



WomensHealth.gov

1-800-994-9662

TDD: 1-888-220-5446

# Osteoporosis



I used to think that women don't have to worry about frail bones until they get older. I was wrong! I found out too late that women of all ages need to take steps to keep their

bones strong. Unfortunately, like me, millions of women already have or are at risk for osteoporosis. Some days I have a hard time doing the things I want to without help. But I still try to do what I can to keep my bones as strong as they can be. I make sure to get enough calcium and vitamin D, and I try to walk with my neighbor in the mornings. I also talked to my doctor about taking medicine to help.

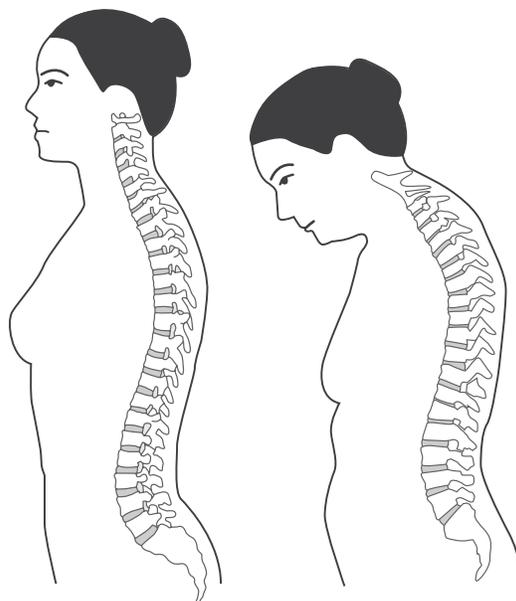
**Q: What is osteoporosis?**

**A:** Osteoporosis (oss-tee-oh-puh-ro-sis) is a condition that means your bones are weak, and you're more likely to break a bone. Since there are no symptoms, you might not know your bones are getting weaker until you break a bone!

A broken bone can really affect a woman's life. It can cause disability, pain, or loss of independence. It can make it harder to do daily activities without help, such as walking. This can make it hard to participate in social activities. It can also cause severe back pain and deformity.

**Q: What bones does osteoporosis affect?**

**A:** Osteoporosis can happen to any of your bones, but is most common in the hip, wrist, and in your spine, also called your vertebrae (ver-tuh-bray). Vertebrae are important because these bones support your body to stand and sit upright. See the picture below.



Healthy spine

Osteoporosis

**Osteoporosis in the Vertebrae**

Osteoporosis in the vertebrae can cause serious problems for women. A fracture in this area occurs from day-to-day activities like climbing stairs, lifting objects, or bending forward.

- Sloping shoulders
- Curve in the back
- Height loss
- Back pain
- Hunched posture
- Protruding abdomen



WomensHealth.gov

1-800-994-9662

TDD: 1-888-220-5446

**Q: What things cause me to have a higher chance of getting osteoporosis?**

**A:** Things that can increase your chances of developing osteoporosis include:

- being female
- small, thin body (under 127 pounds)
- family history of osteoporosis
- being postmenopausal or of an advanced age
- Caucasian or Asian race, but African American and Hispanic women are also at significant risk for developing the disease
- abnormal absence of menstrual periods or having an eating disorder, such as anorexia nervosa or bulimia that can cause menstrual periods to stop before menopause, and loss of bone tissue from too much exercise
- low testosterone levels in men
- a diet low in dairy products or other sources of calcium and vitamin D
- inactive lifestyle
- long-term use of glucocorticoids (medicines prescribed for many diseases, including arthritis, asthma, and lupus) anti-seizure medications; gonadotropin releasing hormone for treatment of endometriosis; aluminum-containing antacids; certain cancer treatments; and excessive thyroid hormone
- cigarette smoking and drinking too much alcohol

**Q: How can I find out if I have weak bones?**

**A:** There are tests you can get to find out your bone strength, also called bone

density. One test is a dual-energy x-ray absorptiometry (DEXA). A DEXA takes x-rays of your bones. There are also other types of bone strength tests too. Talk with your doctor or nurse about which type of test is best for you.

If you are age 65 and older, you should get a bone density test. If you are between ages 60 and 64, weigh less than 154 pounds, and don't take estrogen, get a bone density test. Don't wait until age 65. You have a higher chance for breaks.

**Q: How can I prevent weak bones?**

**A:** The best way to prevent weak bones is easy—start by building strong ones.

No matter how old you are, it is never too late to start! Building strong bones during childhood and adolescence is the best defense against getting osteoporosis later. Building strong bones at a young age will lessen the effects of the natural bone loss that starts around age 30. As you get older, your bones don't make new bone quickly enough to keep up with the bone loss. And after menopause, bone loss increases more quickly. But there are steps you can take to stop your bones from becoming weak and brittle.

**1. Get enough calcium each day.**

Bones are made of calcium. The best way to prevent osteoporosis is to get enough calcium in your diet. You need enough calcium each day for strong bones throughout life. You can get it through foods and/or calcium pills, which you can get at the drug store. Talk with your doctor or nurse before taking calcium pills to see which kind is best for you.

## FREQUENTLY ASKED QUESTIONS



WomensHealth.gov

1-800-994-9662

TDD: 1-888-220-5446

Here are some foods to help you get the calcium you need. Check the food labels for more information.

Food	Portion	Milligrams	Percent
Plain, fat free (or low fat) yogurt	1 cup	450	45
American cheese	2 ounces	348	35
Milk (fat free or low fat)	1 cup	300	30
Orange juice with added calcium	1 cup	300	30
Broccoli, cooked or fresh	1 cup	90	10

\*% **Daily Value** tells you how much of the recommended daily amount of that nutrient is in that portion of food.

Here's how much calcium you need each day.

Ages	Milligrams per day
9-18	1300
19-50	1000
51 and older	1200

Pregnant or nursing women need the same amount of calcium as other women of the same age.

### 2. Get enough vitamin D each day.

It is also important to get enough vitamin D, which helps your body take in calcium. You can get vitamin D through sunlight and foods like milk.

You need 10-15 minutes of sunlight to the hands, arms, and face, two to three times a week to get enough vitamin D. The amount of time depends on how sensitive your skin is to light, use of sunscreen, skin color, and pollution. You can also get vitamin D by eating foods or in your vitamin pills. It's measured in international units (IU).

Here's how much vitamin D you need each day.

Ages	IU per day
19-50	200
51-70	400
71 and older	600

Here are some foods to help you get the vitamin D you need. Check the food labels for more information.

Food	Portion	IU	Percent
Salmon, cooked	3 1/2 oz	360	90
Milk, nonfat, reduced fat, & whole, vitamin D fortified	1 cup	98	25
Egg (vitamin D is in the yolk)	1 whole	25	6
Pudding (made from mix & vitamin D fortified milk)	1/2 cup	50	10

White milk is a good source of vitamin D, most yogurts are not.



WomensHealth.gov

1-800-994-9662

TDD: 1-888-220-5446

### 3. Eat a healthy diet.

Other nutrients, like vitamin A, vitamin C, magnesium, and zinc, as well as protein, help build strong bones too. Milk provides many of these nutrients. But you can also get these nutrients by eating a healthy diet, including with foods that have these nutrients. Some examples are lean meat, fish, green leafy vegetables, and oranges.

### 4. Get moving.

Being active really helps your bones by:

- slowing bone loss
- improving muscle strength
- helping your balance

Do weight-bearing physical activity, which is any activity in which your body works against gravity. There are so many things you can do: walk, dance, run, climb stairs, garden, do yoga or tai chi, jog, hike, play tennis, or lift weights—it all helps!

### 5. Don't smoke.

Smoking raises a woman's risk of getting osteoporosis. It damages your bones and lowers the amount of estrogen in your body. Estrogen is a hormone made by your body that can help slow bone loss.

### 6. Drink alcohol moderately.

If you drink, do not drink more than one alcoholic drink per day. Alcohol can make it harder for your body to use the calcium you take in.

### 7. Make your home safe.

Reduce your chances of falling by making your home safer. For example, use a rubber bath mat in the shower or tub. Keep your floors free from clutter. Remove throw rugs that cause you to

trip. Make sure you have grab bars in the bath or shower.

### 8. Think about taking medicines to prevent or treat bone loss.

Talk with your doctor or nurse about the risks and benefits of medicines for bone loss.

### Q: How can I help my daughter have strong bones?

**A:** Teach your daughter early! Making good choices for healthy bones should start in childhood and become habits that last. Help your daughter build healthy bones. *Powerful Bones. Powerful Girls.*<sup>TM</sup> is a national education effort to help girls increase the calcium in their diets. The campaign has a user friendly web site at [www.cdc.gov/powerfulbones](http://www.cdc.gov/powerfulbones). There is also a web site for *parents* at [www.cdc.gov/powerfulbones/parents](http://www.cdc.gov/powerfulbones/parents). This site provides parents with the information they need to help their daughters build strong bones during the critical window of bone growth—ages 9-12.

### Q: Dairy foods make me sick. How can I get enough calcium?

**A:** If you are lactose intolerant, it can be hard to get enough calcium. Lactose intolerance means the body is not able to easily digest foods that contain lactose, or the sugar that is found in dairy products like milk. Gas, bloating, stomach cramps, diarrhea, and nausea are symptoms you might have. It can start at any age but often begins as we grow older.

Lactose-reduced and lactose-free products are sold in food stores. There's a great variety, including milk, cheese,



WomensHealth.gov

1-800-994-9662

TDD: 1-888-220-5446

and ice cream. Found at the grocery store or drug store, you also can take special pills or liquids before eating to help you digest dairy foods.

You can also eat foods that have calcium added (fortified), like some cereals and orange juice. Also think about taking calcium pills. But talk to your doctor or nurse first to see which one is best for you. Please note: If you have symptoms of lactose intolerance, see your doctor or nurse. These symptoms could also be from a different, or more serious, illness.

**Q: Do men get osteoporosis?**

**A:** Before the 1990s, we used to think only women got osteoporosis. Now we know that men also have to worry about weak bones. In fact, one in four men over age 50 will suffer a fracture caused by osteoporosis. But women are still four times more likely than men to develop osteoporosis because of the loss of estrogen at menopause. Estrogen blocks or slows down bone loss.

**Q: What is pregnancy-associated osteoporosis?**

**A:** Pregnancy-associated osteoporosis is believed to be a rare condition that is usually found in the third trimester of a woman's pregnancy or after giving birth. It usually occurs during a woman's first pregnancy, is temporary, and does not happen again. Women affected usually complain of back pain, have a loss of height, and have vertebral fractures.

As of 1996, there had been 80 cases of this condition reported. Researchers do not know if this condition occurs as a result of pregnancy or because of other

health problems the woman had.

Things that may cause this condition, such as genetic factors or steroid use, are being studied. Even though there is stress on a pregnant woman's calcium supply, and calcium leaves her body more often because of frequent urination, other changes during pregnancy, like increases in estrogen and weight gain, may actually help bone density. There is much more to be learned about how a woman's bone density is affected by pregnancy.

**Q: Will I suffer bone loss during breastfeeding?**

**A:** Although bone density can be lost during breastfeeding, this loss tends to be temporary. Several studies have shown that when women have bone loss during lactation, they recover full bone density within six months after weaning.

**Q: How is osteoporosis treated?**

**A:** Lifestyle changes and medical treatment are part of a total program to prevent future fractures. A diet rich in calcium, daily exercise, and drug therapy are treatment options. Good posture and prevention of falls can lower your chances of being injured.

These drugs are approved for the treatment or prevention of osteoporosis:

- Alendronate (Fosamax®). This drug belongs to a class of drugs called biophosphonates and is approved for both prevention and treatment of osteoporosis. It is used to treat bone loss from the long-term use of osteoporosis-causing medications and is used for osteoporosis in men.



WomensHealth.gov

1-800-994-9662

TDD: 1-888-220-5446

In postmenopausal women, it has shown to be effective at reducing bone loss, increasing bone density in the spine and hip, and reducing the risk of spine and hip fractures.

- Risedronate (Actonel®). Like Alendronate, this drug also is a biophosphonate and is approved for both prevention and treatment of osteoporosis, for bone loss from the long-term use of osteoporosis-causing medications, and for osteoporosis in men. It has been shown to slow bone loss, increase bone density, and reduce the risk of spine and non-spine fractures.
- Calcitonin (Miacalcin®). Calcitonin is a naturally occurring hormone involved in calcium regulation and bone metabolism. Calcitonin can be injected or taken as a nasal spray. In women who are at least five years beyond menopause, it slows bone loss and increases spinal bone density. Women report that it also eases pain associated with bone fractures.
- Raloxifene (Evista®). This drug is a selective estrogen receptor modulator (SERM) that has many estrogen-like properties. It is approved for prevention and treatment of osteoporosis and can prevent bone loss at the spine, hip, and other areas of the body. Studies

have shown that it can decrease the rate of vertebral fractures by 30-50%.

- Estrogen therapy (ET), or Hormone Therapy (HT). These drugs, which have been used to treat the symptoms of menopause, also are used to prevent bone loss. But recent studies suggest that this might not be a good option for many women. The Food and Drug Administration (FDA) has made the following recommendations for taking ET and HT:
- Take the lowest possible doses of ET or HT for the shortest period of time to manage symptoms of menopause.
- Talk about using other osteoporosis medications instead.
- Parathyroid Hormone or Teriparatide (Fortéo®). This form of parathyroid hormone is approved for the treatment of osteoporosis in postmenopausal women and men who are at high risk for a fracture. It helps new bone to form and increases bone density. It has been shown to reduce fractures in postmenopausal women in the spine, hip, foot, ribs, and wrist. In men, it can reduce fractures in the spine. A patient gives it to herself as a daily injection for up to 24 months. ■



WomensHealth.gov

1-800-994-9662

TDD: 1-888-220-5446

### *For More Information...*

You can find out more about osteoporosis by contacting the National Women's Health Information Center at 1-800-994-9662 or the following organizations:

**Osteoporosis and Related Bone Diseases National Resource Center**

Phone: (800) 624-2663

Internet Address: <http://www.osteoo.org/>

**Food and Drug Administration**

Phone: (888) 463-6332

Internet Address: <http://www.fda.gov>

**National Institute of Arthritis and Musculoskeletal and Skin Diseases**

Phone: (301) 496-8188

Internet Address: <http://www.nih.gov/niams/>

**National Institute on Aging**

Phone: (800) 222-2225

Internet Address: <http://www.nih.gov/ni/>

**National Osteoporosis Foundation**

Phone: (877) 868-4520

Internet Address: <http://www.nof.org/>

August 2004