

Vitamin D and Cancer

Vitamin D is not a vitamin but actually a steroid hormone that you can get from sun exposure, food sources and supplementation. The term refers to either vitamin D2 or D3, but D3 (chemical name 25-hydroxy vitamin D) is the actual vitamin D, and is the substance produced naturally through your skin by sun exposure.

<http://www.vitaminCouncil.org/about-vitamin-d/what-is-vitamin-d/>

The best time to be in the sun for vitamin D production is actually as near to solar noon as possible which is 1 PM in the summer for most (due to Daylight Saving Time).. The more damaging UVA rays are quite constant during ALL hours of daylight, throughout the entire year -- unlike UVB, which are low in morning and evening and high at midday. Most people with fair skin will max out their vitamin D production in just 10-20 minutes

1. American Journal of Public Health, 10.2105/AJPH.2004.045260 February 2006, Vol 96, No. 2 | American Journal of Public Health 252-261

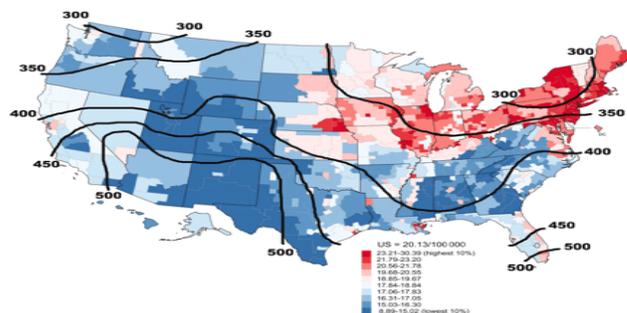
Vitamin D status differs by latitude and race, with residents of the northeastern United States and individuals with more skin pigmentation being at increased risk of deficiency. A PubMed database search yielded 63 observational studies of vitamin D status in relation to cancer risk, including 30 of colon, 13 of breast, 26 of prostate, and 7 of ovarian cancer, and several that assessed the association of vitamin D receptor genotype with cancer risk.

The majority of studies found a protective relationship between sufficient vitamin D status and lower risk of cancer. The evidence suggests that efforts to improve vitamin D status, for example by vitamin D supplementation, could reduce cancer incidence and mortality at low cost, with few or no adverse effects. Garland CF, Garland FC, Gorham ED, Lipkin M, Newmark H, Mohr SB, Holick MF. The role of vitamin D in cancer prevention. Am J Public Health. 2006 Feb;96(2):252-61.

2. Vit D and Colon Cancer

The following chart was developed from:

<http://www3.cancer.gov/atlasplus/charts.html> As can be seen, there is a correlation between latitude and incidence of colon cancer. The higher latitudes populations typically have less Vit D serum typically have less Vit D serum levels.



3. Michael Holick, MD, Boston University Professor of Medicine, has said: “We can reduce cancer risk by 30 to 50% by increasing vitamin D. We gave mice colon cancer, and followed them for 20 days. Tumor growth was markedly reduced simply by having vitamin D in the diet. There was a **40% reduction in tumor size**. And, casual sun exposure actually decreases your risk of melanoma. Everyone needs 1,000 IU of vitamin D3 each day.” [and 1,000 IU is lower by a minimum of a factor of 10 with what is given by Healing Pathways Medical Clinic]

“One man took one million IU of vitamin D per day, orally, for six months, “says Dr Holick. “Of course, he had the symptoms of severe vitamin D intoxication. His treatment was hydration (lots of water), and no more vitamin D or sunshine for a while. He’s perfectly happy and healthy. This was published in the New England Journal of Medicine. Koutkia P, Chen TC, Holick MF. Vitamin D intoxication associated with an over-the-counter supplement. N Engl J Med. 2001 Jul 5;345(1):66-7.

4. <http://www.thorne.com/altmedrev/.fulltext/13/2/153.pdf>

Observational studies highlight an inverse association between serum 25(OH)D levels and the risk of breast and colorectal cancers. In a recent review article, Garland et al looked at the dose-response gradient between the risk of these two common cancers and serum levels of 25(OH)D. The authors estimated a **50-percent decreased incidence of colorectal and breast cancer** with a maintenance of serum 25(OH)D levels at ≥ 34 ng/mL (colorectal cancer) and ≥ 52 ng/mL (breast cancer).¹⁴ Many other cancer types have been associated with decreased UVB exposure and/or serum 25(OH) D levels, including recent studies examining Hodgkins lymphoma and lung and prostate cancer.⁸⁴⁻⁸⁶

14. Garland CF, Grant WB, Mohr SB, et al. What is the dose-response relationship between vitamin D and cancer risk? Nutr Rev 2007;65:S91-S95.

84. Porojnicu A, Robsahm TE, Berg JP, Moan J. Season of diagnosis is a predictor of cancer survival. Sun induced vitamin D may be involved: a possible role of sun-induced vitamin D. J Steroid Biochem Mol Biol 2007;103:675-678.

85. Porojnicu AC, Robsahm TE, Dahlback A, et al. Seasonal and geographical variations in lung cancer prognosis in Norway. Does vitamin D from the sun play a role? Lung Cancer 2007;55:263-270.

86. Li H, Stampfer MJ, Hollis JB, et al. A prospective study of plasma vitamin D metabolites, vitamin D receptor polymorphisms, and prostate cancer. PLoS Med 2007;4:e103.

5. [Annals of Epidemiology July 2009, Volume 19, Issue 7, Pages 468-483](#)

“It is projected that raising the minimum year-around serum 25(OH)D [vitamin D] level to 40-60 ng/ml would **prevent approximately 58,000 new cases of breast cancer and 49,000 new cases of colorectal cancer each year**, and three quarters of deaths from these diseases, in the US and Canada.”

6. [Am J Clin Nutr.](#) 2007 Jun;85(6):1586-91. A large-scale, randomized, placebo-controlled study on vitamin D and cancer showed that vitamin D can cut overall cancer risk by as much as 60 percent.

7. [J Steroid Biochem Mol Biol.](#) 2007 Mar;103(3-5):708-11.

Intake of 2000 IU/day of Vitamin D(3), and, when possible, very moderate exposure to sunlight, could raise serum 25(OH)D to 52 ng/ml, a level associated with reduction by **50% in incidence of breast cancer**, according to observational studies.

8. Cedric F. Garland, Dr. P.H., Sharif B. Mohr, M.P.H., Edward D. Gorham, M.P.H., Ph.D., and Frank C. Garland, Ph.D., of the Division of Epidemiology at the UCSD Department of Family and Preventive Medicine and Moores UCSD Cancer Center; and William B. Grant, Ph.D., of the Sunlight, Nutrition and Health Research Center, San Francisco.

Cedric F. Garland, Dr.P.H., cancer prevention specialist at the Moores Cancer Center at the University of California, San Diego (UCSD) and colleagues estimate that 250,000 cases of colorectal cancer and 350,000 cases of breast cancer could be prevented worldwide by increasing intake of vitamin D3, particularly in countries north of the equator. Vitamin D3 is available through diet, supplements and exposure of the skin to sunlight.

“For the first time, we are saying that 600,000 cases of breast and colorectal cancer could be prevented each year worldwide, including nearly 150,000 in the United States alone,” said study co-author Garland. The paper, which looks at the dose-response relationship between vitamin D and cancer, will be published in the August edition of the journal Nutrition Reviews.

9. <http://aje.oxfordjournals.org/content/166/12/1409.abstract>

Light-skinned women who had high amounts of long-term sun exposure, giving higher serum levels of Vit D, had half the risk of developing advanced breast cancer (cancer that spreads beyond the breast) as women with lower amounts of regular sun exposure.

10. “Her [Stephanie Seneff] suspicion is that the simple oral non-sulfated form of vitamin D likely will not provide the same benefits as the vitamin D created in your skin from sun exposure, because it cannot be converted to vitamin D sulfate. This is yet another reason to really make a concerted effort to get ALL your vitamin D requirements from exposure to sunshine “

<http://articles.mercola.com/sites/articles/archive/2011/09/17/stephanie-seneff-on-sulfur.aspx>