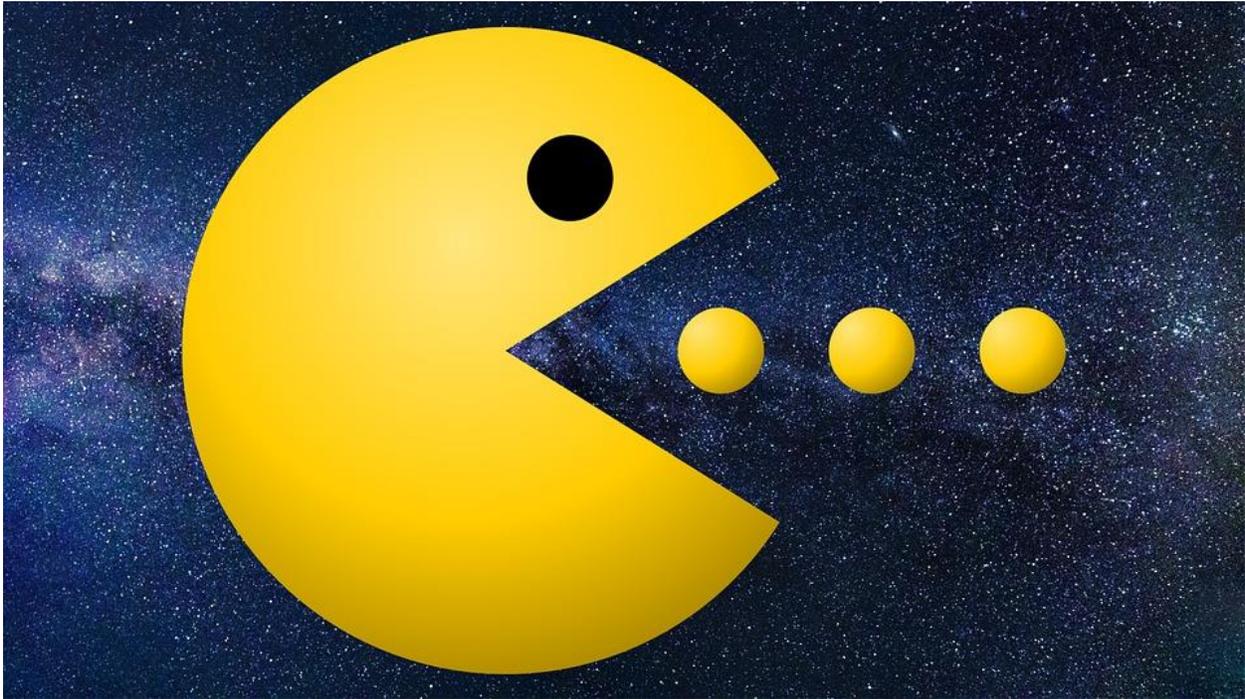


Vitamin D: The Pac-Man of Viruses, Bacterial Infections, and Cancer Cells

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In a fascinating study conducted at the University of Copenhagen, researchers found that vitamin D is essential in order to activate the body's immune system. Without it — or with insufficient levels — the immune system's killer T cells can't fight off serious infections and instead remain unheroically dormant. But with sufficient levels of vitamin D, these T cells spring into action, do what they're designed to do, and gobble up viruses, harmful bacteria, and can even destroy cancer cells.

According to Professor Carsten Geisler (Department of International Health, Immunology and Microbiology): "When a T cell is exposed to a foreign pathogen, it extends a signaling device or 'antenna' known as a vitamin D receptor, with which it searches for vitamin D. This means that the T cell must have vitamin D or activation of the cell will cease. If the T cells cannot find enough vitamin D in the blood, they won't even begin to mobilize."

With an estimated 42% of the world's population deficient in vitamin D, many experts consider this deficiency to be a global health problem. But it's a problem that can be easily remedied.

It begins with knowing what your current vitamin D levels are.

Checking Your Vitamin D Levels – How Much Is Enough?

Knowing your vitamin D levels is critical, especially if you have cancer. Fortunately, a simple blood test is all you'll need. Your doctor can recommend the test, or you can order your own from companies such as LabCorp, Private MD Labs, and Life Extension.

You'll want your vitamin D levels to be a minimum of 60-80 ng/mL on this test. Anything below 25 is dangerously deficient.

Risk Factors

Obesity. Because vitamin D is fat-soluble, people with higher amounts of body fat will store vitamin D in fat cells, causing lower amounts of vitamin D to circulate in the bloodstream. Those who are obese typically require higher amounts of vitamin D to correct a deficiency.

Ethnicity. African Americans are of particular risk for vitamin D deficiency. A study from the Medical University of South Carolina states that this class of people is 90% more likely to be deficient in vitamin D and that daily doses of 4,000IU may be necessary to combat the deficiency. According to a study published in the *Journal of Investigative Medicine*, if you're black AND obese, you are 70% more likely to be deficient in Vitamin D.

Age. For those aged 50 and older, vitamin D deficiency can be a problem. A variety of reasons may account for this such as excessive time spent indoors, reduced appetite and malabsorption of nutrients. In addition, our skin becomes thinner as we age, affecting the body's ability to synthesize vitamin D.

The Ideal Form of Vitamin D

Vitamin D, also called the Sunshine Vitamin, is actually a steroid with hormone-like activity. It regulates the functions of over 200 genes and in addition to its phenomenal immune system boosting properties, is absolutely essential for strong bones.

It only takes about 20 minutes in the midday sun (from 10AM – 2PM) for the body to absorb UVB rays through the skin and, via a chemical reaction process, turn it into one of the best immune system defenses on the planet. Studies show that vitamin D derived from the sun may circulate for double the time as vitamin D from food or supplements.

You would think that since the sun shines on all of us, there wouldn't be a lack of vitamin D, but for many reasons, this simply isn't the case. For those who are housebound or who live at latitudes too far from the equator, getting enough natural vitamin D can be problematic. And for those who use sunscreens, they're missing out on a chance for the body to produce this precious steroid, as sunscreen blocks the body's ability to produce vitamin D.

The Shadow Rule: you make more vitamin D when you are taller than your shadow.

You're fooling yourself if you think that by sitting indoors near a sunny window or driving in the car on a sunny day is enough to increase your levels of vitamin D. Window glass blocks UVB ultraviolet light. You really need to be outdoors, exposing as much skin as possible.

If you're curious as to how much vitamin D potential you have in the area where you live, check this chart from National Oceanic and Atmospheric Administration (NOAA): <https://gml.noaa.gov/grad/solcalc/azel.html>

Enjoy Vitamin D-rich Foods

You can fortify your diet by increasing dietary sources of vitamin D. These include egg yolks, beef liver, salmon, herring, sardines, cod liver oil, and mushrooms.

When eating fatty fish like salmon, be sure to opt for wild-caught as wild-caught salmon (on average) contains anywhere from 988-1,300 IU of vitamin D per 3.5-ounce serving. Farmed salmon disappoints with only about one-quarter of the amount of vitamin D.

If you're not a fish eater, consider cod liver oil. It was used for centuries as a preventative measure against vitamin D deficiency. Those who lived in northern climates may be familiar with the advantages of relying on cod liver oil as a vitamin D supplement when sunlight is scarce in wintertime.

A word about eggs — vitamins, minerals, and fat are concentrated in the yolk, and the protein in eggs is found mainly in the whites. One typical egg yolk contains approximately 37 IU of vitamin D.

Vitamin D Mushroom Hack

Mushrooms are a great source of vitamin D. Like humans, mushrooms can synthesize this vitamin when exposed to UV light. Researchers in Virginia have documented that sliced or chopped mushrooms when exposed to natural sunlight for only 15 minutes recorded a significant increase in Vitamin D levels. In some cases, daily Vitamin D requirements of 600 IU were exceeded by just three sliced white button mushrooms! (Bruce Hudson, Fitness and Health)

Simply place sliced mushrooms in a pan and place in the sunlight for about 15 minutes before adding to a fresh salad or your favorite recipe. Be sure to soak up the sunlight yourself while you're waiting!

Tan-Through Clothing

Ideally, you'll want to have at least 40% of bare skin exposed to the sun, with NO sunscreens or lotions. If you're too modest to bare up to 40% of your body to the sunlight, consider tan-through clothing options like this line of swimwear and shirts: <https://www.tanthrough.com/>.

Vitamin D Supplements

Vitamin D supplements are available in two forms: D2 (made from plants) and D3 (found in animal foods). Vitamin D3 is the type that is naturally produced in the human body and is widely considered to be the optimal form of supplementation.

Look for quality brands – never skimp on this important vitamin. We recommend those such as Bio-D-Mulsion Forte by Biotics Research, Nordic Naturals Arctic Cod Liver Oil, and Thorne Vitamin D/K2. We also recommend that you check with your personal healthcare practitioner to determine if supplementation is right for you.

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Founded by 30+ year cancer survivor, James Templeton, Templeton Wellness Foundation provides research and resources for alternative cancer treatment and holistic health.