doctor will screen for osteoporosis is with a dual-energy X-ray absorption (DEXA) scan. Your doctor will likely scan osteoporosis "hot spots" such as your wrists, hips and your spine.

The scan will return a score on your bone strength. Your doctor will then compare it to the average scores of young adults, as well as the average scores of people who match your age and gender in the overall population.

This allows your doctor to determine whether your results are abnormal or not. Thankfully, the tests don't take very long, are not invasive, and aren't painful in any way. If used early enough, the exams can give you the info you need to take preventative steps to preserve your bone strength.

Osteoporosis Treatment

There are a wide array of treatments available if you're diagnosed with osteoporosis. The goal for all of these different treatments is to either prevent, stop or slow down how quickly your bones lose minerals, as well as minimize your risks of broken bones and fractures.

Not all treatments are equal, and some people respond better to specific treatments than other people. It's important to talk to your doctor and discuss what's available for you, as well as what may have worked in the past, to create an effective treatment plan.

Some osteoporosis treatment options to discuss with your doctor include:

1. **Bisphosphonates**

These are one of the most commonly used family of drugs to treat bone loss. Specific medication names include alendronate, etidronate, risedronate, and zoledronic acid.

The way these drugs work is by binding to the surface of your bones. By binding to, and coating, your bones, they slow bone mineral loss while giving your bone-building cells a chance to do their job.

Bisphosphonates are generally used to build up the density of your bones, as well as minimize your risks of spinal fractures. Some bisphosphonates have also been shown to reduce the risks of fractures in your hips or other bones. Thus, it's important for your doctor to know what areas of your body are experiencing the most bone loss.

It’s important to note that calcium negatively affects how these medications work, so timing your dosages, so they’re timed away from your meals and supplements is important.

2. **Denosumab**

Denosumab is a relatively new treatment for osteoporosis. It's a human monoclonal antibody, and it works by slowing the development and the activity of the cells that cause bone loss. It's primarily used in women with postmenopausal osteoporosis and can help minimize the risks of fractures.

3. **Parathyroid Hormone**

This hormone is what doctors refer to as a bone formation agent. Your bones are constantly undergoing a process where your bones rebuild. In osteoporosis, the rate of bone loss is more than the rate of bone building. This drug, which is administered via injections, increases the rate at which your bones rebuild.

4. **Hormone Therapy**

The administration of progesterone or estrogen as part of hormone therapy may help with osteoporosis because estrogen improves bone maintenance. This drug is especially helpful if you have gone through menopause. After menopause, your body produces less estrogen, which may be linked to bone loss.

5. **SERMs (Selective Estrogen Receptor Modulators)**

Selective Estrogen Receptor Modulators (SERMs) is a non-hormonal therapy that acts like a hormone similar to estrogen. Thus, it may help to build and maintain the strength and density of your bones. It's primarily used with women after menopause.

These are not your only treatment options, but they’re some of the most common that your doctor may suggest. Again, it’s important to work with your healthcare professionals to find a treatment (or combination of treatments) that work best for your lifestyle and your current bone health.

Next page: How to prevent osteoporosis and next steps.

Preventing Osteoporosis

Losing bone strength isn't inevitable. While many people stereotypically link a stooped back, decreased height and poor bone health with aging, there are health and lifestyle steps that you can take to protect and defend your bones' strength no matter your age.

1. **Exercise**

Most world health organizations recommend a minimum of 30 minutes of physical activity a day for better health, improved mood, enhanced weight loss, and lower risks of disease. You can add "preventing osteoporosis" to the list of exercise benefits.

Regular exercise helps to minimize bone loss, and it can also boost the strength of your bones. It's never too late to start investing in your bone health by spending half an hour a day doing physical activity.

For the best results:

- Do weight-bearing exercise, such as lifting weights. This increases bone strength.
- Do balance-improving exercises, such as skipping rope or climbing stairs. This can help prevent falls, which is important because falls increase your risks of osteoporosis-related fractures and injuries.

Cardio workouts, such as swimming or walking, enhance your general health but have limited benefits for osteoporosis.

2. **Calcium**

While calcium supplements are what many people turn to when they think of bone health, calcium in your food is more beneficial when it comes to building your bone health and bone strength.

Calcium-rich foods to add to your daily diet include soy products like tofu and tempeh; dark green, leafy vegetables (i.e., okra, spinach, etc.); white beans; fatty fish like salmon or trout; dairy products, especially low-fat dairy products like fat-free Greek yogurt; and fortified foods like fortified fruit juices.

In general, if you're age 50 and under you'll want to aim for at least 1,000 milligrams of calcium a day. This jumps to 1,200mg when you're over 50.

3. **Vitamin D**

Calcium isn't the only anti-osteoporosis superstar. Vitamin D boosts your body's ability to metabolize and use calcium. Aptly referred to as the "sunshine vitamin," safe sun exposure (don't forget the sunscreen!) increases your vitamin D levels. If you're worried about the health risks of sun exposure, you can talk to your doctor or a dietician about supplements.

4. **Protein**

Finally, protein helps build your bone strength, too. Unfortunately, many people turn to animal-based products like meat and dairy to boost their protein levels. Some studies suggest that excessive animal protein intake can lead to calcium loss in your bones. Alternatively, try plant-based sources of protein like nuts, legumes, and soy.

Additional Osteoporosis Prevention Tips

1. **Eat Less Meat**

A wide range of studies and reports show a positive relationship between bone fracture rates and the consumption of animal protein. This has led to many physicians and health experts to suspect that animal protein may be linked with a reduction in bone mineral density and an increase in calcium loss.

You don't necessarily have to become a vegetarian or a vegan to experience the benefits of changing your diet. Instead, focus on simply eating less meat. You could try cutting animal products out of one day a week (i.e., "Meatless Mondays"), or even out of one meal each day.

2. **Quit Smoking**

Men and women who smoke lose bone mineral at a rate that is much faster than men and women who do not smoke. When comparing smokers to non-smokers, the former experience fractures at a rate that's 71 percent higher!

If you smoke, now is a good time to try cessation techniques and reduce or eliminate the habit from your lifestyle.

3. **Drink Less Caffeine**

Excessive caffeine consumption may be linked to poor health. Plus, too much caffeine may raise your body's stress levels, which in turn drives up your levels of cortisol, a stress hormone that may be linked to bone loss and other health problems.

While many people may balk at the idea of eliminating caffeine from their diet, limiting your caffeine intake to mornings only can help you to curb your consumption naturally.

4. **Cut Back on the Salt**

The average adult eats 3,400mg of salt a day, yet most health organizations recommend a maximum closer to approximately 1,500mg. While many people recognize the risks of excessive salt in relation to health problems like high blood pressure, most men and women don't realize how it affects their bones.

Salt speeds up how your body passes calcium through your kidneys, thus affecting calcium absorption. By simply reducing your salt intake, you can increase your calcium levels. Plus, most people get their salt through processed foods, and health experts agree that minimizing your processed foods is good for your overall wellness.

5. **Reevaluate Your Medications**

Many commonly prescribed medications may speed up how quickly your bones lose calcium. Common examples include bisphosphonates and hormones, such as the ones used in hormonal therapy to treat menopause. If you're taking any medications, talk to your doctor about side effects that may impact your bone health. In some cases, there may be alternative drugs that don't have the same influence on your bone strength and density.

Your Next Steps

Whether you or someone you know is worried about bone health, or if you recently got a diagnosis for osteoporosis, take hope in the fact that it's not a hopeless bone disorder. You can take concrete action today to slow and prevent the loss of bone minerals, and you can work with your health care providers to find treatments that fit your needs.