

## Vitamin D

Don't seek the sun: Top reasons to get vitamin D from your diet

Research shines dangerous truth on ultraviolet light exposure and vitamin D

Our bodies need vitamin D to build and maintain strong, healthy bodies. Without vitamin D, the body cannot use calcium and phosphorus, two minerals that are necessary for healthy bones.<sup>1</sup>

The American Academy of Dermatology (Academy) does not recommend getting vitamin D from sun exposure (natural) or indoor tanning (artificial) because ultraviolet (UV) radiation from the sun and tanning beds can lead to the development of skin cancer. Getting vitamin D from a healthy diet, which includes naturally enriched vitamin D foods, fortified foods and beverages, and/or vitamin supplements, and practicing sun protection offer a healthier and safer alternative. Still skeptical? Consider these scientific facts:

1. Skin cancer is the most common cancer in the United States.<sup>2,3</sup> While the benefits of vitamin D to bone health are well known, it also is well known that overexposure to UV radiation can cause skin cancer.<sup>4</sup>
2. UV rays can cause premature aging of the skin and skin cancer. There is significant scientific evidence to support this fact, which is why the World Health Organization's International Agency of Research on Cancer classifies UV radiation from the sun and tanning devices as a known carcinogen (cancer-causing agent). UV exposure also can lead to cataracts and suppressed immune responses.<sup>5</sup> There is no scientifically proven safe amount of ultraviolet exposure to increase your vitamin D without increasing your skin cancer risk.
3. The number of diagnosed cases of skin cancer continues to increase. Current estimates are that one in five Americans will develop skin cancer during his or her lifetime.<sup>6</sup>
4. One person dies from melanoma, the most serious form of skin cancer, every hour in the United States.<sup>4</sup> Melanoma is the number one cancer for young adults 25-29 years old and the second most common cancer for adolescents and young adults 15-29 years old.<sup>7</sup> At current rates, a person has a one in 59 chance of developing melanoma during his or her lifetime.<sup>8</sup>
5. Dietary sources of vitamin D do not prematurely age the skin or increase the risk of developing skin cancer. Dietary sources (foods naturally rich in vitamin D, fortified foods and beverages) and vitamin supplements are available year-round and can easily be incorporated into a healthy lifestyle. Good sources include fortified milk, cheeses and yogurt, fortified cereal, and oily fish like salmon and tuna.<sup>1</sup> Research shows that vitamin D supplements are well tolerated, safe, and effective when taken as directed by a physician.
6. People need vitamin D to absorb calcium and phosphorus, which are essential for bone health.<sup>1</sup> Vitamin D increases the efficiency of the body's absorption of calcium 30 to 40 percent, and phosphorus by 80 percent. Fortified foods and beverages are rich in both vitamin D and calcium and maintain phosphate levels. Many dietary supplements also contain both of these minerals. Getting enough calcium and vitamin D is essential to prevent osteoporosis in men and women who are 50 years of age and older.<sup>1</sup>
7. Vitamin D from food and dietary supplements offers the same benefits — without the danger of skin cancer — as vitamin D obtained from UV light.<sup>1</sup> Vitamin D cannot be used by the body until it is processed by the liver and the kidneys. The usable form of vitamin D created by this process is the same, regardless of how it enters the body.<sup>1</sup>
8. Vitamin D intake may not lower cancer mortality.<sup>9</sup> While some studies have suggested that vitamin D can reduce deaths from cancer and/or improve cancer survival, other studies have not been able to confirm these observations. This has led the National Academy of Sciences Institute of Medicine (IOM) to conclude that while evidence links a person's vitamin D level to their bone health, the evidence linking vitamin D with other health benefits is inconsistent, inconclusive, and insufficient.<sup>10,11</sup>

Based on currently available scientific evidence that supports a key role of calcium and vitamin D in skeletal health, the IOM Recommended Dietary Allowance (RDA) for vitamin D is:

- 400 IU (International Units) for infants/children 0-1yr
- 600 IU for children, teenagers and adults 1-70yr
- 800 IU for adults 71+ yr

The RDA is intake that covers needs of 97.5 percent of the healthy normal population.

Because the amount of vitamin D a person receives from the sun is inconsistent and increases the risk of skin cancer, the IOM's RDA was developed based on a person receiving minimal or no sun exposure.

The American Academy of Dermatology recommends that anyone concerned about getting enough vitamin D should discuss with his or her doctor the options for obtaining sufficient vitamin D from foods and/or vitamin supplements.

Additional resources:

- [AAD position statement on vitamin D](#)

1Wolpowitz D, Gilchrist BA. The vitamin D questions: how much do you need and how should you get it? JAAD Feb 2006 p 301-17.

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4American Cancer Society. Cancer Facts and Figures 2013.

<http://www.cancer.org/research/cancerfactsfigures/cancerfactsfigures/cancer-facts-figures-2013>

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7Cancer Epidemiology in Older Adolescents & Young Adults. SEER AYA Monograph Pages 53-57. 2007.

8Melanoma of the Skin, Cancer Fact Sheets, National Cancer Institute, SEER database, 2007. <http://seer.cancer.gov/>.

9Freedman MD, Looker AC, Chang S, Graubard BI. Prospective Study of Serum Vitamin D and Cancer Mortality in the United States. *JNCI* 2007.99:1594-1602.

10Ross AC, Manson JE, Abrams SA, Aloia JF, Brannon PM, Clinton SK, et al. The 2011 Report on Dietary Reference Intakes for Calcium and Vitamin D from the Institute of Medicine: What Clinicians Need to Know. *J Clin Endocrinol Metab* Nov 29 2010 (epub ahead of print)

11Institute of Medicine. 2011 Dietary Reference Intakes for Calcium and Vitamin D. Washington, DC: The National Academies Press.