

Low vitamin D linked to higher risk of hip fracture

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Women with low levels of vitamin D have an increased risk of hip fracture, according to a study led by the University of Pittsburgh Graduate School of Public Health presented this week at the 29th annual meeting of the American Society for Bone and Mineral Research at the Hawaii Convention Center.

Jane A. Cauley, Dr.P.H., professor of epidemiology, and colleagues evaluated patient data on 400 women enrolled in the Women's Health Initiative Observational Study Cohort who had experienced hip fracture, confirmed by their medical record, over a median of 7.1 years. Levels of 25 hydroxyvitamin D, an indicator of vitamin D status, in the bloodstream were measured for these patients and compared with those of a control group matched for age, race, ethnicity and the date of relevant blood work. As vitamin D concentrations decreased, the risk of hip fractures climbed.

"The risk of hip fractures was 77 percent higher among women whose 25 hydroxyvitamin D levels were at the lowest concentrations," said Dr. Cauley, who has spent much of the past 15 years investigating the physical changes that take place in postmenopausal women. "This effect persisted even when we adjusted for other risk factors such as body mass index, family history of hip fracture, smoking, alcohol use and calcium and vitamin D intake."

Vitamin D deficiency early in life is associated with rickets – a disorder characterized by soft bones and thought to have been eradicated in the

United States more than 50 years ago.

Though the exact daily requirement of vitamin D has not been determined, most experts think that people need at least 800 to 1,000 international units a day. Many experts believe the current recommended levels of 400 IUs daily should be increased.

The vitamin is manufactured in the skin after sun exposure, and is not available naturally in many foods other than fish liver oils. Some foods are fortified with the vitamin.

Source: University of Pittsburgh

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