

Clinical Update

Vitamin D Cuts Cancer Risk

Women who took nearly 3 times the recommended amount reduced risk by 60%

(American Journal of Clinical Nutrition, June 2007)

(Archives of Internal Medicine, May 2007)

Boosting your vitamin D intake can dramatically reduce your risk of breast and other cancers, a new study found. The research adds to growing evidence that vitamin D can help protect against many forms of cancer as well as other diseases, Creighton University researchers said.

But an American Cancer Society spokeswoman urged caution in interpreting the findings, saying it was premature to recommend taking vitamins to reduce cancer risk. Joan Lappe, a Creighton University professor of medicine and nursing and lead author of the study, said, "What we can say from our study is that 1,100 international units (IUs) a day of vitamin D definitely decreased the incidence of cancer."

That amount of the vitamin is nearly triple the recommended intake for the age group studied -- women who were 55 and older when the four-year study started. Lappe's team followed 1,179 study participants who were all postmenopausal and lived in rural Nebraska. The women were free of known cancers for the 10 years before entering the study. They were assigned to one of three groups and followed for four years.

One group took 1,400 to 1,500 milligrams of supplementary calcium a day. Another group took that same amount of calcium plus 1,100 IUs of vitamin D daily, while the third group took placebo pills every day.

After four years, those in the combination vitamin D and calcium group had a 60 percent lower risk of developing cancer, compared to the placebo group. The calcium-only group had a 47 percent reduced risk. Then the researchers eliminated data from the first year of the study, figuring some women may have entered the study with cancer that had not yet been diagnosed. The results were more dramatic, Lappe said.

When the researchers looked at results from just the last three years of the trial, they found the combination calcium-and-vitamin D group had a 77 percent reduced risk of cancers, compared to the placebo group. The risk for the calcium-only group was essentially unchanged. In all, a total of 50 women got non-skin cancers during the study, with breast cancer the most common. The other cancers included lung and colon tumors.

The findings are published in the June edition of the American Journal of Clinical Nutrition.

In May, Harvard Medical School researchers reported in the Archives of Internal Medicine that high intakes of vitamin D and calcium cut the risk of breast cancer by nearly one-third in premenopausal women, but not women past menopause.

Dr. Michael Holick, professor of medicine, physiology and biophysics at the Boston University School of Medicine and a long-time vitamin D researcher, said the Lappe study adds to growing evidence of the health and disease-fighting effects of vitamin D.

"It's very clear the data are significant," he said of the Lappe study.



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Vitamin D is thought to act through the immune system to help prevent the formation of abnormal cells, Lappe said. To date, both Lappe and Holick said, high intake of vitamin D has been found to reduce the risk of many forms of cancer as well as type 1 diabetes, multiple sclerosis, rheumatoid arthritis and high blood pressure.

Both researchers think the current recommendations for daily vitamin D intake should be boosted. The U.S. Institute of Medicine, which makes recommendations on vitamin and mineral requirements, considers 200 IUs of vitamin D adequate for children and adults up to age 50; 400 IUs adequate for adults 51 to 70, and 600 for those 71 and older. The levels aren't Recommended Dietary Allowances, or RDAs, because the institute doesn't think there's enough evidence to establish an RDA for vitamin D.

"I think it's safe to say the current recommendations are much too low," Lappe said, adding that postmenopausal women should "probably be taking 1,100 IUs a day." She recommends vitamin D3 supplements, the type used in the study, over D2, because D3 is more active, she said.

But Marji McCullough, strategic director of nutritional epidemiology for the American Cancer Society, who is familiar with the new study and other similar research, said in a prepared statement that the society doesn't currently recommend taking vitamin or mineral supplements to reduce cancer risk. But it has joined other health organization to weigh the evidence of vitamin D, and a joint panel recommends supplementation and small amounts of ultraviolet exposure "as the best way to achieve proper vitamin D status."

While she called the new study "intriguing," she said the number of participants was small and the research needs to be replicated before firmer conclusions can be drawn.

The Institute of Medicine has declared that 2,000 IUs is the upper tolerable, or safe, level for most people. For babies up to 1 year old, the limit is 1,000 IUs, McCullough said.

Vitamin D, which is important for strong bones, is found in salmon and other fish, and fortified milk and fortified cereals, among other foods.