

What You Should Know About Vitamin D

By Ryan N. Harrison, MA, HHP

Ryan N. Harrison, MA, HHP is a Health, Lifestyle, and Weight Management Specialist with a private practice. He has taught nutrition and holistic health for many years in both online and traditional settings. He has his Masters Degree in Transpersonal Psychology and certifications in several areas of health and wellness.

Many people think of vitamin D as the “sunshine vitamin,” and aptly so: one of the best sources of vitamin D is the natural reaction that occurs when the sun’s ultraviolet rays act on the oils of the skin to produce the vitamin, which is then absorbed into the body.¹ What many people *don’t* know, however, are more of the specifics about this peculiar vitamin, including how important it is to human health and the best ways to get it (especially if exposure to sunlight is at a minimum).

In the world of micronutrients, vitamin D is rather unique. For starters, it isn’t actually a vitamin. Because sunlight can stimulate the synthesis of vitamin D within the body, it’s not like other essential nutrients, which have to be taken in via food. In fact, outside of seafood, most foods don’t contain vitamin D unless it’s added to them (as is the case with the majority of dairy products sold today), because nature intended for the human body – with the sun’s help – to make its own supply.

What’s more, vitamin D’s chemical structure and actions in the body make it seem more like a hormone (or hormone precursor, also called a “prehormone”) than a vitamin. When converted into its activated form, vitamin D becomes the most potent steroid hormone in your body, able to influence over 2,000 of the 30,000 that help make you who you are.²

This means that vitamin D has nearly unparalleled importance in maintaining a well-functioning, healthy body. It’s fairly common knowledge that vitamin D is necessary for strong bones and teeth and that a deficiency of vitamin D leads to rickets (softening of the bones, especially in children). But vitamin D does far more than guard bone health. It also:

- Combats several kinds of cancer
- Maintains breast health
- Helps prevent multiple sclerosis
- Lowers risk of cavities, gingivitis, and periodontal disease
- Helps eliminate mercury from the body
- Fights colds and flu, and optimizes the immune system
- Helps prevent diabetes
- Is helpful in the treatment of eczema
- Enhances athletic performance
- Encourages fertility
- And much, much more...³

Long under-appreciated, research is only now starting to uncover the myriad ways that vitamin D positively affects our health, from head to toe. This has important implications for people who are seeking optimal wellness. But before you run out to grab a bottle of vitamin D, take a moment to learn a bit more about this vital nutrient.

For starters, you should assess whether you need to supplement with vitamin D. If you spend sufficient bare-skinned hours in the sun on a regular basis, you may not need any supplementation; your body will be making plenty of vitamin D (see below).

Most people, however, spend their days inside their homes or offices, venturing outside only under the vitamin D-prohibitive effects of sunscreen lotions, creams, and sprays. In these circumstances, even if you take a multivitamin with vitamin D in it, you may be at risk for lower-than-optimal levels of this nutrient. Health researchers suggest that most people – even those who regularly use nutritional supplements – are very likely to have vitamin D levels that are lower than required for optimal health and wellness. One study of people who regularly take a multivitamin containing 800-1,000 IU of vitamin D found that as many as 85% of the study participants showed levels of vitamin D that were just barely at or below the optimal range.⁴ If you aren't taking any kind of supplemental vitamin D, chances are you fall into this category, as well.

All the same, because vitamin D can be toxic in very large doses taken over a length of time, it's important to know your level of vitamin D, and the only way to do that is to have a blood test. This test measures the metabolically active *25-hydroxyvitamin D* form of the vitamin in the blood. Recognizing that optimal levels of 25-hydroxyvitamin D are 50-100 ng/mL, most people (an estimated 50-78% of the general population) have much lower levels in their body, measuring in at less than 30 ng/mL.⁵ A startling 36% of the general population may have levels lower than 20 ng/mL,⁶ a foolproof recipe for compromised health.

If you do decide that supplementing with vitamin D is in your best interest, you should know what kinds of supplements are available and which will work best for you. Because vitamin D has become such a hot topic, there are now numerous companies selling it in different doses, quantities and qualities. Basically, there are two types of vitamin D that you are likely to run across: vitamins D2 (*ergocalciferol*) and D3 (*cholecalciferol*). Of the two, research has determined that vitamin D3 (which is the same kind that your body makes via sunlight) is far more effective and easier for the body to use; you'd have to take three times as much vitamin D2 to get as much out of it as a single dose of vitamin D3.⁷

But how much to take? It's possible to find vitamin D3 in dosages from 400-5,000 IU. While there is some risk of toxicity if too much is taken over a long period of time, research suggests that most people would do well to take between 4,600-10,000 IU of vitamin D3 per day. This amount, easily achievable with one or two pea-sized capsules, would present a very low risk of toxicity.⁸ (Toxicity in humans probably begins to occur after chronic daily consumption of 40,000 IU.⁹)

Alternately, spending more time in the sun is an excellent way to increase the level of vitamin D3 in your body. Getting even just 30 minutes of full body exposure to the sun can create approximately 10,000 IU of vitamin D.¹⁰ (Skin color is certainly a factor; lighter-skinned people make vitamin D more readily than darker-skinned people, who should strongly consider supplementation for optimal health.¹¹) Remember, however, that if you are covering yourself in sunblock, you will significantly decrease your body's ability to synthesize vitamin D3.

A final word about using vitamin D supplements. Make sure that the supplement you choose is manufactured correctly and safely, according to current Good Manufacturing Practices (cGMP) set by the Food and Drug Administration. While vitamin D is not a new nutrient, and certainly not a “fad,” it always pays to go with a supplement manufacturer that you can trust and which has a proven track record of producing high-quality products.

¹ Mindell, Earl. *Earl Mindell's New Vitamin Bible*, Warner Books, ©2004.

² <http://articles.mercola.com/sites/articles/archive/2008/12/16/my-one-hour-vitamin-d-lecture-to-clear-up-all-your-confusion-on-this-vital-nutrient.aspx>

³ <http://articles.mercola.com/sites/articles/archive/2008/11/01/Vitamin-D-is-a-Key-Player-in-Your-Overall-Health.aspx>

⁴ http://www.lef.org/magazine/mag2010/jan2010_Startling-Findings-About-Vitamin-D-Levels-in-Life-Extension-Members_01.htm

⁵ Ibid.

⁶ Ibid.

⁷ <http://jcem.endojournals.org/cgi/content/full/89/11/5387>

⁸ http://www.lef.org/magazine/mag2010/jan2010_Startling-Findings-About-Vitamin-D-Levels-in-Life-Extension-Members_01.htm

⁹ <http://jcem.endojournals.org/cgi/content/full/89/11/5387>

¹⁰ <http://jcem.endojournals.org/cgi/content/full/89/11/5387>

¹¹ <http://ods.od.nih.gov/factsheets/vitamind.asp#h6>