

Vitamin D and colorectal cancer survival

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Yale Cancer Center Director Charles Fuchs, MD, MPH, discusses new research on vitamin D supplements for people undergoing chemotherapy for colorectal cancer. Credit: Robert A. Lisak

Vitamin D, the "sunshine vitamin," may be helpful for people diagnosed with colon cancer, says Charles Fuchs, MD, MPH, director of Yale Cancer Center.

A small clinical trial, called the "Sunshine Trial," found the odds of

dying from colon cancer were lower for those with high levels of [vitamin D](#) in their bloodstream than for those whose blood contained [lower levels](#). Dr. Fuchs conducted the research with colleagues from the Dana Farber Cancer Institute. Results were published in *JAMA*.

A group of 139 patients with [metastatic colorectal cancer](#) were prescribed standard chemotherapy and vitamin D supplements. One group received a high dose of vitamin D (8,000 international units [IU] daily for 14 days followed by 4,000 IU/day thereafter), and the other group was given low doses (400 IU, found in most multivitamins).

Dr. Fuchs and colleagues found that the 69 patients who received the high dosage of vitamin D experienced a 36 percent improvement in the rate of cancer progression or death when compared to the 70 patients who received low-dose supplements. Specifically, the length of time before the disease worsened was longer (a median time of 13 months) compared to those who were supplemented with lower doses, whose disease worsened after about 11 months.

"Our trial suggests that addition of high-dose vitamin D to chemotherapy for colorectal cancer can improve the effectiveness of our standard therapies," says Dr. Fuchs. "Ultimately, this represents a relatively inexpensive intervention that could make a meaningful difference in the lives of people diagnosed with colorectal cancer."

Dr. Fuchs, a medical oncologist focused on gastrointestinal cancers and co-principal investigator of a grant from Stand Up To Cancer—a charitable organization co-founded by news personality Katie Couric, whose husband Jay Monahan died of colorectal cancer—says a larger study is needed to confirm the research results.

"We are working with the National Cancer Institute to do a national trial to confirm the results in a larger group of people," he says. "Until a

larger confirmatory study is completed, I would not recommend high-dose vitamin D as a routine practice."

What is vitamin D?

Although vitamin D benefits continue to be studied, the vitamin is known for being essential to bone health. Its primary role is to help the body absorb calcium from the intestines to harden the bones. Not getting enough of the vitamin over long periods of time can lead to softening and weakening of bones.

Vitamin D comes from foods such as salmon, tuna, mackerel, egg yolks and beef liver, or in fortified foods such as milk, cereal and some orange juices. Another way to get the vitamin is by spending time outdoors, in sunlight. (The body manufactures its own vitamin D when the skin is exposed to sunlight.)

Supplements are also available over the counter.

What's the best way to get your vitamin D?

The news that vitamin D can help colon cancer survival doesn't mean you should become a sun worshiper.

"I would not advise that," says Dr. Fuchs. Melanoma is a form of skin cancer that can be life-threatening, and it results from sun exposure. "In our study, vitamin D was administered through supplementation. Supplements and food are the only safe way to gain the health benefits of the vitamin without putting yourself at risk for skin cancer."

Does this finding relate to other cancers?

"It might," says Dr. Fuchs. "There are some studies that suggest that vitamin D may be beneficial in other cancers. Nonetheless, our study was limited to colorectal cancer, and we have to study this question one cancer at a time."

It's important to note that this finding relates to survival odds for those who've been diagnosed with [colon cancer](#), but it's not a way to prevent it.

According to the National Cancer Institute, a large clinical trial conducted in 2018 shows that taking vitamin D does not lower cancer risk. Some things that do lower [cancer](#) risk, though, says Dr. Fuchs, include not smoking, eating well, avoiding heavy alcohol intake, avoiding heavy red meat consumption, maintaining a healthy weight, and exercising regularly.

More information: Kimmie Ng et al. Effect of High-Dose vs Standard-Dose Vitamin D3 Supplementation on Progression-Free Survival Among Patients With Advanced or Metastatic Colorectal Cancer, *JAMA* (2019). [DOI: 10.1001/jama.2019.2402](https://doi.org/10.1001/jama.2019.2402)

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