

ARE YOU AT RISK?

Age greater than 65 years: Bone loss increases over time therefore the disease is more likely to occur as we get older.

Gender: Women are more likely to develop osteoporosis than men because women have thinner and lighter bones in general. The post-menopausal loss of estrogen, a hormone that stimulates the bone building cells also puts women at greater risk.

Family History and Ethnicity: If your parents or siblings have a history of fractures or osteoporosis, your risk is greater. Caucasian (white) and Asian women have the greatest risk. Osteoporosis occurs in African American and Latino women but at a lower rate. In men, Caucasians are at highest risk.

Medications and Medical Conditions: Diabetes, spinal cord injury, rheumatoid arthritis are just a few of the medical conditions that may increase risk for osteoporosis. Certain medications can also affect the body's calcium balance.

Body size: A small boned frame and weight less than approximately 127 pounds has been associated with an increased risk for osteoporosis.

Your health care provider can answer questions that you may have about your medications, medical conditions and risk for osteoporosis.



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OSTEOPOROSIS are you at risk?



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OSTEOPOROSIS

ARE YOU AT RISK?

By Patricia Tomshine, CNP

Osteoporosis is a disease of low bone mass and reduced bone strength that affects 10 million Americans over the age of 50. Another 34 million have decreased bone mass (osteopenia) that puts them at risk for osteoporosis.

Each year fractures related to osteoporosis will affect more women than heart attacks, strokes, breast cancer, uterine, ovarian and cervical cancer combined. One in three women and one in four men will have an osteoporosis related fracture in their lifetime. Over 14 billion dollars are spent yearly in the U.S. on medical, hospital, nursing home care and lost productivity from osteoporotic fractures.

Osteoporosis means bone (osteo) that is porous (porosis). Bone is a living tissue just like skin, blood cells or muscle. From birth, all tissues undergo a process in which new cells form and old cells are carried away. In bone, this process is called remodeling. It is carried out by osteoblasts (bone building cells) and osteoclasts (cells that carry the old bone away). As you read this, millions of your bone cells are remodeling.

During childhood, the bone building cells work much harder than the osteoclasts, which accounts for rapid growth in our younger years. After peak bone mass is reached, at about age 30, the builder cells tend to slow down. By late midlife, the cells that carry old bone away are often working at a faster rate than the builder cells resulting in thinning (osteopenia) of bone mass. Osteoporosis occurs when bones have become so thin and fragile they can break easily, sometimes even with slight movement.

Factors that you can change include diet, exercise, smoking and excessive alcohol use.

How do I decrease my risk?

Eat a Well Balanced Diet: A well balanced diet is the basis for good health. From childhood through old age, bones need calcium and vitamin D to grow and stay strong. The following chart shows the recommended calcium and vitamin D intakes for Adults and Older Children. Infants, young children, and pregnant women have different needs. If you have questions about the amount of calcium that is best for you or your child, your healthcare provider can help.

Recommended Calcium & Vitamin D Intake

Life Stage Group (years old)	Calcium Recommended Dietary Allowance (mg/day)	Vitamin D Recommended Dietary Allowance (IU/day)
19 - 30	1,000	600
31 - 50	1,000	600
51 - 70	1,000	600
51 - 70 females	1,200	600
71+	1,200	800

Do Exercise: Weight bearing exercise makes bones stronger. Walking and exercising with light hand weights are great way to help bones stay strong. Even if you are unable to walk, there may be a weight bearing exercise that you can do. Speak to your healthcare provider or physical therapist about exercises that you can do safely to help preserve and strengthen bone. Exercise can also help maintain flexibility and balance thus decreasing the risk of falls.

Do Not Smoke: It is thought to interfere with the production of estrogen, the hormone that stimulates the bone building cells.

Avoid Excessive Alcohol use: Excessive alcohol interferes with absorption of important nutrients including calcium and vitamin D. Also, excessive alcohol increases the risk for falls and fracture.

Warning signs

Osteoporosis is called the Silent Thief because bone loss occurs gradually and most often without symptoms. Often the first symptom is a fracture. Back pain, loss of height or bent posture may indicate that you are developing osteoporosis.

Diagnosis

Diagnosis is made by a painless exam called a Bone Mineral Density (BMD) test. Test results are reported in the form of a T-Score which represents your bone density compared to that of a healthy young person with peak bone mass. Sometimes you will also get a Z-Score which is your bone mass compared to others in your age group. If you have risk factors, talk to one of your health care provider about whether you need to be tested.

Diagnosing Osteoporosis

T-Score

0 to -1 = Normal
-1 to -2.5 = Osteopenia
-2.5 and less = Osteoporosis

Treatment

Several medications are available that may increase bone mass and reduce bone loss to varying degrees. There is not a cure for osteoporosis at this time. Remember, calcium and vitamin D are important even if you are taking a medication to treat osteoporosis. The goal of treatment is to reduce the risk for falls and fracture. If a vertebral compression fracture does occur it can often be treated with

vertebroplasty or kyphoplasty, procedures that use a type of heated cement to stabilize the fractured vertebrae.

Avoiding falls

You may need to make changes in your daily life to decrease your risk for falls. The following are just a few simple changes: Wear supportive low heeled shoes. Avoid walking on ice, slippery sidewalks or uneven ground.

- Stop at curbs and check their height before stepping up or down
- Use grab bars and nonskid tape in the tub or shower. Keep rooms well lit and free of clutter
- Use rugs with a skid proof backing or avoid them entirely
- Use a cane or walker for stability

Calcium tips

Calcium is best absorbed in small amounts (500 mgs.) throughout the day. Calcium carbonate is best absorbed if taken with food or just after eating. Calcium citrate can be taken anytime. Since there can be an interaction between calcium supplements and other medications, ask your pharmacist which supplement is best for you.

Food for your bones

Dairy products are high in calcium. Eight ounces of milk has approximately 330 milligrams of calcium. Cheeses, yogurt and ice cream have less calcium than milk but are still good sources. Oranges, fresh broccoli, beans, fish and shellfish are other sources. Because calcium is so important to bone health, it is now added to other foods and beverages. Look for calcium on labels the next time you shop.