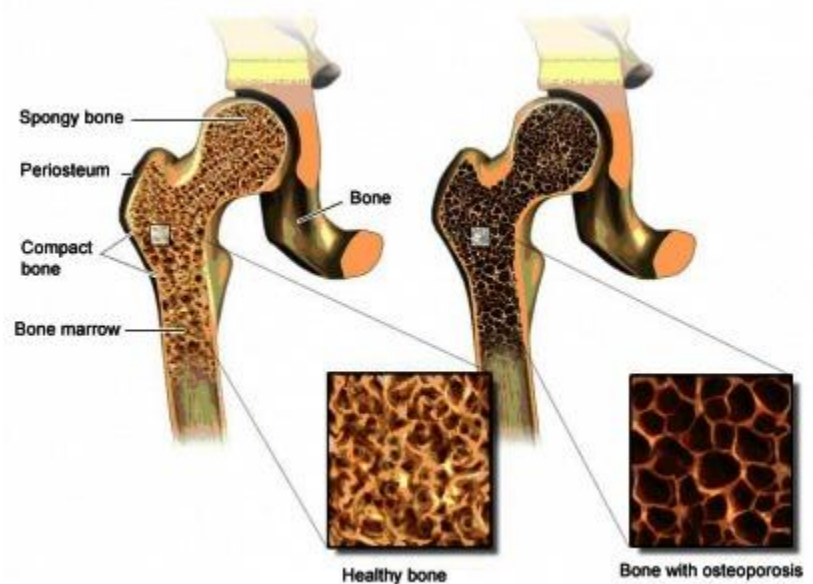


## Osteoporosis

Osteoporosis is the most common form of bone disease in which bones become fragile and more likely to fracture. The hard, solid outer layer of our bones is called compact or cortical bone. Inside there is a supporting structure of interconnecting bony webs and rods. This structure is commonly called spongy bone and contains the bone marrow where our blood cells are produced. Bone is living tissue and is constantly being broken down and replaced by new bone. In children and young adults, more bone is formed than is broken down. This means that the bones grow, get heavier and more dense. At about the age of 30 our bones are about as strong as they will ever be. Osteoporosis occurs when the body fails to form enough new bone or when too much existing bone is reabsorbed by the body. After we are 50 years old, this process can start to speed up. For women, the hormone estrogen helps slow down the rate at which bone is broken down. So after the menopause, when this hormone level drops, bone is lost more quickly. Because of osteoporosis about half of all women over the age of 50 will have a fracture of the hip, wrist, or vertebra during their lifetime. A drop in testosterone in men can also cause of bone loss.

There are no symptoms in the early stages of osteoporosis. Many times people will have a fracture before learning that they have the disease. So early detection is the first preventive step. Some illnesses and some medicines may increase the risk of osteoporosis. Other main risk factors include:

- Age (past menopause for women and over age 65 for men)
- Low body weight for your height
- Poor diet (calcium or vitamin D deficiency)
- Lack of movement
- A family history of osteoporosis
- Smoking
- Alcohol abuse



Bone mineral density testing (most often with a DEXA scan) measures your bone mineral density. Your health care provider uses this test to diagnose osteoporosis and help predict your risk of future bone fractures. A spine or hip x-ray may show some collapse of bones, but is not very accurate in predicting osteoporosis. You may need other blood and urine tests if your osteoporosis is thought to be related to other medical conditions.

Treatment for osteoporosis consist of lifestyle changes and medication. Lifestyle changes include diet, exercise, smoking and drinking.

# Vitamin D



The body itself makes vitamin D when it is exposed to the sun

Cheese, butter, margarine, fortified milk, fish and fortified cereals are food sources of vitamin D



A proper diet is both a prevention and treatment to osteoporosis. Calcium is important for building and maintaining healthy bone and makes bones harder, stronger and denser. High bone density helps protect against fractures. Vitamin D is also important as it helps your body absorb calcium. Following a healthy, well-balanced diet can help you get these and other important nutrients. Women ages 51 to 70 should get 1,200 mg of calcium a day and men need slightly less at 1,000 mg of calcium. Both men

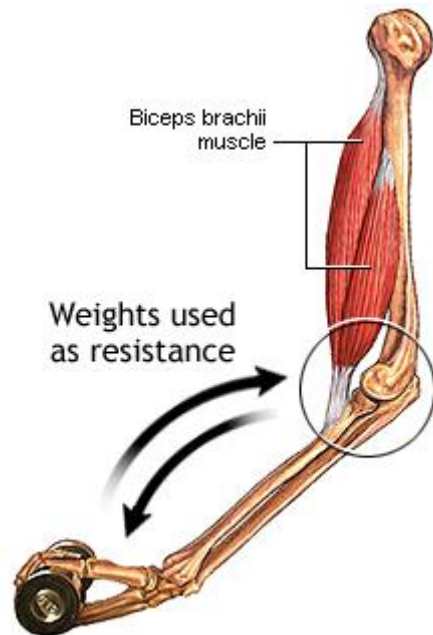
and women 51 to 70 need 400 - 800 IU of vitamin D a day. Adults over age 70 should get 1,200 mg of calcium and 800 IU of vitamin D daily. You can get your calcium in your diet and also from dietary supplements. Both sources can strengthen your bones and reduce your risk of osteoporosis.



Skeletal muscle pulls against the bone, causing it to rebuild and become denser

Exercise also plays a key role in preserving bone density in older adults. Some of the exercises recommended to reduce your chance of a fracture include: weight-bearing exercises like walking, playing tennis & dancing; weight lifting or stretch bands; balance exercises like tai chi or yoga; and rowing machines. Brisk walking is a relatively safe form of exercise most of us can keep up with. Avoid high-impact exercises, and always be careful about falling down. But do not avoid exercise for fear of a fall. Exercise that is done safely can increase your stability confidence, and balance and thus helps fight osteoporosis while reducing fall risks.

Your doctor may also prescribe medicine to treat or attempt to prevent osteoporosis. Finally, if you have osteoporosis or wish to guard against it, quit smoking if you smoke and limit your alcohol intake. Too much alcohol can damage your bones, and of course can increase your risk of a fall.



**Fall prevention** is an important consideration for those with osteoporosis. There is a lot you can do to help prevent slips and falls.

**Removing hazards around your house that could increase your chances of stumbling or slipping.** Extension cords across walkways and throw rugs are potential trip hazards, as is anything lying on the floor. Door steps or door jams could be removed when possible, or made safer and more visible if not. Throw rugs on hard floors are also potential slip hazards. Hard floors, tile and linoleum are slippery when wet. This makes the kitchen and bathroom some of the most dangerous rooms in the house. Keep the floor dry and don't track dirt or water in from outside.

**Leave some lights on at night so you can see better when walking around your house.**

**Take extra precautions in the bathroom.** Install safety grab bars. Use anti-slip mats in the shower, bathtub and bathroom floor. If you have a cell phone, keep it near you while in the bathroom.

**Wear shoes that fit well and that have heels.** This includes slippers. Slippers that do not have heels can cause you to trip and fall.

**Avoid sedating medicines.** These medicines can make you drowsy and unsteady. If you must take them, be extra careful when you are up and about. For example, hold on to countertops or sturdy furniture to avoid falling.

**Make sure your vision is good.** Have your eyes checked once or twice a year by an eye doctor.

**Do not walk outdoors alone on icy or raining days.** Use a cane. Walk only in well lit areas on smooth surfaces. Carry your cell phone just in case.

**Severely reduce alcohol use!** Not only does alcohol diminish your balance and judgment, but it can weaken bones, thus making the fall more likely while increasing its consequences.

**Exercise.** Don't think that the best way to prevent a fall is just not to move! Safe exercise improves your strength, balance, stability and confidence; while inactivity furthers the weakening of your muscles and bones. At a minimum, routine, brisk walking is a simple way to keep your body in shape enough to safely enjoy your life without undue fear of falls.

These are only some suggestions and what you do for yourself or a loved one, will depend on the severity of the fall risk.

Whether you have osteoporosis or wish to prevent it, a proper diet, exercise, and fall prevention are logical simple things you can do.