

Osteoporosis - A Preventable Epidemic

What is osteoporosis?

Osteoporosis is a chronic, progressive disease in which bones lose their normal hardness. It is a silent disease that can result in weakened bones and fractures.

Why is osteoporosis becoming an epidemic?

Osteoporosis is already the most common bone disease in the world. 13-18% of postmenopausal women in the U.S. has osteoporosis. Another 30-50% of postmenopausal women has less bone material or bone mass than normal, which means they are at risk of developing osteoporosis.

Osteoporosis is **not** a normal part of aging, although we all lose bone mass as we age osteoporosis and bone fractures can be prevented.

Why is osteoporosis a problem?

Osteoporosis is a major health problem in the U.S. because it causes disabling fractures. Complications from fractures can rob older people of their independence and are sometimes fatal.

The bones most commonly affected by osteoporosis are the bones in the spine and hip. Spinal fractures can occur from something as simple as coughing, sneezing, carrying grocery bags, or lifting a grandchild. People with spinal fractures often have a humpbacked appearance - they lose height and their waistline disappears. 340,000 Americans have a hip fracture each year due to osteoporosis. This number is expected to triple by 2040 with the aging of the baby boomer generation. Some people die of hip fracture complications and many individuals never return to their previous level of independence after a hip fracture.

Are women and men both at risk for developing osteoporosis?

Both women and men get osteoporosis, although the risk is higher for women. Women have lower bone mass than men and can lose a high percentage of bone at the time of menopause.

A woman's risk of having a hip fracture from osteoporosis is equal to her Combined risk of breast, uterine, and ovarian cancer.

Men can also develop osteoporosis, especially if they live into their 80's and 90's, If they take medications for other chronic diseases that cause bone loss.

How do you know that you are at risk for developing osteoporosis?

There are some risk factors that you can't do anything about. These include:

- Caucasian or Asian ancestry
- A history of fractures in your family
- Advancing age - all of us normally lose a small percentage of bone mass each year after age 35. If you live into your 80's, you may have lost a significant amount of bone.
- Female sex

Other risk factors can be controlled through healthy life style choices. These include:

- not smoking cigarettes and avoiding excessive alcohol intake
- keeping your body weight above 127 pounds (or - maintain ideal body weight for your height)
- taking estrogen replacement therapy if you are a post-menopausal woman
- making sure you eat enough calcium and regularly participating in weight bearing exercises

How do you know if you should have a bone density test?

A bone mineral density test measures how strong your bones are, can help predict fracture risk, and provides information to your doctor about whether you should receive treatment for osteoporosis. The National Osteoporosis Foundation recommends a bone mineral density test for the following people:

- all postmenopausal women under age 65 who have one or more of the risk factors mentioned above.
- all women 65 and older
- post-menopausal women who have had a fracture
- women who are uncertain about taking hormone replacement therapy or who have been taking hormone replacement therapy for a long time

What can you do to keep your bones healthy and prevent osteoporosis?

The most important things you can do to keep your bones healthy and prevent osteoporosis are:

- to take in enough calcium and Vitamin D every day
- do regular exercise to keep calcium in your bones
- avoid smoking and excessive alcohol intake

What can you do to keep your bones healthy and prevent Osteoporosis (cont.)?

If you are an adult between 19 and 50, you should consume 1000 mg of calcium every day. If you're a woman between 51 and 65 taking hormone replacement therapy, your daily calcium requirement is 1200 mg a day. If you don't take hormone replacement therapy, your daily requirement is 1500 mg a day. Both men and women over age 65 should consume 1500 mg of calcium daily.

The best sources of calcium are dairy products. For people who have problems digesting the lactose in dairy products, many lactose free products are available; for example, orange juice or V8 juice fortified with calcium has as much calcium as one glass of milk, about 300 mg. We also need Vitamin D to help absorb the calcium. Good sources of Vitamin D are fortified milk, cereals, egg yolk, and saltwater fish.

Participate in an exercise program to keep your bones strong. Walking and dancing are examples of weight bearing exercises that keep your bones healthy.

What should you look for in a calcium supplement?

If you can't take in enough calcium in your diet, you'll want to find a calcium supplement that is right for you. The most common forms of calcium supplements are calcium carbonate and calcium citrate.

Become a label reader - look at the amount of "elemental calcium" each tablet provides.

Take your calcium supplement with food, but wait at least two hours to take your Calcium supplement if you are eating beans or wheat bran, as these foods contain substances that interfere with optimum calcium absorption.

Keep in mind that 500 mg of calcium is the most you can effectively absorb at one meal, so you may need to take calcium tablets at more than one meal.

Calculate how much calcium you need to take each day in the form of a supplement. How many tablets will you need to take? What is the cost per day?

Many supplements also contain 200 International Units of Vitamin D; people who are housebound may need more. Remember that your body stores Vitamin D, so you can overdose on it. Ask your doctor how much Vitamin D you should be taking.

Keep your own food diary for at least a week to monitor how much Calcium you consume each day.

How is osteoporosis treated?

There are several medications approved by the federal Food and Drug Administration (FDA) that can both prevent and treat osteoporosis. Hormone replacement therapy has a major role in preventing osteoporosis.

Taking hormone replacement therapy for 10 or more years after menopause decreases the risk of all types of osteoporosis fractures by 50-75%. Hormone replacement therapy also helps women maintain a healthy heart and some studies show that women who take hormone replacement have less memory loss as they age. If you are not taking hormone replacement therapy, talk to your doctor. A drug called Evista may also be used as a form of hormone replacement therapy for women who can't take estrogen. Fosamax and Actonel are two drugs that are used to prevent and treat osteoporosis. These drugs are taken by mouth the first thing in the morning with a full glass of water. After taking these drugs, you must remain upright for at least 30 minutes before you have food or water. Fosamax is now approved in a once per week dose.

Miacalcin is a drug that can be inhaled or given by injection. It is used to treat osteoporosis once it is diagnosed, and it can help decrease the pain of spinal fractures.

What other things should you do if you have osteoporosis?

A. Avoiding falls

One of the most important things you can do if you already have osteoporosis, besides taking your prescribed medications, is to avoid falling. If your bones are weak from osteoporosis and you fall, it is likely you will have a fracture.

To avoid falling, make sure you keep your home well lit, especially the night time route from your bed to the bathroom. Remove throw rugs, lamp cords, or other objects that may cause you to fall. Wear footwear that grips the floor, rather than stockings or slippers.

If you have problems with your vision, have the problems corrected. Make sure that you wear your glasses, even for short trips to the kitchen and back.

B. Exercise

Bone is living tissue that responds to exercise by becoming stronger. Just as a muscle gets stronger and bigger the more you use it, a bone becomes stronger and denser when you place demands on it.

If your bones are not called upon to work, such as during physical activity, they do not receive any messages that they need to be strong. Thus, a lack of exercise, particularly as you get older, may contribute to lower bone mass or density.

What other things should you do if you have osteoporosis (cont.)?

Two types of exercises are important for building and maintaining bone mass and density: weight-bearing and resistance exercises. Weight-bearing exercises are those in which your bones and muscles work against gravity.

This is any exercise in which your feet and legs are bearing your weight. Jogging, walking, stair climbing, dancing and soccer are examples of weight-bearing exercise with different degrees of impact. The second type of exercises are resistance exercises or activities that use muscular strength to improve muscle mass and strengthen bone. These activities include weight lifting, such as using free weights and weight machines found at gyms and health clubs, swimming and bicycling.

Most weight-bearing and resistance exercises place health demands on bone. Daily activities and most sports involve a combination of these two types of exercises. Thus, an active lifestyle filled with varied physical activities strengthens muscles and improves bone strength.

CAUTION: If you are frail, have had a fracture, fall frequently or have osteoporosis, you should take extra caution. Certain movements like twisting of the spine, high impact aerobics, or bending from the waist can be harmful. It is recommended that before starting any exercise program, you should consult with a knowledgeable physician about your fracture risk.

How can you help younger people in your family prevent osteoporosis?

Osteoporosis is a disease that is seen by gerontologists (doctors that specialize in caring for older people), but the disease begins in childhood with food and exercise habits. Let them know what you have learned about osteoporosis risk factors and how to prevent them.

Talk to family about calcium requirements, especially if you have daughters or granddaughters. Keep in mind that the only age group of females who consume enough calcium are infants under one year and girls age 6 to 11.

Between 12 and 35, both young women and young men must build the bone mass that is needed to last a lifetime. Teenage girls are at special risk: Because many of them are concerned with being thin, teenage girls drink 4 times more soft drinks than milk. Fast foods also contain substances that prevent calcium from being absorbed.

You can be a role model for healthy bones for your family!

Where can you get more information about osteoporosis?

If you are on the Internet, go to nof.org - this is the website for the National Osteoporosis Foundation. You can also call the National Osteoporosis Foundation at 202-223-2226.