

## Sun Exposure, Cancer & Vitamin D

Americans have been told for many years that the sun is bad. According to the Mayo Clinic, all forms of skin cancer have been on the rise. The greatest rise has been in melanoma, which is the most serious and most deadly type of skin cancer. Even with our sun-phobic, sunscreen-wearing society, the percentage of people with melanoma has more than doubled over the last 30 years.

Sunlight consists of two types of rays- UVB and UVA rays. Both can cause wrinkling, skin cancer, damage to the eyes and premature skin aging. The US Dept. of Health and Human Services lists UV rays from the sun or artificial light sources (including sun lamps and tanning beds) as known carcinogens (an agent that causes cancer).

In contradiction to the typical skin cancer prevention advice, the journal *Cancer* in March 2002 did an examination of 506 regions and found a close inverse correlation between cancer mortality and levels of ultraviolet B (UVB) light. The likeliest mechanism for a protective effect of sunlight is vitamin D, which is synthesized by the body in the presence of ultraviolet B. In a more recent study in the *Journal of the National Cancer Institute* (Feb. 2, 2005), 528 melanoma patients were assessed. It was found that even high intermittent sun exposure and self-reported skin awareness were all linked to improved survival from melanoma. Attempting to explain their finding the authors note that sun exposure is essential for the skin to make vitamin D3. Vitamin D has been shown to be anticancer in nature and therefore could explain the beneficial association between sun exposure and survival from melanoma.

Where does this leave our devotion to sunscreen? According to a researcher from Memorial Sloan-Kettering Cancer Center in New York, sunscreen does not protect against melanoma. However, octyl methoxycinnamate (OMC), which is present in 90% of sunscreen brands, was found to kill mouse skin cells even at low doses in a study by Norwegian scientists. There are also many other chemicals in sunscreens to be concerned about. We recommend that you take the time to find out what those ingredients are and any potential side effects they may have.

According to the National Institute of Health, sunscreen with a sun protection factor of 8 or greater will block the UVB rays that produce vitamin D. The degree of UVB exposure varies according to skin color, latitude, time of year, clouds, pollution and altitude. Along with increased risk of certain cancers, vitamin D deficiency is associated with weakened bones, osteoporosis in the elderly, post-menopausal women, individuals on chronic steroid therapy, insulin deficiency and insulin resistance, progression of degenerative arthritis of the knee and hip, infertility, PMS, fatigue and depression, auto immune disorders and obesity.

We were told the sun was bad and we should limit our sun exposure. So, many people went overboard. Many Americans slather on the sunscreen and work indoors so much that they hardly get any full spectrum sun exposure.

What about overdosing on vitamin D? It is true that vitamin D can be toxic in extremely high doses as can be the case with numerous nutritional supplements. If you live far from the equator such as the Pacific NW, do not get daily sun exposure, do not eat vitamin D rich foods (such as eggs, organ meats, animal fat, cod liver oil) and /or have a history of melanoma, you may want to have your vitamin D blood levels checked by a qualified healthcare practitioner.

What about using tanning beds to prepare for a sunny vacation? The association between tanning beds and melanoma (the deadliest form of skin cancer) has been published widely. Less sun protection is provided by tanning booths than a natural suntan (which provides an SPF of 3) plus a person is exposed to extra radiation.

What about using topical sunless tanning products? Although the FDA approved in 1977 the use of DHA (dihydroxyacetone) which is found in all of these products, recent safety studies are lacking.

Even though the study mentioned earlier (*Journal of the NCI-2/2/05*) suggests that some sun exposure may play a positive factor in survival from skin cancer, we suggest you use caution and **always avoid burning the skin**. Sunburn has been clearly related to an increased risk of skin cancer.

To avoid getting sunburned:

- a) In the early season, slowly work yourself into exposing your skin to the sun.
- b) Optimal hours of sun exposure are morning hours until noon and evening hours 3pm to dark.
- c) Many dermatologists recommend that people use in their sunscreen at least an SPF (Sun Protection Factor) of 15. The best sunscreens have both UVA and UVB (broad spectrum) protection with ingredients such as zinc oxide or titanium oxide.
- d) Instead of toxic chemical sunscreens, use clothing and hats to shelter your skin when you must go outside for longer periods of time and/or try one of the natural sunscreens by Aubrey Organics or the on line store at [www.allnaturalcosmetics.com](http://www.allnaturalcosmetics.com).
- e) For light skinned people, about 10-20 minutes of exposure is enough to increase your natural vitamin D production in the summer in the Pacific NW. For darker skinned people, 20-30 minutes may be necessary.
- f) During the winter, if you do have problems with seasonal depression due to vitamin D deficiency, you may try supplementing your diet (after getting a serum vitamin D and serum calcium test).

Should you get sunburned, we recommend the following regimen for a couple of days in order to help heal and repair the skin: Vitamins C, E, beta-carotene, essential fatty acids

(EPA/DHA, GLA)-dosages vary with each individual. Drink lots of water and apply aloe vera gel to the affected area.

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