
Osteoporosis & Other Bone Disorders

Osteoporosis

Osteoporosis is a condition in which there is a loss of mineral part of the bone and thinning and disintegration of the spongy part of the bone. All this leads to propensity of the bone to break. Fractures (breaks) of the hip or spine are main complications but other bones are affected, too. Osteoporosis treatment is aimed to prevent fractures. Osteoporosis is much more common in females than in males because bone minerals are lost very fast 3-8 years after menopause.

Treatment with bisphosphonate medications increases bone density and strength by slowing down bone resorption in osteoporosis. These medications need to be taken for several years (usually once a week) to combat the spread of osteoporosis. Taking enough calcium and vitamin D as well as regular exercise also helps prevent fractures. Severity of the osteoporosis is determined by bone densitometry (see below).

Osteopenia

Basically the same condition as osteoporosis just of milder degree. Individuals who are currently losing bone (determined by blood tests or densitometry) or have risk factors for further bone thinning should be treated with same medications as people who already have osteoporosis, just with lower doses (goal is to prevent further bone loss).

Osteomalacia

A bone condition similar to osteoporosis caused by prolonged and severe vitamin D deficiency. Vitamin D is very important for absorption of calcium from guts into the blood stream. Low blood level of vitamin D causes not enough calcium to be available for rebuilding the skeleton (rebuilding occurs throughout the life). This leads to poorly calcified bone, much like in osteoporosis. Symptoms of diffuse bone and muscle aching may develop and in severe cases lead to fractures of the bone. However, most patients have a mild form and are basically without symptoms. Diagnosis is usually made during the investigation of low bone density obtained by DEXA (see below).

Paget's disease of bone

A condition different from osteoporosis in which part of the skeleton (sometime just one bone) suffers from greatly increased and irregular remodeling. Bone affected with the disease is thickened but weak. Irregular bone structure is easily visible on x-rays. Patients may have pain in the affected bone or pain from the compression if nearby nerves (at times pain may be severe). Deformations of weight bearing bones can be seen when affected with Paget's. Cause of the disease is currently unknown but some viruses have been suspected.

Treatment consist of bisphosphonates (same medications used for osteoporosis and osteopenia but in higher doses) and pain management. Sometimes, corrective surgeries are necessary to improve function of the affected bone.

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