



PATIENT FACT SHEET

Glucocorticoid-Induced Osteoporosis



CONDITION DESCRIPTION

Treatment with glucocorticoids for inflammatory arthritis or other health problems may weaken bones. This can lead to osteoporosis. Treatment to protect bones can help prevent glucocorticoid-induced osteoporosis.

Glucocorticoids are also called corticosteroids or steroids, and include prednisone [Deltasone, Orasone], prednisolone [Prelone], dexamethasone [Decadron, Hexadrol] and cortisone [Cortone]. They may be used to treat joint diseases like rheumatoid arthritis, lupus, myositis and polymyalgia rheumatica.

Glucocorticoids may have a negative effect on bone cells. New bone may form more slowly. These drugs may also affect calcium processing and sex hormones, which also increase bone loss. Glucocorticoid-induced osteoporosis increases fracture risk. Risk factors include older age, small bone structure, Asian or non-Hispanic white background, or prior fracture due to low-level injury after 50.



SIGNS/ SYMPTOMS

Weakened bones and increased fracture risk are the main signs of glucocorticoid-induced osteoporosis. Spine and hip fractures are most common. These may lead to chronic pain, long-term disability and even death.

Bone mineral density [BMD] testing diagnoses osteoporosis. Dual-energy X-ray absorptiometry [DXA] is a quick, painless test to measure BMD. Pregnant women should not have DXA, as it could harm their fetuses.

DXA testing provides a T-score. People with a T-score between -1.0 and -2.5 have osteopenia, or mild BMD loss.

Those with a T-score of -2.5 or lower have osteoporosis. People taking glucocorticoids have a fracture risk at higher bone density levels than would be expected.

Risk factors for glucocorticoid-induced osteoporosis that might be treatable include low levels of sex hormones like estrogen, anorexia nervosa, smoking, alcohol abuse, low calcium and vitamin D, and sedentary lifestyles. Some medications, such as blood thinners, may also increase osteoporosis risk.



COMMON TREATMENTS

Treatment of glucocorticoid-induced osteoporosis includes getting enough calcium and vitamin D.

Patients should take at least 1,500mg of calcium and 800-1,000 international units [IU] of vitamin D daily through supplements. Blood testing can determine if patients need more vitamin D.

Prescription medications approved to prevent or treat glucocorticoid-induced osteoporosis include

bisphosphonates, such as risedronate [Actonel] and zoledronic acid [Reclast]. Alendronate [Fosamax] and teriparatide [Forteo] are also approved treatments.

Patients should work with their doctors to take the lowest dose of glucocorticoids necessary for any conditions, and take calcium and vitamin D supplements as soon as they start these medications.



CARE/ MANAGEMENT TIPS

People taking glucocorticoids of more than 7.5mg per day for three months are at higher risk for developing osteoporosis. Steps to help prevent osteoporosis include weight-bearing physical activity [such as walking on most days], quitting smoking, planning strategies to prevent falls that could cause a fracture, and early DXA testing to diagnose osteopenia or osteoporosis.

A rheumatologist can use a tool called FRAX to estimate fracture risk in patients with glucocorticoid-induced osteoporosis, and suggest changes or treatment. Patients at higher fracture risk may take steps to modify activities to prevent slips or falls. Physical therapy may be helpful. A patient's main goal for management is to prevent fractures.