What Is Osteoporosis?

Osteoporosis is a common disease among older adults that weakens bones and increases the likelihood of fractures.

Worldwide, 1 in 3 women and 1 in 5 men older than 50 years have a bone fracture due to osteoporosis during their lifetime.[1] Fractures most commonly associated with osteoporosis involve the hip, spine, shoulder, forearm, and pelvis. In 2019, 8 million women and 6 million men aged 50 years or older worldwide sustained a hip fracture—the most serious consequence of osteoporosis. About 24% of people with a hip fracture die within a year of their fracture.

What Are the Risk Factors and Symptoms of Osteoporosis?

Risk factors for osteoporosis include older age; female sex; prior fractures or falls; low body weight; having a parent who had a hip fracture; using oral steroid medications such as prednisone; cigarette smoking; excessive alcohol use; certain medical conditions such as inflammatory bowel disease, rheumatoid arthritis, and chronic kidney and liver disease; and menopause before age 40 years.

Many patients with osteoporosis have no symptoms. Some people learn they have osteoporosis after having a painful fracture or after an imaging test shows a fractured vertebra in their spine.

Osteoporosis Screening, Diagnosis, and Risk Prediction

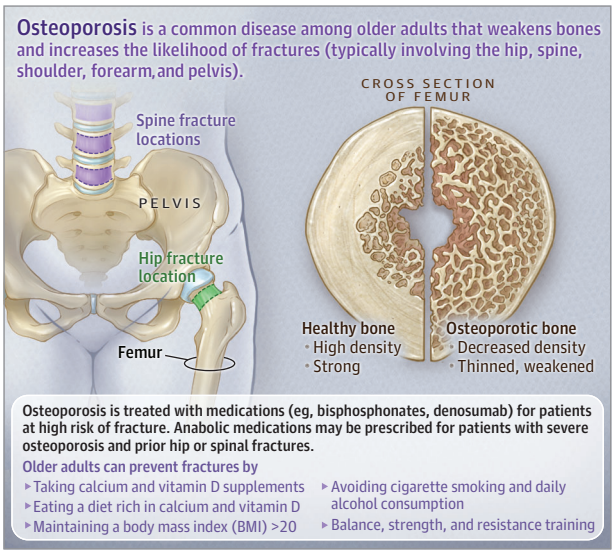
A common method used to screen for and diagnose osteoporosis is dual-energy x-ray absorptiometry (DEXA), low-dose x-ray imaging that measures calcium and other minerals in the bones to determine their strength (bone mineral density). DEXA results are reported as a T score, which compares a patient's bone mineral density with that of a young adult. Patients with a T score of −2.5 or less have osteoporosis.

The Fracture Risk Assessment Tool (FRAX) predicts the likelihood of a hip, spine, shoulder, or forearm fracture over the next 10 years based on a patient's risk factors and DEXA bone mineral density results.

How Is Osteoporosis Treated?

Antiresorptive drugs (bisphosphonates and denosumab) decrease the natural breakdown of bone tissue and help reduce spine and hip fractures among high-risk patients. However, if bone health has stabilized, patients may discontinue bisphosphonates after 3 to 5 years of treatment to reduce the risk of rare thigh bone fractures or deterioration of bone in the jaw.

Anabolic medications (teriparatide, abaloparatide, and romosozumab) help prevent fractures by stimulating bone formation. These medications are recommended for patients with severe osteoporosis who have had multiple or recent spine or hip fractures.



Who Should Be Screened for Osteoporosis?

Guidelines offer varying recommendations about when patients should be screened for osteoporosis. In 2025, the US Preventive Services Task Force (USPSTF) recommended bone mineral density screening for all females without a prior bone fracture who are aged 65 years or older or females younger than 65 years with risk factors for osteoporosis. The USPSTF stated that there is not enough evidence to recommend for or against screening among males.

How Can Patients Prevent Fractures?

Dietary calcium (1000-1200 mg daily) and vitamin D (600-800 international units daily) from supplements and foods such as cow's milk, fortified orange juice, plant-based beverages such as soy or oat milk, eggs, and fatty fish are important for maintaining bone health. Lifestyle measures such as maintaining a body mass index (BMI) higher than 20; avoiding cigarette smoking and daily alcohol consumption; and balance, strength, and resistance training exercises can help older adults prevent fractures.

FOR MORE INFORMATION

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Published Online: November 20, 2025. doi:10.1001/jama.2025.17692

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Conflict of Interest Disclosures: None reported.

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1. Morin SN, Leslie WD, Schousboe JT. Osteoporosis: a review. *JAMA*. 2025;334(10):894-907. doi:10.1001/jama.2025.6003

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