

Osteoporosis common in U.S.

Osteoporosis is the thinning of bone tissue and loss of bone density over time. It is the most common type of bone disease. It is a major public health threat that afflicts 55 percent of Americans age 50 and older. It affects 44 million Americans, striking one in three women and one in five men. It is responsible for millions of fractures annually, mostly involving hip, vertebrae, and wrist.

The leading cause of osteoporosis is a drop in estrogen in women at the time of menopause and a drop in testosterone in men. Because of this, women over the age of 50 and men over the age of 70 have a higher risk for osteoporosis.

Medical causes of osteoporosis include immobilization, chronic rheumatoid arthritis, chronic kidney disease, vitamin D deficiency, use of prednisone and alcohol, and smoking. High dose cortisone is the second most common cause of osteoporosis. Others include low weight, low calcium intake and poor health. Sign and symptoms includes bone pain, tenderness, fractures, loss of height over time, low back pain as well as stooped posture

Hip and vertebrae fractures are responsible for the most serious consequences of osteoporosis. In the U.S., more than 300,000 hip fractures and 700,000 vertebral fractures are attributed to osteoporosis. The wrist fracture (250,000) is the third most common kind of fracture.

Dual energy x-ray absorptiometry is considered gold standard for diagnosis of osteoporosis. FDA approved indications for a bone density test includes

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estrogen deficient women at clinical risk for osteoporosis, vertebral abnormalities on x-ray suggestive of osteoporosis, prednisone 7.5 mg or more for more than three months, primary hyperparathyroidism, and monitoring response to medication. DEXA can be repeated every two years or more frequently if medically justified.

The U.S. Preventive Services Task Force recommended in 2011 that all women 65 years of age or older should be screened with bone densitometry. In men, screening will be cost-effective to 85 years of age. *Effective*

Lifestyle changes are important in prevention like smoking cessation, decreased alcohol intake, and improved nutrition with more calcium and vitamin D supplements. They are recommended to avoid Omega-6 based oil such as corn oil; instead use olive and coconut oil. Animal and plant-based omega-3 fats are highly beneficial. Vitamin K2 supplement found in green leafy vegetable can reduce fractures as well. Weight bearing exercise will be another remedy against osteoporosis.

Biphosphonate (Fosamax) and alendronate (Actonel) and

ibandronate like Boniva are the first line of treatment of osteoporosis. Annual infusion of Zoledronic Acid reduced the risk of any fracture as well. Estrogen replacement therapy remains good treatment for prevention of osteoporosis. Teriparatide (Forteo) is effective treatment for osteoporosis. Calcium is required to support bone growth, bone healing and is part of the treatment of osteoporosis. U.S. health agencies recommend 1200 mg of calcium plus vitamin D 1000-2000 international units per day.

Hip fractures can increase mortality due to complications of fractures like deep venous thrombosis, pulmonary embolism and pneumonia. The six-month mortality rate following hip fracture is approximately 13.5 percent. Low bone mass has been linked with Alzheimer's disease. Research shows that the patients with lowest bone mass were more than twice as likely to develop Alzheimer's disease as their healthy counterpart.

Osteoporosis is something that can be prevented and cured. Patients need careful monitoring of their diet, exercise and bone density test in order to definitely diagnose the problem. Any small amount of effort can prevent future bone fracture and complications.

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