

Vitamin D: Overpromising & Under-Delivering, Study Says



By Lila Abassi — February 1, 2016



Vitamin D via [shutterstock](#) [1]

The human body is really awesomely designed. In non-diseased states, our bodies have evolved to respond to both their external and internal environments with admirable precision.

Physiologically speaking, our bodies are well-equipped to sense deficiencies and excesses of essential nutrients and minerals, and respond to them.

Often referred to as the sunshine vitamin, [Vitamin D](#) [2] plays a vital role in the homeostasis of calcium and phosphorous levels in the body, as well as maintaining the integrity of bones and teeth. It is said to have protective effects against multiple conditions such as cancer, Type 1 diabetes and multiple sclerosis. Despite being hailed as a "miracle vitamin," in clinical trials Vitamin D supplementation has failed to substantiate claims of its supposed boundless benefits.

Several clinical trials published recently have demonstrated not only the lack of evidence that high-dose Vitamin D supplements prevent fractures and falls, but suggested that it may in fact contribute to them. Previous research has suggested that Vitamin D plays a [beneficial role](#) [3] in prevention of falls and fall-related injury in the elderly. One such [study](#) [4] published in *JAMA Internal Medicine*, revealed that high-dose Vitamin D supplementation in postmenopausal women was not associated with beneficial effects on bone mineral density, muscle function, muscle mass or falls.

The authors of the study state in their conclusion that, "Study results do not justify the common and frequently touted practice of administering high-dose cholecalciferol to older adults to maintain serum 25(OH)D [25-hydroxyvitamin D] levels of 30 ng/mL or greater.

Another, more recent [randomized clinical trial](#) [5], also published in *JAMA Internal Medicine*, found that high-dose Vitamin D does *not* improve lower extremity function *and* increases the risk of falls in the elderly.

A [meta-analysis](#) [6] published in the *Lancet Diabetes & Endocrinology* journal, made up of a review of 20 randomized controlled trials, found that supplementations with Vitamin D did not reduce falls by 15 percent or more and that there is little justification for prescribing Vitamin D supplements to prevent falls.

Most of the Vitamin D our bodies need is provided by sunlight acting on the skin. A pro-hormone is produced, absorbed and converted to Vitamin D. It can also be obtained through the diet from flesh of fatty fish such as salmon, tuna and mackerel. Also, many foods are fortified with Vitamin D such as milk, breakfast cereals, orange juice, yogurt and others.

The main causes of Vitamin D deficiency are:

- Lack of it in the diet
- Individuals who have darker skin
- Abnormally low exposure to the sun (such as in the winter months)
- Inability to absorb Vitamin D from the intestine
- Inability to process Vitamin D due to kidney or liver disease

Barring the aforementioned conditions, the majority of healthy individuals will unlikely suffer the consequences of severe Vitamin D deficiency rickets in childhood and osteomalacia as adults.

In an article published in [The Conversation](#) [7], Tim Spector, Professor of Genetic Epidemiology, King's College London, stated, The billions we waste on these products, assisted by the poorly regulated but rich and powerful vitamin industry, should be spent on proper healthcare and people should be educated to go in the sunshine and eat a diverse range of real food instead. For 99 [percent] of people, this will provide all the healthy vitamins they will ever need.

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[2] http://www.uptodate.com.newproxy.downstate.edu/contents/vitamin-d-deficiency-beyond-the-basics?source=related_link

[3] <http://www.todaysgeriatricmedicine.com/archive/032414p18.shtml>

[4] <http://www.sciencedaily.com/releases/2015/08/150803154902.htm>

[5] <http://archinte.jamanetwork.com/article.aspx?articleid=2478893>

[6] <http://www.thelancet.com/journals/landia/article/PIIS2213-8587%2814%2970068-3/fulltext>

[7] <https://theconversation.com/the-sun-goes-down-on-vitamin-d-why-i-changed-my-mind-about-this-celebrated-supplement-52725>