

## Bones, Here's to Your Health



For many people, the word osteoporosis brings about an image of an elderly person walking around hunched over, unable to stand up straight. And although osteoporosis can eventually cause serious issues with posture, most people who have symptoms of osteoporosis have been losing bone mass for many years before they even knew anything was wrong.

People with osteoporosis have bones that are fragile and more likely to break. In fact, osteoporosis literally means porous bone. The disease is characterized by low bone mass and a structural deterioration of bone tissue. As the disease progresses, it leaves people at risk for fractures and broken bones that can occur during even minor falls. In more serious cases of osteoporosis, simple, unavoidable actions like a sneeze can also lead to bone fractures.

Most fractures related to osteoporosis occur in the hip, spine and wrist. Hip and spinal fractures are a serious concern. Hip fractures require hospitalization and surgery almost every time, and they can make it difficult for people to walk without help. They can also lead to long-term disability and even death. Spinal fractures also have severe consequences that include height loss, severe back pain and physical deformity.

## Prevention

Fortunately, osteoporosis and related complications are not inevitable. In many cases, the disease can be prevented and treated. There are steps everyone can take to prevent osteoporosis.

### Help children build strong bones

It's not just older people who should think about osteoporosis. In fact, 85-90 percent of adult bone mass is acquired by age 18 in girls and age 20 in boys. This means that taking steps to build strong bones during childhood and adolescence is one of the most important things a person can do to prevent osteoporosis from occurring later in life.

### Take steps to optimize bone health

- Eat a balanced diet rich in calcium and vitamin D
- Perform weight-bearing exercise regularly
- Engage in a healthy lifestyle with no smoking or excessive alcohol intake
- Have bone density testing and take medication when prescribed and appropriate

### Don't accept osteoporosis as an inevitable part of aging

In the first five to seven years after menopause, women can experience bone loss of up to 20 percent which makes them more susceptible to osteoporosis – but there are steps they can take to minimize bone loss. It is important for post-

menopausal women to talk with their healthcare providers about prevention of and, if necessary, treatment for osteoporosis.

## Does Osteoporosis Have Symptoms?

Osteoporosis does not typically have any symptoms during the early stages of the disease. People cannot feel their bones getting weaker, and they may not have any idea they have osteoporosis until they break a bone. Fortunately, there are non-invasive tests to measure bone density that can help diagnosis bone loss or risk of loss before it develops into osteoporosis.

Once bones deteriorate significantly or fracture, people may begin feeling symptoms or displaying signs, such as:

- Loss of height or “shrinking”
- Spinal deformities, such as kyphosis
- Stooped posture
- Back pain caused by fracture

## Risk Factors

Some people are more likely to develop osteoporosis than others, but anyone can get it and everyone should be aware of risk factors and ways to prevent it. Although some risk factors are unavoidable, others can be controlled.

### Uncontrollable risk factors

- Gender – females are more likely than males to develop osteoporosis
- Age – as people age, their bones are more likely to lose density and strength
- Race and ethnicity – Caucasians, Asians and Hispanics/Latinos are at greater risk; although African Americans also suffer from osteoporosis
- Size – people who are smaller and thinner are often at greater risk
- Personal history of broken bones
- Family history of osteoporosis or broken bones

### Diseases and medicines that predispose people to osteoporosis

- Rheumatoid arthritis (and other rheumatologic conditions)
- Diabetes mellitus (on insulin)
- Celiac disease
- Anorexia nervosa and athlete’s triad
- Organ transplant recipients
- Cancer survivors
- Over-active thyroid
- Endometriosis
- Prostate cancer
- Chronic bronchitis and emphysema
- Inflammatory bowel disease (Crohn’s disease)
- Kidney stones
- Prednisone and inhaled steroids (Advair, Flovent, etc.)
- Protein Pump Inhibitors / PPIs (Nexium, Prilosec, etc.)
- Aromatase inhibitors (Arimidex, Femara, Aromasin)
- GnRH agonists (Leuprolide)
- Diabetes drugs (Troglitazone)

- Antidepressants (Prozac, etc.)
- Chemotherapy

## Risk factors that may be controllable

- Low sex hormones (sometimes hormone levels can be increased through treatment)
  - Low estrogen levels in women, including the decrease of hormones associated with menopause
  - Low levels of testosterone and estrogen in men
- Certain medications, such as steroids and anticonvulsants (talk with your healthcare provider about the risks versus benefits of all medications)

## Risk factors that are controllable

- Poor Diet
  - Low calcium intake
  - Low vitamin D intake
  - Excessive intake of protein, sodium and caffeine
- Inactive lifestyle
- Smoking
- Alcohol abuse

## How Northwestern Memorial Physicians Can Help

Osteoporosis experts at Northwestern Memorial Hospital can evaluate your bone health and diagnose and treat osteoporosis. Our Bone Health and Osteoporosis Program has been a National Osteoporosis Foundation Partners Program since 1999.

## Testing

Because there are no early symptoms of osteoporosis, most people will not know they have it until they break a bone. However, doctors can perform specialized tests to measure bone density. They are called bone mineral density (BMD) tests, and they are able to measure bone density in different sites throughout the body.

Studies have shown that regular bone mineral density testing and osteoporosis treatment when necessary are associated with a decrease in hip fractures and the problems that often accompany hip fracture.

In addition to BMD tests, Northwestern Memorial offers a [number of state-of-the-art tests](#) to aid in the diagnosis of bone loss and osteoporosis.

A fracture is a red flag that your bones are weakened. Studies have shown that one you suffer a fracture your risk for future fractures doubles. If you suspect or know you have a fracture, it's important to bring it to your doctor's attention.

## Medications

Although there is currently no cure for osteoporosis, the disease can be treated. There are a number of medications currently approved by the FDA to prevent and/or treat osteoporosis. Your doctor can work with you to decide whether you could benefit from medications, and if so, which may be right for you.