

Bone Health of Americans is in Jeopardy: Key Theme of Surgeon General's 2004 Report

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The Burden of Osteoporosis

Estimates are that by the year 2020, one in two Americans will have or be at high risk for osteoporosis.

Surgeon General's Report, 2004

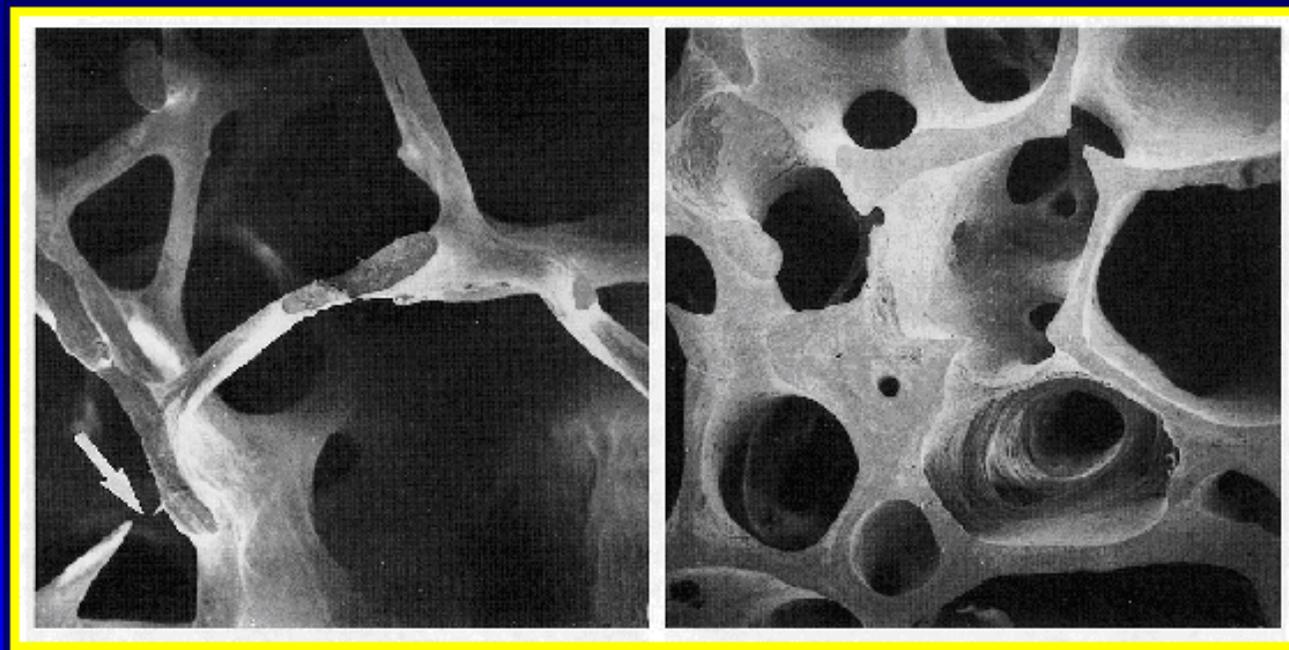


Osteoporosis

- a systemic skeletal disease
- characterized by low bone mass and microarchitectural deterioration of bone tissue
- results in an increase in bone fragility and susceptibility to fracture.



Osteoporotic Bone Loss



Osteoporosis

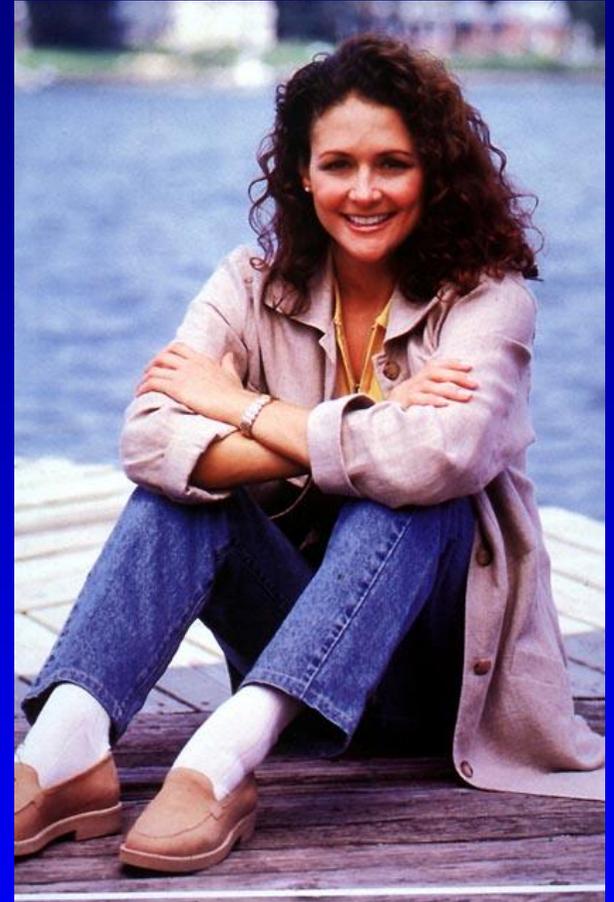
Normal

Dempster DW, et al. J Bone Miner Res. 1986;1:15



One out of every two women age 50 and older will experience an osteoporotic fracture during her lifetime.

In women, osteoporosis disproportionately affects Caucasians and Asians, but other races/ethnicities significantly affected.



As many as one in four men over the age of 50 will experience an osteoporosis-related fracture in their lifetime.

In men, involvement of all races and ethnicities is significant



Osteoporosis also is seen in premenopausal women, although less commonly than in older women.



Hip Fractures Have Significant Consequences

Risk of mortality is 10 times greater among hip fracture patients as compared to comparable persons without fracture in the first few weeks after a fracture.

Of persons who fracture a hip, ~20% die within 12 months after the fracture.

Half of hip fracture patients will need to use walkers or canes or someone to help them walk for the rest of their lives.

One in five hip fracture patients ends up in a nursing home. Many elderly see this as worse than dying. (Salkeld et al, 2000)



Consequences of Spine Fracture

- Back pain
- Abdominal discomfort
- Difficulty breathing
- Early satiety and weight loss
- Loss of self esteem
- Sleep disorders

Silverman SL. 1992



Research Developments in Diagnosis and Treatment of Osteoporosis

- Bone density tests with DXA can be used to estimate risk of fracture.
- Since 1995, seven new drugs have been developed to decrease risk of bone loss and subsequent fractures.
- Calcium and vitamin D have been shown to have significant effects in maintaining bone health.
- Studies have shown that optimal calcium and physical activity can improve bone mass accrual in children and adolescents.



Critical Need for More Research

- New methods, in addition to DXA bone density measurements, for predicting who will suffer an osteoporotic fracture. Some osteoporotic fractures occur in persons with normal bone mass. Methods are needed to evaluate bone quality in addition to bone mass.
- New and improved modalities for preventing fracture. In large studies, the most effective medications prevent only 50-60% of osteoporotic fractures.
- Studies of osteoporosis in premenopausal women. Very little is known about osteoporosis in this age group, and it is devastating for those who suffer from it.



Persons with osteoporosis do not die; they slowly break apart.

- Long-time osteoporosis suffer

