

Low vitamin D levels linked to poor physical performance in older adults

April 23 2007

Older adults who don't get enough vitamin D – either from their diets or exposure to the sun – may be at increased risk for poor physical performance and disability, according to new research from Wake Forest University School of Medicine and colleagues.

"With a growing older population, we need to identify better ways to reduce the risk of disability," said lead author Denise Houston, Ph.D. "Our study showed a significant relationship between low vitamin D levels in older adults and poorer physical performance."

The results are reported in the April issue of the *Journal of Gerontology: Medical Sciences*.

About one-fourth of people over age 60 have low vitamin D levels. Previous research has shown that vitamin D not only plays a role in bone health, but possibly also in protecting against diabetes, cancer, colds and tuberculosis.

"Recent findings showing the importance of vitamin D status on multiple health outcomes underscore the need for more research on the effects of low vitamin D levels in elderly populations," said Houston, an instructor in internal medicine - gerontology.

Vitamin D is naturally produced when skin is exposed to the sun's ultraviolet rays. Foods such as fortified milk, juice and cereals also contain vitamin D, but it is difficult to get enough through diet alone,

said Houston.

Older adults are particularly prone to low vitamin D levels because they may get less exposure to sunlight and because their skin is less efficient in producing vitamin D from sun exposure compared to younger adults. Older adults also may not get enough vitamin D from dietary sources.

"There is a growing awareness that the prevalence of low vitamin D levels is common among the elderly," said Houston.

For the current study, researchers analyzed data from the InCHIANTI study, which evaluated factors contributing to the decline of mobility in late life. The study involved 976 people who were 65 years and older from two towns in the Chianti area of Italy. The mean age of participants was 74.8 years. Data were collected from Sept. 1998 through March 2000.

Participants completed a short physical performance test of their walking speed, ability to stand from a chair and ability to maintain their balance in progressively more challenging positions. In addition, handgrip strength, a predictor of future disability, was measured using a hand-held dynamometer.

The researchers found that physical performance and grip strength were about five to 10 percent lower in those who had low levels of vitamin D. After looking at other variables that could influence the results, such as body mass index, physical activity, the season of the year, mental abilities, health conditions and anemia, the results held true.

The study wasn't designed to evaluate whether low vitamin D levels actually cause poor physical performance, but the results suggest the need for additional research in this area, said Houston. She said vitamin D plays an important role in muscle function, so it is plausible that low

levels of the vitamin could result in lower muscle strength and physical performance.

"But it's also possible that those with poor physical performance had less exposure to sunlight resulting in low vitamin D levels," she said.

Current recommendations call for people from age 50 to 69 to get 400 international units (IUs) of vitamin D per day and for those over age 70 to get 600 IUs. Many researchers, however, suggest that higher amounts may be needed.

"Higher amounts of vitamin D may be needed for the preservation of muscle strength and physical function as well as other conditions such as cancer prevention," said Houston. "The current recommendations are based primarily on vitamin D's effects on bone health."

Source: Wake Forest University Baptist Medical Center

Citation: Low vitamin D levels linked to poor physical performance in older adults (2007, April 23) retrieved 30 April 2024 from <https://medicalxpress.com/news/2007-04-vitamin-d-linked-poor-physical.html>

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