Osteoporosis, which literally means “porous bone,” is a disease of progressive bone loss that greatly increases the risk of fractures. Because bone loss occurs gradually over the years without any symptoms, osteoporosis is often called a silent disease. Most people don’t even realize they have osteoporosis until they sustain a fracture.

What Causes Osteoporosis?

No one knows exactly what causes osteoporosis, but several factors are known to contribute:

- Aging
- Reduced levels of estrogen
- Heredity
- Medications and other illnesses
- Poor nutrition
- Smoking
- Lack of physical activity
- Excessive consumption of alcohol

Facts About Osteoporosis

- 10 million Americans suffer from osteoporosis.
- 34 million more have low bone mass, which increases their risk for the disease.
- 80 percent of osteoporosis sufferers are women, who are more vulnerable because they have less bone tissue and lose bone faster than men, especially after menopause.
- Osteoporosis is responsible for more than 1.5 million bone fractures every year.
- Half of women and a quarter of men over age 50 will break a bone in their lifetime — most often at the hip, spine, or wrist — as a result of osteoporosis.

How Can I Prevent Osteoporosis or Stop It from Getting Worse?

Osteoporosis is a fact of life for all of us. Starting at about age 35, everyone experiences gradual bone loss — especially women. The good news? There are things you can do to slow the process:

Get enough calcium. Calcium fortifies bones and helps decrease the risk of fracture. How much calcium do you need? The National Academy of Sciences recommends:

- Females and males 9 to 18 years — 1,300 mg per day
- Women and men 19 to 50 years — 1,000 mg per day
- Women and men over 50 — 1,200 mg per day

Get enough vitamin D. Vitamin D helps your body absorb calcium. Recommended amounts, measured in international units (IU), range from 200 IU for people ages 19 to 50, 400 IU for people ages 51 to 70, and 600 IU for people over 70. Milk and saltwater fish are good sources of vitamin D. Vitamin supplements are another source. As with any supplement, consult with your doctor first, as too much vitamin D can be toxic.

Exercise regularly. Three to four hours of exercise per week is recommended for the prevention and control of osteoporosis. For the greatest benefit, focus on weight-bearing exercises such as walking, jogging, stair climbing, and weightlifting. Balance training, such as tai chi, can help you avoid falls, which account for 50 percent of fractures in people with low bone density.

How is Osteoporosis Diagnosed?

Your doctor diagnoses osteoporosis using a variety of methods and specialized tests: a physical exam, a review of your family history and skeletal X-rays. That includes bone densitometry, a technique that compares your bone density to the peak bone density of someone of your gender and ethnicity at 20 to 25 years of age.

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How is Osteoporosis Treated?

You cannot replace bone mass once it is lost. Therefore, osteoporosis treatment aims to prevent further bone loss, often through exercise and nutrition therapy. Other treatments include:

+ **Hormone replacement therapy (HRT).** HRT can help maintain bone density, especially after menopause. However, its side effects include increased risk of blood clots, breast cancer, and possibly heart disease.

+ **Calcitonin.** This hormone, produced by the thyroid gland, can be administered as a nasal spray to help slow bone loss.

+ **Bisphosphonates.** Like estrogen, these drugs can preserve bone mass and reduce the risk of fractures.