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In this issue

Life Extension Update Exclusive

Higher vitamin D levels could prevent 600,000 cases of breast and colorectal cancer annually

Health Concern

Breast cancer

Featured Products

Vitamin D3 Capsules

25-Hydroxyvitamin D Test

Life Extension

Life Extension Forums

Life Extension Update Exclusive

Higher vitamin D levels could prevent 600,000 cases of breast and colorectal cancer annually

Readers of Life Extension Update may recall the February 6, 2007 issue which reported the results of meta-analyses conducted by Cedric F. Garland, DrPH of the University of San Diego and colleagues that found a strong protective effect for higher serum vitamin D levels against breast and colorectal cancer. A new report coauthored by Dr Garland, published in the August, 2007 issue of *Nutrition Reviews*, builds on this work, and concludes that higher levels of vitamin D could prevent breast and colorectal cancers in over half a million people.

The current research determines the dose-response relationship between serum vitamin D levels and cancer. The study is the first to utilize satellite measurements of sunshine and cloud cover in 15 countries in which wintertime serum vitamin D levels among the populace were also measured. (Vitamin D is obtained from sun exposure, as well as by dietary means.) The information was used to estimate the average serum level of 25-hydroxyvitamin D [25(OH)D], a vitamin D metabolite, in 177 countries.

The team determined that higher vitamin D levels were related to a lower worldwide incidence of colorectal and breast cancer. Protective effects began to be observed at 24 to 32 nanograms per milliliter serum 25-hydroxyvitamin D (the average US late winter average is 15-18 ng/mL). The authors conclude that in North America, a 50 percent reduction in breast cancer incidence would require an intake of 3,500 IU vitamin D3 per day, and the same reduction in colon cancer incidence would require 2,000 IU. They estimate that 250,000 cases of colorectal cancer and 350,000 cases of breast cancer per year could be prevented if vitamin D levels were increased to 55 ng/mL worldwide, a level found to confer optimal protective benefits in Dr Garland's previous research.

"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," Dr Garland announced.

"The message is, depending on where you live, you may need to consider taking in considerably higher levels of vitamin D3 than those currently recommended," he advised. "I'd recommend discussing vitamin D needs with a health care professional, who may order and interpret a simple blood test for a vitamin D metabolite [25(OH)D], and provide a dosage recommendation that's appropriate for the individual's needs."

Health Concern

Breast cancer

Vitamin A and vitamin D3 inhibit breast cancer cell division and can induce cancer cells to differentiate into mature, noncancerous

cells. Vitamin D3 works synergistically with tamoxifen (and melatonin) to inhibit breast cancer cell proliferation. Preclinical studies demonstrated that vitamin D compounds could reduce breast cancer development in animals. Furthermore, human studies indicate that both vitamin D status and genetic variations in the vitamin D3 receptor (VDR) may affect breast cancer risk. Findings from cellular, molecular and population studies suggest that the VDR is a nutritionally modulated growth-regulatory gene that may represent a molecular target for chemoprevention of breast cancer (Welsh et al. 2003).

Daily doses of vitamin A, 350,000 to 500,000 IU were given to 100 patients with metastatic breast carcinoma treated by chemotherapy. A significant increase in the complete response was observed; however, response rates, duration of response and projected survival were only significantly increased in postmenopausal women with breast cancer (Israel et al. 1985).

Breast cancer patients may take between 4000 to 6000 IU, of vitamin D3 every day. Water-soluble vitamin A can be taken in doses of 100,000-300,000 IU every day. Monthly blood tests are needed to make sure toxicity does not occur in response to these high daily doses of vitamin A and vitamin D3. After 4-6 months, the doses of vitamin D3 and vitamin A can be reduced.

<http://www.lef.org/protocols/prtcl-022.shtml>

Featured Products

Vitamin D3 Capsules

Vitamin D is necessary for utilization of calcium and phosphorus and in many ways acts as a hormone. The two most important forms of vitamin D are cholecalciferol (D3), which is derived from our own cholesterol and ergocalciferol (D2), a plant analogue derived from the diet. The cholecalciferol supplied by the Life Extension Buyers Club is synthetic, but its form is identical to that which is derived from cholesterol and synthesized by sunlight on the skin. Cholecalciferol Vitamin D is essential for bone growth and maintenance of bone density.



<http://www.lef.org/newshop/items/item00251.html>

25-Hydroxyvitamin D Test

This test is used to rule out vitamin D deficiency as cause of bone disease. It can also be used to identify hypercalcemia.

<http://www.lef.org/newshop/items/itemLC081950.html>



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If you have questions or comments concerning this issue or past issues of *Life Extension Update*, send them to ddye@lifeextension.com or call 954 202 7716.

For longer life,



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