

## Bone Health

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Although you can't see them, your bones are always working to support your body. Our bones are important for our overall health. In addition to helping us move from one place to another, our bones protect our organs (such as our brains and hearts) from injury. Our bones also perform jobs that are less obvious such as storing and releasing nutrients that our bodies need.

### What Happens if We Do Not Take Care of Our Bones?

If we don't take care of our bones, then our bones can't help support our bodies. If our bones become weak, they might break. Even though we can't see it, our bones are constantly changing. New bone forms, and old bone gets reabsorbed. When we are young, our bones are building strength. After age 30, our bones lose their strength, and we can lose more bone than we gain. As we get older, if we are not careful, we can lose too much bone and we are at risk for having problems with our bones such as osteopenia and osteoporosis. Osteopenia and osteoporosis are medical conditions that describe different levels of bone health problems. When your bones are weak but you are still at low risk of breaking a bone when falling, then you have a condition called osteopenia. If you have osteopenia, you would not know it because there are no symptoms. Osteoporosis is a more serious condition. If you have osteoporosis, your bones are so weak that you are at higher risk for breaking a bone, in particular your wrist, spine or hip, if you fall.



### What Can We Do To Keep Our Bones Healthy?

It is never too late to take steps to improve your bone health. Diet, exercise and living a healthy lifestyle are some important steps.

#### **Diet**

You should eat foods with plenty of calcium and Vitamin D. Not getting enough of these two important nutrients can put you at risk for developing problems with bone health

such as osteopenia or osteoporosis. If you are between 19 and 50 years old, you should try to eat 1000 milligrams (mg) of calcium and 600 international units (IU) of Vitamin D every day. If you are 50 or older, you should eat more calcium and Vitamin D every day with a goal of 1200 mg of calcium and 600 IU of Vitamin D.

If you are trying to eat foods with more calcium, look for dairy products, leafy green vegetables such as kale and bok choy, certain saltwater fish such as salmon and sardines, calcium fortified soy products such as tofu and soy milk, and nuts such as almonds. If you are trying to eat foods with more vitamin D, look for oily fish such as tuna, egg yolks, and vitamin D fortified milk. Getting sunlight is another important way to get vitamin D for the body. You may need to take supplements if you can't get enough calcium and vitamin D from the foods you eat every day.



### Physical Activity

You should stay active and avoid sitting around for long periods of time to keep your bones healthy. You can strengthen your bones by doing weight-bearing exercises, such as walking, jogging, lifting weights, yoga and dancing. These kinds of activities can help you build strong bones. If you don't have

any health problems that make exercising dangerous or difficult, you should try to get 150 minutes of exercise a week, which is about 30 minutes every day.

### Healthy Lifestyle

If you smoke cigarettes or drink a lot of alcohol, you might be at higher risk for developing osteoporosis. Cigarettes and alcohol block your body from getting the calcium you eat in your foods. If you are too thin from exercising too much or eating too little, you can put your bone health at risk too. Also, if you drink too much caffeine, which is found in coffee and sodas, or if you eat foods with a lot of salt, you might not be absorbing the nutrients from your diet that are important in bone building. You should talk with a health provider about your lifestyle choices, so you can eat foods and participate in exercise that makes your bone health the best it can be.

### Medicines

Many medicines can cause bone loss. If you have medical problems, such as inflammatory bowel disease, rheumatoid arthritis, lung disease and lupus, and take medications to treat those conditions, then you should speak with your doctor about your risk for bone health problems. Other medical problems, such as diabetes and cancer, can also weaken your bones. It is important to see your medical provider if you have to take medications regularly in order to avoid problems with your bone health in the future.

### **Risk Factors That You Can't Control**

If you are older, if you are of Asian or Caucasian ancestry, or if someone in your family has had a bone fracture, you are at higher risk for having problems with your bone health. Even if you don't have these risk factors, you need to pay attention to your bone health.

## **What is the Link between Osteoporosis and Menopause?**

As we get older, the levels of certain hormones in our bodies decrease. Estrogen is a hormone that protects our bones from bone loss. After we hit menopause at approximately 50 years old, our ovaries produce very little estrogen, which leads to more rapid bone loss. This is why older women are at higher risk for having bone health problems.



## **Are There Symptoms of Osteoporosis?**

Symptoms of osteoporosis include fractured vertebrae, which can cause loss of height or a slight curve of the spine. These kind of spine fractures are not painful, but other kinds of fractures can cause pain. Most often, however, women with osteoporosis have no symptoms.

### **If there are no Symptoms Associated With Weak Bones, Then How Do I Know If I Have Weak Bones?**

If you are over 65 years old, you should get a bone density test. If you are younger than 65 years old, your doctor may order a bone density test if you are at risk for bone loss. A bone density test tells us how strong your bones are and whether you are at risk for fracture. If you are over 65 and have normal bone health or bones that are only a little weak, then you can get a bone scan every 15 years. You might need to have testing more often if you are in this age group with weaker than average bones.

The bone density scan, also known as a DXA scan, is the best test to check your bone health. The test is painless and safe. You lie down for 3 to 10 minutes while a machine scans your body. You are exposed to a small amount of radiation during this test – less than in a chest X-ray. Using the results of your hip and spine bone strength, your medical provider can tell if you have normal or weak bones.

If you're younger than 65 years old, your provider might use a tool called FRAX to estimate your fracture risk and decide whether you should have a bone scan test. The FRAX tool uses information such as age, sex, weight, height, smoking, alcohol intake, and other risk factors to guess your risk of having a fracture within the next 10 years. Your medical provider will recommend starting a medication for bone health if your FRAX shows that you have a 3% risk of hip fracture or a 20% risk of a fracture of the forearm, shoulder, or spine.

## **What Kind of Medications Do Providers Prescribe To Treat Osteoporosis?**

If you are at high risk for getting a fracture, your doctor may recommend that you start a medication to improve your bone health. In addition to making sure you are living a healthy lifestyle and getting enough calcium and vitamin D, it is important for you to prevent falls. If you can prevent falls, you will decrease your risk of fracturing a bone.

The most common medication prescribed to treat osteoporosis is a pill called bisphosphonate, but there are other types of medications that your medical provider may prescribe for you. If you are prescribed a medication, it is important to take your medication as instructed and follow up with your medical provider regularly. If your health changes and you start a medication that weakens your bones, you should tell your medical provider. If you fracture a bone, you should tell your medical provider since a fracture might mean that you have a serious bone health problem such as osteoporosis and may need to have some tests done and even start a new medication.

## **Take Home Points:**

- ✔ Bone health is an important part of your overall health.
- ✔ If your bones are weak, you can get a fracture more easily.
- ✔ In order to improve your bones' health, eat a balanced diet with enough calcium and vitamin D, exercise regularly, and avoid bad habits such as smoking and drinking alcohol.

- 🌱 If you have health problems, make sure you see your medical provider regularly to check your bone health.
- 🌱 Depending on your risk factors, you may need to undergo bone health testing such as a DXA scan.
- 🌱 If you have poor bone health, you might need to start a prescription medication.

## Useful Websites:

- 🌱 <https://www.mayoclinic.org/healthy-lifestyle/adult-health/in-depth/bone-health/art-20045060>
- 🌱 <https://www.bones.nih.gov/health-info/bone/bone-health/bone-health-life-health-information-basics-you-and-your-family>
- 🌱 <https://www.bones.nih.gov/health-info/bone/bone-health/bone-health-life-health-information-basics-you-and-your-family>
- 🌱 <https://www.webmd.com/osteoporosis/features/lifestyle-tips#1>
- 🌱 <https://www.healthline.com/nutrition/build-healthy-bones>

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