

Study links vitamin D to colon cancer survival

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Patients diagnosed with colon cancer who had abundant vitamin D in their blood were less likely to die during a follow-up period than those who were deficient in the vitamin, according to a new study by scientists at Dana-Farber Cancer Institute.

The findings of the study -- the first to examine the effect of vitamin D among colorectal cancer patients -- merit further research, but it is too early to recommend supplements as a part of treatment, say the investigators from Dana-Farber and the Harvard School of Public Health.

In a report in the June 20 issue of the Journal of Clinical Oncology, the authors note that previous research has shown that higher levels of vitamin D reduce the risk of developing colon and rectal cancer by about 50 percent, but the effect on outcomes wasn't known. To examine this question, the investigators, led by Kimmie Ng, MD, MPH, and Charles Fuchs, MD, MPH, of Dana-Farber, analyzed data from two long-running epidemiologic studies whose participants gave blood samples and whose health has been monitored for many years.

They identified 304 participants in the Nurses' Health Study and the Health Professionals Followup Study who were diagnosed with colorectal cancer between 1991 and 2002. All had had vitamin D levels measured in blood samples given at least two year prior to their diagnosis. Each patient's vitamin D measurement was ranked by "quartiles" -- the top 25 percent, the next lowest 25 percent, and so on.

Those whose levels were in the lowest quartile were considered deficient in vitamin D.

The researchers followed the 304 patients until they died or until 2005, whichever occurred first. During that period, 123 patients died, with 96 of them dying from colon or rectal cancer. The researchers then looked for associations between the patients' previously measured vitamin D blood levels and whether they had died or survived.

The results showed that individuals with the vitamin D levels in the highest quartile were 48 percent less likely to die (from any cause, including colon cancer) than those with the lowest vitamin D measurements. The odds of dying from colon cancer specifically were 39 percent lower, the scientists found.

"Our data suggest that higher prediagnosis plasma levels of [vitamin D] after a diagnosis of colorectal cancer may significantly improve overall survival," the authors wrote. "Future trials should examine the role of vitamin D supplementation in patients with colorectal cancer."

The measurements of vitamin D in the patients' blood reflected both the amounts made by the body when exposed to sunlight and to all sources of the vitamin in their diets, said Ng. However, she added, there may be additional unknown factors that might account for individual differences. Patients with the highest vitamin D levels tended to have lower body-mass index (BMI) indicating that they were leaner, and also were more physically active. However, after controlling for BMI and physical activity, as well as other prognostic factors, higher vitamin D levels were still independently associated with better survival rates.

Ng said that a trial is being planned in which colon cancer patients will take vitamin D along with post-surgery chemotherapy to look for any benefits of the supplements.

Meanwhile, she said that individuals with colon cancer should consult their physicians as to whether they should add vitamin supplements to their daily regimen. Standard recommended daily amounts of vitamin D supplements range from 200 International Units (IU) per day for people under age 50 to 400 IU for people between 50 and 70, and 600 IU for those over 70.

Source: Dana-Farber Cancer Institute

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