



The Link Between Thyroid Health and Vitamin D Status

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It's that time of year—where temps plummet and Vitamin D can do the same. Safe and responsible sun exposure is the best way for the body to generate Vitamin D, but many choose to supplement no matter what the season.

The benefits of adequate Vitamin D are aplenty and as we get into the cooler months, it's a good idea to be mindful of how to maintain sufficient levels, especially considering that D [plays a significant role in maintaining the health of our “master gland,” our thyroid.](#)

It's also critical for immune function—another consideration during “cold and flu season” and for managing autoimmune conditions such as Hashimoto's (autoimmune hypothyroidism—the most common form of autoimmunity). In short, [Vitamin D is one of the most potent immune modulators we have.](#)

Despite its name, Vitamin D isn't a vitamin. Or a nutrient. It's a hormone produced via photolytic reaction from direct sunlight on our skin. Because the body cannot produce any vitamin on its own, Vitamin D is considered a hormone because it's made within the body via photosynthesis.

And like all hormones, it fluctuates.

[According to Frank Lipman, MD,](#) “Vitamin D is involved in making hundreds of enzymes and proteins, which are crucial for preserving health and preventing disease. It has the ability to interact and affect more than 2000 genes in the body. It enhances muscle strength and builds bone. It has anti-inflammatory effects and bolsters the immune system. It helps the action of insulin and has anti-cancer activity. This is why Vitamin D deficiency has been linked with so many of the diseases of modern society.”

According to internist and integrative medicine physician, Greg Plotnikoff, MD, “Vitamin D is crucial for health and far too many people are (unknowingly) deficient in this hormone. This is a true public health concern. The Vitamin D dose doesn't matter. What matters, and what's a big deal, is your blood level. And that can only be measured through a blood test. Like with cholesterol levels, you cannot look at somebody and know their numbers.”

Back to the Thyroid...

According to Mark Hyman, MD, “Vitamin D is critical for activation of the thyroid receptor and making your thyroid hormone turn on the genes that improve your metabolism. It combines with the active hormone T3, which allows the hormone to ‘dock’ on its receptor or landing spot

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on the cell. It's a critical factor in thyroid function as it helps T3 bind to the receptor on the nucleus that controls gene function and our overall metabolism.”

Vitamin D also helps us make Free T3 (the “big daddy” (available/bioactive) thyroid hormone) and [reduces Hashimoto's antibodies](#).

What About Food?

Food sources of Vitamin D include: egg yolks, fatty wild fish (salmon, mackerel, tuna, herring, halibut, and sardines), fortified foods (milk, yogurt, some cereals, and orange juice) and shiitake mushrooms. But we only receive about 10 percent of our Vitamin D requirement from our diet because there are so few foods that contain D. This is why dairy and other products are often fortified with it.

Aren't I Supposed to Wear Sunscreen?

Dr. Lipman continues, “For about the last 25 years, doctors (dermatologists in particular) have demonized sun exposure and repeatedly told us it is bad for you and causes cancer. But is that true? In the last few years, numerous studies have shown that modest exposure to sunlight may actually be good for you, helping the body produce the Vitamin D it needs to keep bones healthy and protect against cancer, including skin cancer. Though repeated sunburns—in children and very fair-skinned people—have been linked to melanoma, there is no credible scientific evidence that moderate sun exposure causes it.”

Even 20 minutes in mid-day direct sunlight, sans sunscreen, increases our Vitamin D levels. The more sunlight we're exposed to in the warmer months, the less supplementation we need in winter because our bodies store Vitamin D in our fat cells.

Dr. Plotnikoff further states, “We know that Vitamin D is free from the sun. A general guide is that you can make Vitamin D from sun exposure if your shadow is shorter than you are tall. Vitamin D cannot be made through sunscreens SPF-8 or higher.”

Given that adequate Vitamin D supports our body's ability to produce and regulate thyroid hormones and modulates the immune system, helping to manage Hashimoto's (and other autoimmune conditions), it's my *strong* feeling that testing for Vitamin D should go right alongside [thyroid hormone and antibody testing](#). The additional benefits of Vitamin D are so well-founded, many agree with Dr. Plotnikoff's assertion that D supplementation is “the single most cost effective intervention” we can use for our overall health and longevity.

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