Vitamin D Deficiency Raises Risk of Hip Fracture

A low serum level of vitamin D is associated with a higher risk of hip fracture in postmenopausal women, according to a large nationwide case-control study.*

The eligible study population was recruited from the Women’s Health Initiative Observational Study of the National Institutes of Health and included 39,793 postmenopausal women aged 50 to 79 years. Of these, 400 experienced hip fractures during seven years of follow-up, and 400 women were selected as matched controls. Vitamin D status was measured as serum 25-hydroxyvitamin D.

Women with hip fracture had significantly lower average levels of 25-hydroxyvitamin D than the controls. When vitamin D serum levels were divided into four groups, the researchers found that the lowest levels of vitamin D were associated with the highest risk of hip fracture. Physical condition, body mass index, number of falls, kidney function, and levels of sex steroid hormones did not affect this association.

This study highlights the importance of maintaining optimal serum levels of vitamin D for good bone health.

—Laura J. Ninger, ELS


Vitamin B12 May Help Prevent Brain Shrinkage

In a study published in the journal Neurology, researchers report an association between decreased levels of vitamin B12 and a decline in brain volume.* Decreased brain volume (atrophy) has been linked with Alzheimer’s disease.

The study included 107 participants who did not have cognitive impairment upon enrollment. MRI scans of the brain, blood testing, and cognitive assessments were conducted annually over a five-year period.

Comparison of MRI images obtained at the beginning of the study with those scanned after five years found a greater amount of brain volume loss among participants with low vitamin B12. Subjects whose B12 levels were among the lowest one-third of participants had a six times greater adjusted risk of increased brain volume loss than those whose levels were in the top two-thirds.

"Vitamin B12 deficiency is a public health problem, especially among the elderly, so more vitamin B12 intake could help reverse this," lead author Anna Vogiatzoglou, MSc, advised.

—Dayna Dye

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