



## Once Is Enough: A Guide to Preventing Future Fractures

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So, you've broken a bone. Only those who have experienced a fracture can truly understand how painful and debilitating it can be. Recovering should be your first priority. However, you and your doctor also will want to determine whether this fracture is a symptom of osteoporosis. If you have this underlying disorder, it puts you at greater risk for future fractures. *If you are age 50 or older, there is a very good chance your fracture is related to osteoporosis.* This fact sheet will help you better understand the relationship between fracture and osteoporosis, so you can take action now to strengthen and protect your bones.

Many people are unaware of the link between a broken bone and osteoporosis. Osteoporosis, or "porous bone," is a disease characterized by low bone mass. It makes bones fragile and more prone to fractures, especially the bones of the hip, spine, and wrist. Osteoporosis is called a "silent disease" because bone loss occurs without symptoms. People typically do not know that they have osteoporosis until their bones become so weak that a sudden strain, twist, or fall results in a fracture.

In the United States, more than 40 million people either already have osteoporosis or are at high risk due to low bone mass. The disease can occur in both men and women and at any age, but it is most common in older women.

The majority of all hip and spine fractures among older white women can be attributed to underlying bone fragility. Moreover, women near or past menopause who have sustained a fracture in the past are more likely to experience another fracture. Yet, unfortunately, few patients with osteoporotic fractures are referred for an osteoporosis evaluation and medical treatment.

### The Osteoporosis Evaluation

#### **I've already had a fracture. Is it too late to talk to my doctor about osteoporosis?**

It is never too late. Ideally, you should talk to your doctor during your recovery about whether you might be a candidate for an osteoporosis evaluation. But even if your fracture has healed, you can be evaluated and begin taking steps to protect your bones now.

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## What kind of doctor should I see about getting an osteoporosis evaluation?

Many different kinds of doctors can evaluate and treat osteoporosis. Start with your primary care doctor or the doctor treating your fracture. He or she probably can conduct the evaluation and may then refer you to a specialist, such as an endocrinologist or rheumatologist, if you require treatment.

## What does an osteoporosis evaluation involve?

One thing your doctor will do is ask about your medical history and lifestyle to determine whether you have risk factors for osteoporosis. Some of the factors that increase the risk of developing osteoporosis include personal or family history of fractures; low levels of the hormone estrogen or testosterone; and the use of certain medications, such as glucocorticoids or anti-seizure medications, that may contribute to bone fragility. Your doctor also may want to test your blood or urine and may suggest that you have a bone mineral density test.

## What is a bone mineral density test? Is it painful?

A bone mineral density (BMD) test is the best way to determine your bone health. This test can identify osteoporosis, determine your risk for fractures (broken bones), and measure your response to osteoporosis treatment. The most widely recognized BMD test is called a dual-energy x-ray absorptiometry, or DXA test. The test is safe and painless, a bit like having an x ray, but with much less exposure to radiation. It can measure bone density at your hip and spine and takes only 15 minutes to complete. For a DXA test, you will be asked to lie on a table while a machine above you measures your bone density.

Some private insurance plans will cover BMD tests ordered by your doctor. Medicare also may pay for a BMD test under certain circumstances for women and men age 65 or older. Your doctor and his or her office staff can help you determine if Medicare will cover a BMD test for you.

## Strategies to Reduce Your Risk of Fractures

### If I am diagnosed with osteoporosis, what should I do next?

You may feel concerned or even frightened after being diagnosed with osteoporosis. However, the good news is that, armed with information and the support of your doctor, you *can* significantly improve your bone health and reduce your risk of future fractures with a combination of medication, diet, exercise, and lifestyle modifications.

### Some of my friends take medication for osteoporosis. Should I consider this?

Yes. Several medications are available to prevent and treat osteoporosis, including: bisphosphonates; estrogen agonists/antagonists (also called selective estrogen receptor modulators or SERMS); parathyroid hormone; estrogen therapy; hormone therapy; and a recently approved RANK ligand (RANKL) inhibitor. Your doctor can help you understand the benefits and risks of each of these medications and select one that is right for you.

In men, reduced levels of testosterone may be linked to the development of osteoporosis. Men with abnormally low levels of testosterone may be prescribed testosterone replacement therapy to help prevent or slow bone loss.

### What else can I do to protect my bones?

In addition to taking your medication, some of the most important things you can do are to follow a diet rich in calcium and vitamin D, maintain an adequate daily intake of protein, monitor your sodium intake, and get plenty of exercise.

- **Calcium** is needed to maintain healthy, strong bones throughout your life. Unfortunately, most Americans do not get enough calcium from their diets. Dairy products such as milk, cheese, and yogurt are excellent sources of calcium, and some nondairy foods such as broccoli, almonds, and sardines can provide smaller amounts. In addition, many foods that you may already enjoy—juices, breads, and cereals—can now be found fortified with calcium.

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Calcium supplements can ensure that you get enough calcium each day, especially in people with a proven milk allergy. The Institute of Medicine recommends a daily calcium intake of 1,000 mg (milligrams) for men and women up to age 50, increasing to 1,200 mg for women over age 50 and men over age 70.

Calcium supplements are available without a prescription in a wide range of preparations and strengths. Many people ask which calcium supplement they should take. The “best” supplement is the one that meets your needs based on tolerance, convenience, cost, and availability. In general, you should choose calcium supplements that are known brand names with proven reliability. Also, you will absorb calcium better if you take it several times a day in smaller amounts of 500 mg or less each time.

- **Vitamin D** plays a significant role in helping your body absorb calcium. The relationship between calcium and vitamin D is similar to that of a locked door and a key. Vitamin D is the key that unlocks the door, allowing calcium to enter your bloodstream. As we age, our bodies become less able to absorb calcium, which makes getting enough vitamin D even more important. The recommended daily intake for vitamin D is 600 IU (international units) up to age 70. Men and women over age 70 should increase their uptake to 800 IU daily. Many people get this amount by consuming vitamin D-fortified foods such as milk. In addition, many calcium supplements are fortified with vitamin D.
- **Sodium**, a main component of table salt, affects our need for calcium by increasing the amount of it we excrete in urine. As a result, people with diets high in sodium, or table salt, appear to need more calcium than people with low-sodium diets to ensure that, on balance, they retain enough calcium for their bones.
- **Protein** in excess amounts also increases the amount of calcium we excrete in urine, but it provides benefits for bone health as well. For example, protein is needed for fracture healing. In addition, studies have shown that elderly people with a hip fracture who do not have

enough protein in their diets are more likely to experience loss of independence, institutionalization, and even death after their fracture. The recommended daily intake for protein is 56 grams for men and 46 grams for women.

### **I've always been active, but I don't want to risk breaking another bone. Maybe I need to spend more time "on the sidelines" from now on.**

It is perfectly understandable that you want to avoid another fracture. No one who has broken a bone wants to revisit that pain and loss of independence. However, living your life “on the sidelines” is *not* an effective way to protect your bones. Remaining physically active reduces your risk of heart disease, colon cancer, and type 2 diabetes. It may also protect you against prostate and breast cancer, high blood pressure, obesity, and mood disorders such as depression and anxiety. If that isn’t enough to convince you to stay active, consider this: exercise is one of the best ways to preserve your bone density and prevent falls as you age.

### **What type of exercise is best to reduce my risk of another fracture?**

Exercise can reduce your risk of fracturing in two ways—by helping you build and maintain bone density and by enhancing your balance, flexibility, and strength, all of which reduce your chance of falling.

- **Building and maintaining bone density.** Bone is a living tissue that responds to exercise by becoming stronger. Just as a muscle gets stronger and bigger with use, a bone becomes stronger and denser when it is called upon to bear weight. Two types of exercise are important for building and maintaining bone density: weight-bearing and resistance. Weight-bearing exercises are those in which your bones and muscles work against gravity. Examples include walking, climbing stairs, dancing, and playing tennis. Resistance exercises are those that use muscular strength to improve muscle mass and strengthen bone. The best example of a resistance exercise is weight training, with either free weights or weight machines.

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