

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

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