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Benefits of vitamin D

Researchers are learning more about this important element of human nutrition.

By Judd Handler

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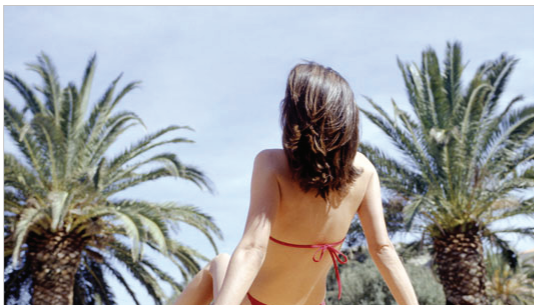
 What's this?


Photo: David De Lossy/Getty Image

Vitamin D is the only vitamin humans can acquire without food — albeit with a catch.

It's only if we manage to squeeze enough time in our hectic, hermetically sealed indoor lives and expose our skin to sunlight that we'll reap the **benefits of vitamin D** without food.

Despite the lack of large-scale randomized and controlled clinical studies that factor in skin color, geographic location, and lifestyle factors such as diet, some researchers say that increased vitamin D intake might help with the following:

- 1. Developing stronger immune systems and preventing autoimmune disorders like multiple sclerosis (MS):** One collaborative [study](#) between researchers at Oxford and three Canadian universities concluded that low vitamin D levels are directly connected to cases of MS in the study of more than 3,000 families. Experts suggest people in cold climates with little sun should take vitamin D supplements to prevent autoimmune disorders.
- 2. Regulating the release of insulin:** Researchers at the [Institute of Animal Physiology](#) in Munich, Germany, found that mice have vitamin D receptor cells located within insulin-secreting cells of the pancreas and these cells play an active role in the release of the blood sugar-regulating hormone when higher demand calls for its release. Limited human studies suggest a correlation between low vitamin D levels and insulin secretion and glucose tolerance in individuals with type 2 diabetes.
- 3. Maintaining heart muscle function:** A University of Rochester Medical Center [study](#) published in The Annals of Family Medicine determined in a study that African Americans have higher incidences of deaths from heart attacks and stroke because of low serum levels of vitamin D. "Growing evidence links low serum levels of D to many serious illnesses including diabetes, hypertension, kidney and heart disease," the study concluded.
- 4. Regulating blood pressure:** If you're not getting enough vitamin D from sunshine or the [minimum 1,000 International Units \(IUs\)](#) from supplements and food, you may be increasing your risk for developing high blood pressure, suggests one [study](#) in the Journal of Clinical Investigation.



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5. Absorbing calcium and reducing cancer risk in postmenopausal women: The active form of vitamin D is a hormone and several medical studies, (such as [this one](#) in Molecular Nutrition and Food Research) have found that vitamin D plays a critical role in absorbing calcium from the intestine. Another [study](#) in the American Journal of Clinical Nutrition concluded, "Improving calcium and vitamin D nutritional status substantially reduces all cancer risk in postmenopausal women."

6. Preventing muscle weakness and pain: The Linus Pauling Institute at Oregon State University points to research in an endocrinology textbook stating that muscle pain and weakness were major symptoms experienced by Arab and Danish-Muslim women, all of whom had very low vitamin D serum levels. Another small study of 124 women at nursing homes, with an average age of 89, the institute reports, concluded that those supplementing with 800 IUs per day of vitamin D had a 72 percent lower fall rate than those taking a placebo.

7. Preventing rickets: If you've taken a nutrition class, perhaps you've seen heart-breaking pictures of young children with extremely bowed legs or disturbingly distended pot bellies, two of the symptoms associated with the vitamin D deficiency commonly called [rickets](#).

The scientific community first became aware that sunlight can prevent rickets in the early 1800s.

First noticed in the mid-1600s in England, as Europe's industrial transformation was underway, rickets, though highly preventable, still exists all too often, mostly in the developing world, though cases are still reported in the U.S. (Rickets is rare in the tropics because of its sunny climate.)

On a related note: What about skin cancer? Shouldn't I stay out of the sun?

According to the journal [Cancer](#), cancer rates are twice as high in the Northeast U.S. as compared to those in the Southwest. The journal concluded in one article that, "many lives could be extended through increased careful exposure to solar UV-B radiation and more safely, vitamin D3 supplementation, especially in non[.]summer months."

When it comes to balancing getting adequate amounts of vitamin D at the risk of getting sunburned, Dr. Jacob Teitelbaum, author of "Real Cause, Real Cures" suggests, "Just use common sense and don't be paranoid about being out in the sun."

Teitelbaum adds, "Historically people spent most of the day outside, weren't dipped in sunscreen and didn't have sunglasses on. They got plenty of sunshine. That was the normal way to get vitamin D."

Know of other benefits of vitamin D? Leave us a note in the comments below.

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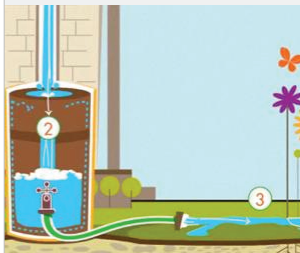
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