Calcium And Vitamin D Strengthen Seniors' Bones

Life spans have increased drastically during this century, but longevity is a mixed blessing if pain and disability haunt the latter years. Bone fractures are high on the list of serious health problems that plague the elderly, yet research indicates it doesn't have to be that way.

Many elderly people are deficient in vitamin D and calcium, both critical to maintaining strong bones. There are many reasons for age-related deficiencies, the most common being low dietary intakes of these nutrients as well as absorption problems. With age, absorption of calcium and, possibly, vitamin D declines as does the ability of the skin to produce vitamin D upon exposure to sunlight. Nursing home patients in particular may not receive sufficient sun exposure. The bottom line is that calcium and vitamin D deficiencies stimulate parathyroid hormone, which leads to bone loss; this in turn increases susceptibility to fractures.

Prior studies have shown that supplementing postmenopausal women with calcium or vitamin D increases their bone density. Now, researchers at the U.S.D.A. Human Nutrition Research Center on Aging at Tufts University in

Boston have demonstrated that combined'calcium and vitamin D supplementation also increases bone density in both older men and women.

In this study, 176 men and 213 women aged 65 or older took either 500 mg calcium plus 700 IU vitamin D or placebo daily for three years. The groups were split approximately evenly, and every six months bone-density measurements were taken of the hip, spine and total body. After one year, the calcium-vitamin D group had significantly greater bone density at all sites than the placebo group. In the second and third years, the improvement in the treatment group's bone density was significantly greater only for total-body measurements. Nevertheless, the initial boost to hip and spine bone density from the first year was maintained over the next two years.

This enduring benefit supports the effectiveness of long-term supplementation. Also, whereas the vitamin-mineral group gained bone density, the placebo group overall lost bone mass. Best of all, for those taking calcium plus vitamin D, the risk of fracture was cut in half.

This study adds clout to the advice that older men and women should make sure they get enough calcium and vitamin D. The AIs (adequate intakes) for people over 5 1 for both calcium and vitamin D were just raised (see Oct. *NSN*, p. 487) to 1,200 mg/day and 10-15 ug/day, respectively. Food sources of calcium include dairy products, tofu and green leafy vegetables such as turnip greens, kale and collard greens. Sources of vitamin D include fortified milk, cod liver oil, cold-water fish (e.g., salmon, mackerel, herring), butter and egg yolks. People should also remember to step outside. In the skin, sunlight converts a precursor to vitamin D3, which the liver and kidney modii to form a more potent form of the vitamin

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