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Vitamin D Levels and Bone Loss in Older Men

In men older than 75, 25(OH)D levels lower than 20 ng/mL were associated with accelerated bone loss.

Osteoporotic Fractures in Men is a prospective study of healthy aging — with a focus on osteoporosis — in 6000 older U.S. men (age, ≥ 65). In a previous report from that study ([JW Gen Med Apr 23 2009](#)), one quarter of participants exhibited 25 hydroxyvitamin D [25(OH)D] levels lower than 20 ng/mL. Now, the researchers report on the relation between vitamin D levels and bone loss.

About 1300 participants underwent baseline measurement of serum 25(OH)D and bone-mineral density at the hip, followed by repeat bone density testing about 4 years later. After adjustment for potentially confounding variables, men with baseline 25(OH)D levels < 20 ng/mL had significantly greater 4-year declines in bone density than did men with levels of 20–29 ng/mL or levels ≥ 30 ng/mL. For men in the latter two categories, rates of bone loss were similar. The association between 25(OH)D levels < 20 ng/mL and a higher rate of bone loss was limited to elders (age, ≥ 75 at baseline).

Comment: In men older than 75, but not in younger men, 25(OH)D levels < 20 ng/mL were associated with accelerated bone loss. The findings support a level of 20 ng/mL as a cutoff for vitamin D deficiency in older men, although levels in the range of 20–30 ng/mL possibly are suboptimal in other ways.

— [Allan S. Brett, MD](#)

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Citation(s):

Ensrud KE et al. Serum 25-hydroxyvitamin D levels and rate of hip bone loss in older men. *J Clin Endocrinol Metab* 2009 Aug; 94:2773.