



Osteoporosis

Guide to Good Health

Healthy Living Guide

- ▶ Asthma
- ▶ Chronic Fatigue Syndrome (CFS)
- ▶ Chronic Obstructive Pulmonary Disease (COPD)
- ▶ Coronary Artery Disease (CAD)
- ▶ Depression
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- ▶ Osteoporosis
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- ▶ Weight Management
- ▶ Bariatric Surgery

What is Osteoporosis?

Osteoarthritis is the thinning of bone tissue and loss of bone density over time.

Overview & Facts

- Researchers estimate that about 1 out of 5 American women over the age of 50 have osteoporosis. About half of all women over the age of 50 will have a fracture of the hip, wrist, or vertebra (bones of the spine).
- Osteoporosis occurs when the body fails to form enough new bone, when too much old bone is reabsorbed by the body, or both.
 - ✓ Calcium and phosphate are two minerals that are essential for normal bone formation. Throughout youth, your body uses these minerals to produce bones. If you do not get enough calcium, or if your body does not absorb enough calcium from the diet, bone production and bone tissues may suffer.
 - ✓ As you age, calcium and phosphate may be reabsorbed back into the body from the bones, which makes the bone tissue weaker. This can result in brittle, fragile bones that are more prone to fractures, even without injury.
 - ✓ Usually, the loss occurs gradually over years. Many times, a person will have a fracture before becoming aware that the disease is present. By the time a fracture occurs, the disease is in its advanced stages and damage is severe.
- Vitamin D plays an important role in protecting your bones. Your body requires vitamin D to absorb calcium.



Signs & Symptoms

- Usually, osteoporosis does not cause any symptoms at first. Osteoporosis is often called the "silent" disease, because bone loss occurs without symptoms.
- People often don't know they have the disease until their bone breaks: frequently in a minor fall that wouldn't normally cause a fracture.
- All too often osteoporosis becomes apparent in dramatic fashion: a fracture of a vertebra (back bone), hip, forearm, or any bony site if sufficient bone mass is lost. These fractures frequently occur after apparently minor trauma, such as bending over, lifting, jumping, or falling from the standing position.
- Osteoporosis may break other bones, particularly the hip and wrist. Hip and wrist fractures often occur after a fall.



A broken hip is especially serious. It can lead to loss of independence and function and to serious, even life-threatening problems.

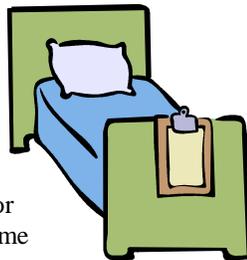
However, all broken bones in people with osteoporosis are serious, because bones that are less dense tend to heal slowly and sometimes incompletely. Also, if people with osteoporosis break one bone, they tend to break other bones.

Causes

The leading causes of osteoporosis are a drop in estrogen in women at the time of menopause and a drop in testosterone in men. Women over age 50 and men over age 70 have a higher risk for osteoporosis.

Risk Factors

1. Being confined to a bed
2. Chronic rheumatoid arthritis, chronic kidney disease, eating disorders
3. Taking corticosteroid medications (prednisone, methylprednisolone) every day for more than 3 months, or taking some anti-seizure drugs
4. Hyperparathyroidism
5. Absence of menstrual periods (amenorrhea) for long periods of time
6. Drinking a large amount of alcohol
7. Family history of osteoporosis
8. History of hormone treatment for prostate cancer or breast cancer
9. Low body weight
10. Smoking
11. Too little calcium in the diet.





Questions to Ask Your Provider

Ask your doctor what you can do to prevent osteoporosis. Remember—as a woman, you may lose up to 20% of your total skeletal bone mass in the first 5 or 7 years of post menopause.

Diagnostic Workup

- Bone mineral density testing (specifically a densitometry or DEXA scan) measures how much bone you have. Your health care provider uses this test to predict your risk for bone fractures in the future.
- A CT Scan can show loss of bone mineral density, quantitative computed tomography (QCT) may be used in rare cases.



- In severe cases, a spine or hip x-ray may show fracture or collapse of the spinal bones.
 - ✓ However, simple x-rays of bones are not very accurate in predicting whether someone is likely to have osteoporosis.
 - ✓ You may need other blood and urine tests if your osteoporosis is thought to be due to a medical condition, rather than simply the usual bone loss seen with older age.

Treatment and Care

1. Medical

- The goals of osteoporosis treatment are to:
 - ✓ Control pain from the disease
 - ✓ Slow down or stop bone loss
 - ✓ Prevent bone fractures with medicines that strengthen bone
 - ✓ Minimize the risk of falls that might cause fractures
- Your response to treatment can be monitored with the bone mineral density information. There is no surgery for treating osteoporosis itself. However, a procedure called vertebroplasty can be used to treat any small fractures in your spinal column due to osteoporosis.
- Quit smoking: Limit alcohol intake, too much alcohol can damage your bones, as well as put you at risk for falling and breaking a bone.
- Household Hazards: Remove household hazards to reduce the risk of falls that might cause fractures.
- Make sure your vision is good.



- Calcitonin
Calcitonin is a medicine that slows the rate of bone loss and relieves bone pain. It comes as a nasal spray or injection. Calcitonin appears to be less effective than bisphosphonates.
- Hormone Replacement Therapy
Estrogens or Hormone Replacement Therapy (HRT) is rarely used anymore to prevent osteoporosis, and are not approved to treat a woman who has already been diagnosed with the condition.
- Parathyroid Hormone
 - ✓ Teriparatide (Forteo) is approved for the treatment of postmenopausal women who have severe osteoporosis and are considered at high risk for fractures.
 - ✓ Raloxifene (Evista) is used for the prevention and treatment of osteoporosis.
- Ask your physician if Calcium and Vitamin D supplementation would be beneficial for you.

2. Pharmacological

Medications: Avoid sedating medications.

- Bisphosphonates
Bisphosphonates are the primary drugs used to both prevent and treat osteoporosis in postmenopausal women. Most are taken by mouth, usually once a week or once a month.

3. Nutritional

An Eating Plan: Get at least 1,200 milligrams per day of calcium, and 800 - 1,000 international units of vitamin D3. Vitamin D helps your body absorb calcium.

4. Physical

Regular exercise can reduce the likelihood of bone fractures.

Healthy Lifestyle Management

- ▶ **Medications to treat osteoporosis** can help prevent fractures, but vertebrae that have already collapsed cannot be reversed.
- ▶ **Physicians that treat people that have Osteoporosis:** There is no physician specialty dedicated solely to osteoporosis, nor is there a certification program for health professionals who treat the disease.



- ▶ A variety of medical specialists treat people with osteoporosis, including internists, gynecologists, family doctors, endocrinologists, rheumatologists, physiatrists, orthopedists and geriatric physicians.
- ▶ There are a number of ways to find a doctor who treats osteoporosis. If you have a primary care or family doctor, discuss your concerns with him or her. Your doctor may treat the disease or be able to refer you to an osteoporosis specialist.

Resources

- ❖ National Osteoporosis Foundation: www.nof.org
- ❖ Mayo Clinic: www.mayoclinic.com
- ❖ National Institute of Health: www.nlm.nih.gov
- ❖ Women's Health: www.womenshealth.gov
- ❖ National Institute of Health Senior Health: <http://nihseniorhealth.gov>