Osteoporosis: Causes, Symptoms, Physical Therapy Treatment

What is Osteoporosis?

Osteoporosis is a condition characterized by decreased density and structure of bones, causing bones to become weak or brittle. These changes increase a person’s risk for breaking a bone. The lower one’s bone density, the greater the risk of fracture. Osteoporosis is a silent disease, meaning people are often unaware of these bony changes until after they break a bone. The spine, hip and wrist are the most common bones to fracture. These fractures impact a person’s mobility, functional independence, reduce height, and cause pain.

What causes Osteoporosis?

Unfortunately, many of the risk factors associated with osteoporosis are not easily modified. Women are more commonly affected by osteoporosis, especially those of Asian or European descent. Small stature, age, heredity, medical conditions (such as renal failure, diabetes, hyperthyroidism, etc.) and women who are post-menopausal are all factors contributing to a greater risk of developing osteoporosis. Certain medications, such as prolonged steroid use, can also put one at risk for weak or brittle bones.
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What causes Osteoporosis?

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Modifiable risk factors that can be controlled include excessive alcohol consumption, smoking tobacco, low body mass index (BMI), inadequate Calcium and Vitamin D intake, soft drink consumption, and a sedentary or inactive lifestyle.

Osteopenia is a mild reduction in bone structure and density, and also a risk factor for osteoporosis. Proper nutrition, weight-bearing and resistance exercise, and/or medications can help prevent osteopenia from worsening and developing into osteoporosis.

What are the symptoms of osteoporosis?

Osteoporosis is often present without noticeable symptoms. Back pain due to vertebral fractures can go unnoticed or dismissed as a general backache. Some individuals with osteoporosis may have a flexed or stooped posture and become shorter. Being aware of risk factors associated with osteoporosis is a powerful first step in the preventing osteoporosis and its complications. Take control of your bone health by talking with your health care provider about your concerns.
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What tests are used to diagnose osteoporosis?

- The DXA or DEXA (dual energy x-ray absorptiometry) test is used to assess bone mineral density to determine if you have osteoporosis. Standardized scores on this test help your healthcare provider determine your current bone mineral density status.
- A T-Score compares your bone density to a 30-year-old of the same gender. A T-score greater than (-1) is considered normal. A T-score of (-1) to (-2.5) is considered osteopenia (low bone density), and a T-score of less than (-2.5) indicates the presence of osteoporosis.
- A Z-Score compares your bone density to others your same age, ethnicity and gender. A Z-score of less than (-1.5) raises concern that factors other than aging may be contributing to osteoporosis. These factors may include but are not limited to thyroid abnormalities, poor nutrition, medications, and smoking tobacco.

How can physical therapy help?

Individuals throughout the life span can benefit from physical therapy to prevent or manage osteoporosis. Physical therapists (PTs) help individuals maximize function through movement by improving strength, balance, coordination and flexibility. PTs also educate in ways to promote good posture, body awareness, prevent falls, and encourage a healthy lifestyle.

Research indicates that maximum bone mass is achieved by the late twenties and most healthy individuals maintain their bone mass until age 35. Gradual bone loss begins in the late thirties. As a result, young girls and women must prevent osteoporosis through healthy lifestyle habits that include a balanced diet, good posture, and exercise that includes resistance and weight bearing.
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How can physical therapy help?
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Estrogen is a necessary hormone for maintaining bone strength. Women who are menopausal or post-menopausal have reduced estrogen and therefore are at a higher risk of developing osteoporosis and fractures. Learning proper body mechanics and safe exercises from a physical therapist helps improve breathing, flexibility, balance, and strength in order to optimize mobility and independence, while reducing the risk of a fracture. Involving a physical therapist in your health care team is an important step in learning ways to manage bone health and maximize functional independence at all stages of life.

Who should be referred to a women’s health Physical Therapist (PT)? Those with...

- Pain related to osteoporosis
- Poor posture
- Balance concerns or falls
- Decreased ability to participate in normal daily activities
- Decreased strength, flexibility and/or endurance
- A desire to prevent or slow bone loss
- An interest in starting or resuming a safe and effective exercise program

Looking for a Physical Therapist that specializes in osteoporosis?

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