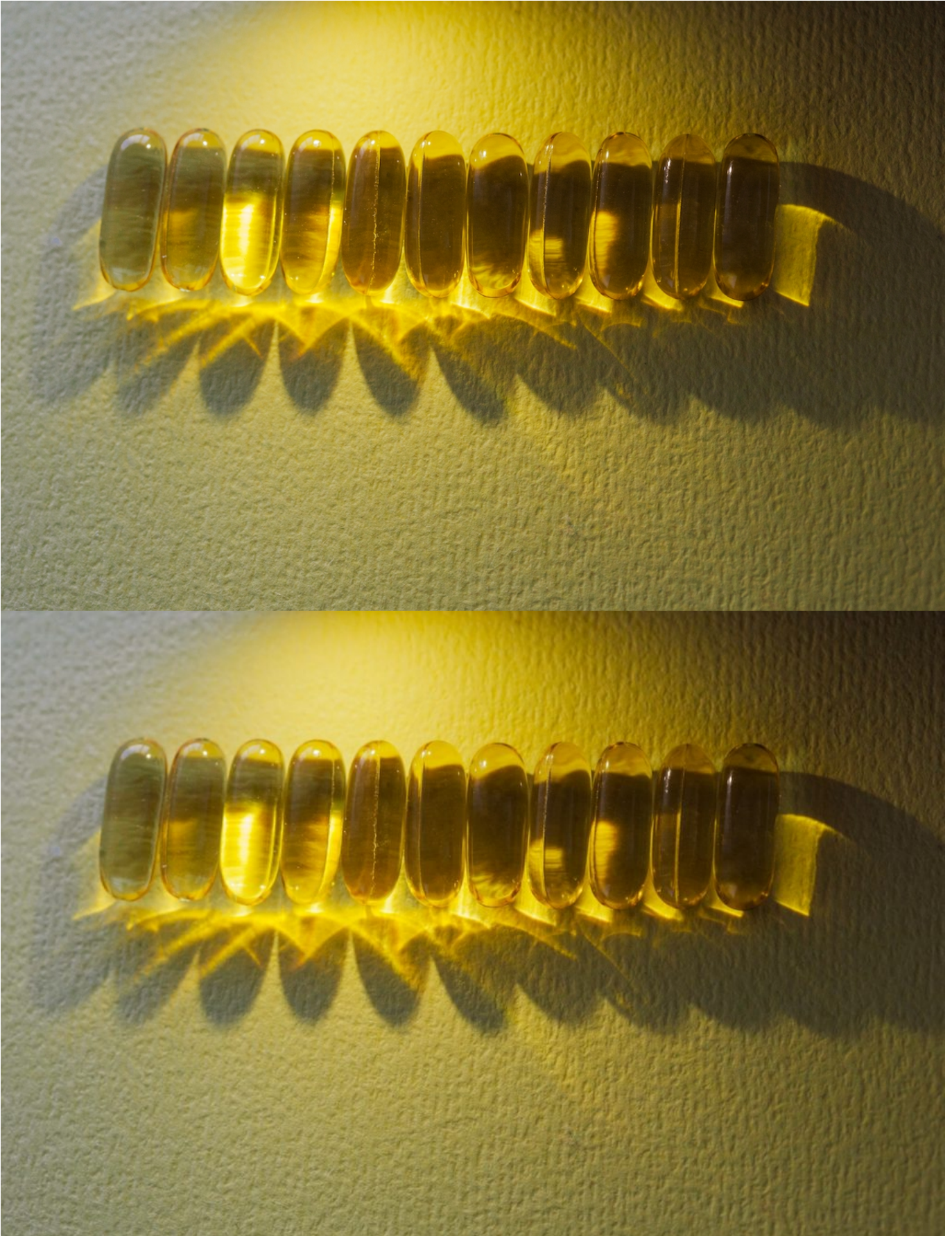


Implications of Vitamin D Deficiency



David Heber M.D., PhD, FACP, FASN - Chairman, Herbalife Nutrition Institute

Spring is officially here. Many of us will be heading outside to enjoy the warmer weather, taking great care to generously apply sunscreen. While it's always good to protect our skin from harmful UV rays, we're also blocking out one of the main ways that vitamin D is made in the skin through activation by UV light. As the obesity epidemic has spread globally, so has the deficiency of vitamin D. Since vitamin D is fat soluble, it goes into the body fat lowering the blood levels of vitamin D. Vitamin D is an essential vitamin for the absorption of calcium and maintaining bone health. However, it also has been found to have other effects primarily on the immune system. Therefore, it is important to realize that the world is in the middle of an epidemic of vitamin D deficiency with more than a billion people affected.

It's a problem with grave ramifications. Vitamin D is critical for aiding the absorption of calcium in the body, for bone growth and healing (this reduces the likelihood of brittle bones and osteoporosis), for a healthy immune function, and for reducing inflammation. A lack of this nutrient is associated with obesity, diabetes, hypertension, depression, fibromyalgia, chronic fatigue syndrome, heart disease, stroke, autoimmune diseases, birth defects, periodontal disease, osteoporosis, and Alzheimer's as well as other neuro-degenerative diseases. It has even been reported by the National Institutes of Health in the U.S. that "vitamin D deficiency may even contribute to the development of cancers, especially breast, prostate, and colon cancers."

Who Is at Risk?

Everyone knows that you can get vitamin D from the sun—it seems like it would be such a simple, ubiquitous and free solution—but we're just not getting enough for several reasons, or for some people, there are a combination of factors:

Sun-blocking: We've done such a good job protecting our skin with sunscreen, clothing and hats that harmful UV rays, the same ones that deliver vitamin D, are not being absorbed by our bodies. "To prevent vitamin D deficiency, one should spend 15 to 20 minutes daily in the sunshine with 40% of the skin surface exposed. High concentrations of melanin in the skin slows the production of vitamin D; similarly, aging greatly reduces skin production of vitamin D. Use of sunblock, common window glass in homes or cars and clothing, all effectively block UVB radiation – even in the summer," the NIH says.

Our diets: Vitamin D comes from only a few sources. You get the most from fatty fish such as tuna, mackerel and salmon, as well as fish liver oils; and smaller amounts from beef liver, cheese, egg yolks and some mushrooms. Vitamin D is also added to milk and infant formula, some cereals, orange juice and other prepared foods. That's why it's important especially for those with dietary restrictions, such as vegans, to get enough supplemental vitamin D if they're not coming across it naturally in their foods.

Obesity: Vitamin D (as well as vitamin A) dissolves into the body fat, making it unavailable to do its job in the rest of the body. In order to get the benefits of vitamin D, overweight and obese individuals need about two or three times the recommended amount for non-overweight people.

Age and skin color: Darker and older skin (those over 70) does not synthesize vitamin D as well as lighter and younger skin; people falling into those categories may need to up their intake.

IBS and other “leaky gut” issues: When the body can’t properly absorb fat, there’s a high probability that they will not absorb enough vitamin D into the body. This happens in people with cystic fibrosis, liver disease and intestinal conditions such as celiac disease, Crohn’s disease, and ulcerative colitis.

Are You Getting Enough?

While the recommended amounts of vitamin D vary by age, NIH recommends 600 IU per day for non-obese adult. There are varying recommended amounts depending on an individual’s particular circumstance. Typical supplements are available over the counter in amounts from 1,000 IU to 5,000 IU per day.

As with any vitamin, you should not take too much even though the body has ways of inactivating excess vitamin D that you take. Side effects related to increased calcium levels have been reported when individuals take more than 10,000 IU per day for three months or longer. High blood calcium can result in the following symptoms:

- Feelings of sickness, confusion or fatigue
- Poor appetite or loss of appetite
- Feeling very thirsty
- Frequent urination
- Constipation or diarrhea
- Abdominal, bone and muscle weakness and/or pain

To make sure you’re on track with your vitamin D intake, be sure to consult your health practitioner and if it’s not included as part of your regular blood work, ask for a test of your blood levels of vitamin D which is actually measured as 25-hydroxyvitamin D in clinical testing.