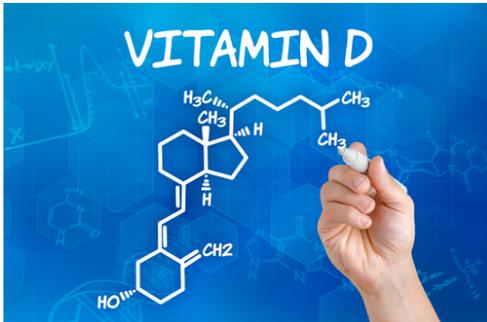


Yet Another Supplement (Vitamin D)isappoints



By Ruth Kava — January 5, 2016



[1] [Chemical Structure of Vitamin D](#)

[2]

We've written many times about the effects of the 1994 Dietary Supplement Health Education Act (DSHEA) on the perception of various supplements as almost magical treatments for a variety of ills (see [here](#) [3], for example). One such perception has been that vitamin D can help prevent some forms of cancer, as well as problems related to bone and muscle strength.

It's been known for many years that vitamin D is essential for normal bone growth and maintenance; this has led to the hypothesis that supplementing vitamin D for older people, who are deficient in that nutrient, will help strengthen bones and thus help prevent falls and fractures. In addition, it is known that a feature of clinical vitamin D deficiency is decreased muscle strength.

But a new [study](#) [4] published in *JAMA Internal Medicine* fails utterly to support the effectiveness of vitamin D supplementation to address such problems.

Dr. Helke A. Bischof-Ferrari from the University Hospital in Zurich, Switzerland and colleagues tested the effects of three doses of vitamin D on the likelihood of falls and fractures in people over 70 years old who had had one fall in the year before their participation in the study. Two hundred individuals (two thirds of each group were women) were included, and assigned to one of three groups:

- Group 1 received a monthly drink containing 24,000 IU vitamin D₃ (this is what a person consuming the recommended 800 IU/day would ingest over a month)
- Group 2 received a drink with 60,000 IU vitamin D₃ monthly
- Group 3 members were given capsules containing 24,000 IU vitamin D₃ plus a capsule containing 300 micrograms vitamin D₂ (the form of the vitamin usually measured in the blood to determine vitamin status)

At the start of the study, participants' physical functions, e.g. walking speed, chair stands, and balance tests, were assessed and repeated at six and 12 months. In addition, they noted the proportion of patients whose blood levels of vitamin D reached 30 ngm (nanograms) per ml after supplementation (58 percent of participants had a lower level at the beginning of the study).

After one year, the investigators found that while Groups 2 and 3 were significantly more likely to achieve a blood level of vitamin D greater than 30 nanograms/ml, this increase was not associated with significantly improved function when compared to Group 1. In fact, those groups experienced slightly more falls than did Group 1.

Thus, although greater levels of supplementation were associated with higher blood levels of vitamin D, there was no associated improvement in terms of walking speed and balance, and other physical functions.

In their conclusions, the authors noted that an important limitation of this study was the lack of a placebo group i.e., one that did not receive any vitamin D and therefore "our trial supports low dose over high dose vitamin D supplementation but cannot establish a benefit over placebo."

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