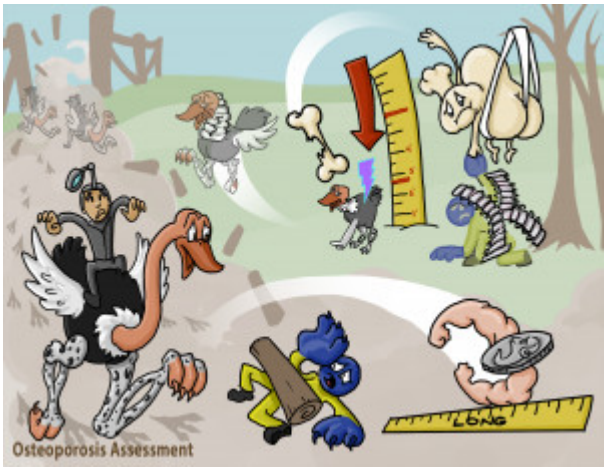
Osteoporosis Assessment

Osteoporosis is a disease that negatively affects bone mass and density, leading to increasingly fragile bones in both men and women. While this disease is more common in women, circumstances such as long-term corticosteroid use can increase a person's risk of developing the disease, regardless of gender. Patients with osteoporosis may experience a decrease in height, back pain, and pathologic fractures.



PLAY PICMONIC

Highest Risk

Postmenopausal Women

Post-man-paws

Estrogen helps to regulate bone mass by inhibiting osteoclast activity in the body. During menopause, when levels of estrogen begin to decrease in women, osteoclast activity increases. This biological change puts postmenopausal women at a greater risk of developing osteoporosis, because bone resorption (osteoclast activity) exceeds bone deposition (osteoblast activity). Osteoporosis can be prevented with sex hormone replacement in men and women who are hypogonadal, but is not a effective therapy once osteoporosis has been established

Long Term Corticosteroids

Long-ruler and Quarter-on-steroids

Glucocorticoids can cause increased bone loss, if used long-term. These medications directly inhibit osteoblast activity and cause increased urinary excretion of calcium. Both of which affect bone mass and formation.

Assessment

Kyphosis

Curvy-spine

Osteoporosis most commonly affects the vertebral bones. When bones in the spine weaken and fracture over time, patients may develop a humped back, known as kyphosis.

Dowager's Hump

Dough-wedgies Hump

Hyperkyphosis is excessive curvature of the thoracic spine, commonly known as the "dowager's hump. Curvature of the spine occurs when the front portion of the affected vertebra fractures and compresses. Typically, the posterior side of the vertebra is unaffected, causing the spine to tip forward into a curved posture.

Loss of Height

Down-arrow Height-chart

Weakening of the bones makes a person more prone to bone fractures. Because osteoporosis commonly affects bones in the spine, repeated bone fractures in this area can lead to gradual loss of height. On average, a person's height can decrease by two to three inches.

Back Pain

Back Pain-bolt

Osteoporosis is often asymptomatic until a fracture occurs. This may present as back pain in varying degrees. Back pain, especially in the lumbar area, in patients with osteoporosis is usually associated with a spinal fracture.

Pathologic Fractures

Fractured Bone

Weakening of the bones in patients with osteoporosis can cause fractures, unrelated to an injury, especially in the bones of the wrists, upper femur, and pelvis.

Spinal Compression Fracture

Spine Compressed with Fractures

Fractures that occur in the spine, causing the vertebral bone to collapse, or compress, are commonly seen in patients with osteoporosis. This type of fracture can be very painful and can eventually lead to kyphosis of the spine. Further leading to a loss of independence, and increased pain and mortality.