



Newsletter

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To Sun Or Not To Sun

Summer is in full swing, which inevitably brings up the question of how much sun, if any, is safe? Vitamin D is a unique nutrient, as it is formed in the skin by UV light. Unfortunately, this same UV light can also dramatically increase the risk of skin cancer at larger doses. So how do we know how much is too much?

The answer, as you might expect, depends on each individual skin type, as well as latitude and time of year. Establishment of the minimum erythemal dose (MED) (the minimal amount of sun exposure required to cause redness in the skin over 24 hours) can be a good indicator for some people, however there is evidence that this measurement is significantly less accurate in darker skin types. Once an individual's MED is known, exposure of the face, arms, hands and legs for 20-25% of that time should provide an adequate vitamin D dose. For many, this may be just 6-10 min/day, however during the winter months at latitudes above the 35 parallel the sun is not at a sufficient angle to provide the adequate UV exposure. In some locations, this results in a short window of opportunity to produce vitamin D in the skin, and often inadequate stores of vitamin D to last throughout the winter.

While vitamin D deficiency is problematic, skin cancer (if we group all types together) is the most common form of cancer found in the US and the largest controllable risk factor is sun or UV exposure. Long-term exposure to the sun, and allowing the sun to burn, can dramatically increase the risk of all forms of skin cancer. For this reason, the use of sunscreen has become widespread, but a sunscreen of SPF 8 reduces the ability to produce vitamin D by 97.5%! Many sunscreens also contain xenoestrogens and other endocrine disrupting chemicals which further confounds the issue.

As with many things, the most reasonable way to navigate the vitamin D, sun exposure and skin cancer debate is with judicious exposure to the sun, using long sleeves and sunshades rather than sunscreen when available and measuring serum vitamin D levels to ensure that stores are adequate. If serum levels are insufficient, then supplementation of vitamin D may be warranted regardless of the season.

Resources

1. Sanclemente G, Zapata JF, García JJ, Gaviria A, Gómez LF, Barrera M. Lack of correlation between minimal erythema dose and skin phototype in a Colombian scholar population. *Skin Res Technol.* 2008 Nov;14(4):403-9.

2. Holick M. Sunlight and Vitamin D Both Good for Cardiovascular Health. J Gen Intern Med. 2002 Sept; 17(9): 733-735.
3. Holick MF. Vitamin D: the underappreciated D-lightful hormone that is important for skeletal and cellular health. Curr Opin Endocrinol Diabetes. 2002;9:87-98.
4. National Cancer Institute. What You Need to Know About Skin Cancer. Bethesda, MD: National Institutes of Health, U.S. Department of Health and Human Services.

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