

# What Is Bone Disease?

**Bone diseases are conditions that result in the impairment of normal bone function and can make bones weak.**

- Weak bones should not just be excused as a natural part of aging.
- Strong bones begin in childhood.
- People of all ages can improve their bone health.

**The most common bone disease is osteoporosis.**

- Osteoporosis is characterized by low bone mass and deterioration of bone structure.
- Osteoporosis can be prevented, as well as diagnosed and treated.

**Low bone mass means that bones have less than optimal amounts of calcium and other minerals that make them strong.**

- As a result of low bone mass, bones become weak and break, or can *fracture* more easily.
- Bone fractures often occur from falling or other common accidents. Spine fractures can occur while doing daily activities without any trauma.

**Other bone diseases include Paget's disease and osteogenesis imperfecta.**

- Paget's disease causes skeletal deformities and fractures. It affects older men and women.
- Osteogenesis imperfecta is an inherited disorder that causes brittle bones and frequent bone fractures in children.

# Why Are Healthy Bones Important?

**A healthy skeletal system with strong bones is essential to overall health and quality of life.**

- Strong bones support us and are the framework for our muscles.
- Bones are a storehouse for vital minerals needed to live.
- Strong bones protect the heart, lungs, brain, and other organs from injury.

**Weak bones often result in painful and debilitating fractures.**

- Each year, 1.5 million Americans suffer a fracture because of weak bones.
- The most common breaks are of the wrist, spine, and hip.

**Hip fractures are the most devastating type of bone fracture and account for almost 300,000 hospitalizations each year. Of hip fracture patients:**

- 20 percent die within a year of the fracture.
- 20 percent end up in a nursing home within a year.

- Many become isolated, depressed, or afraid to leave home because they fear falling.

**Bone disease is costly for society and individuals with the disease.**

- Care for bone fractures from osteoporosis costs nearly \$18 billion each year.
- The cost of a hip fracture for one individual can be more than \$81,000 during their lifetime.

## Who Is at Risk?

**Many Americans do not know that their bone health is in jeopardy.**

- Osteoporosis is a silent disease until a fracture occur.
- Four times as many men and nearly three times as many women have osteoporosis than report having the disease.

**An estimated 10 million Americans over the age of 50 have osteoporosis. Another 34 million have low bone mass.**

- If immediate action is not taken, half of all Americans over 50 will have weak bones from osteoporosis and low bone mass by 2020.
- This could cause the number of hip fractures in the United States to double or even triple by 2040.

**Bone disease affects women and men of all ethnicities.**

- The risk of osteoporosis is highest among women. It is higher in White and Asian women, but still occurs in Black, Hispanic, and American Indian and Alaska Native women.
- Bone disease is a risk for both men and women.

## How Do You Prevent Osteoporosis?

**Be physically active every day.**

- More than half of all Americans do not get enough physical activity to strengthen their bones.
- Children and teens should get at least an hour of physical activity every day. Jumping rope, running, skateboarding, and riding bikes are enjoyable activities that also build strong bones.
- Adults should get at least 30 minutes of moderate physical activity every day. Simple activities like walking and stair climbing will strengthen the bones that are exercised.

**Eat a healthy diet.**

- The average American eats far too little calcium and vitamin D for good bone health.
- High levels of calcium can be found in milk, leafy green vegetables, soybeans, yogurt, cheese, and fortified orange juice.
- Vitamin D is produced in the skin by exposure to the sun and is found in fortified milk and other foods. For those individuals not getting enough calcium and vitamin D in the diet, supplements can be helpful.

Calcium and Vitamin D Requirements		
Age	Calcium (mg/day)	Vitamin D (IU/day)
0-6 months	210	200
6-12 months	270	200
1-3 years	500	200
4-8 years	800	200
9-18 years	1300	200
18-50 years	1000	200
51-70 years	1200	400
Over 70 years	1200	600
(A cup of milk or fortified orange juice has about 300 mg of calcium and 50 IU of vitamin D.)		

**Get a bone mineral density test.**

- All women over 65 and anyone who has a bone fracture after age 50 should get a bone density test.
- Others with significant risk factors should also get a bone density test.
- Bone density tests use x-rays or sound waves to measure the strength of the bones.
- Bone density tests are safe, painless, quick (5-10 minutes) and indicate the health of bones.

**Reduce the risk of falling.**

- Falls are not just the result of getting older. Most falls can be prevented.
- As you age, falls become more dangerous.

## How Do You Prevent Falls?

**Exercise regularly.**

- Physical activity is one of the most important ways to reduce your chances of falling.
- It makes you stronger, improves balance and coordination, and improves overall health.

- Activities like dancing and Tai Chi can be very effective.

**Make your home safe.**

- Remove things you can trip over.
- Remove all small rugs.
- Don't use step stools.
- Have grab bars installed.
- Use non-slip mats in the bathtub and shower.
- Use bright light bulbs.
- Add handrails and light in all staircases.
- Wear shoes with good support and non-slip soles.

**Ask a health care professional to review your medicines.**

- Some medicines, or combinations of medicines, can make you drowsy or light-headed, which can lead to a fall. Include prescription and over-the-counter medications in your review.

**Have your vision checked.**

- You may be wearing the wrong glasses or have a condition like glaucoma or cataracts that limits your vision.

**Call toll free 1-866-718-BONE to order a free publication from the Surgeon General about bone health. For more information visit [www.surgeongeneral.gov](http://www.surgeongeneral.gov)**

***Citation***

U.S. Department of Health and Human Services. *Bone Health and Osteoporosis: A Report of the Surgeon General*. U.S. Department of Health and Human Services, Office of the Surgeon General, 2004.