

Do Vitamins Prevent Cancer? The Answer Will Give You Whiplash

by Matthew Herper Oct. 17, 2012

A [new study](#) shows that taking Centrum Silver, a top-selling multivitamin, can reduce men's risk of getting cancer by 8%. It's the kind of result that can give anyone who follows medical news whiplash. Just a year ago, a study in women showed that certain vitamins not only don't help but can increase the rate of death. What gives?

Studies of vitamins over the past decade have been "quite variable," says Raymond DuBois, a professor of cancer medicine at M.D. [Anderson](#) Cancer Center and a former president of the American Association of Cancer Research (AACR). In context, that 8% decrease in risk over such a long period of time is not that large, though obviously better than nothing. Getting people to exercise regularly, avoid cigarettes, sun exposure, and other known carcinogens would have a much bigger and immediate impact in reducing cancer cases. Half of cancer cases are thought to be preventable by avoiding known risks, he argues.

"This is a case of a statistically significant but not particularly impactful result," notes George Sledge, an oncologist at Indiana University and a past-president of the American Society for Clinical Oncology. "The reduction in cancer incidence is small but real, but at the end of the day no one lived any longer."

The new study, published in the Journal of the American Medical Association and presented at a medical conference held by the AACR, has several big advantages over previous trials, and is the best-conducted study of multivitamin use conducted to date. It is a randomized controlled study, meaning that similar patients were assigned at random to either get either Centrum or placebo. This is the gold standard for medical research, because it means that whether or not they got the multivitamin was the only difference between the drug and placebo groups.

"It's a trial that shows how we can and should obtain evidence about what to eat and what not to eat and which supplements to take," says Christian Gluud, head of the Copenhagen Trials Unit at the Copenhagen University Hospital. But though he has nothing but praise for the way the study was conducted and reported, he notes that this statistical significance is only borderline. "It's clear there was a benefit, but it could be anything from a 14% decrease in risk to an 0.002% decrease in risk of cancer. Any trial should be seen as just a piece of evidence and therefore I would say we need further randomized trials of similar size and similar duration of follow-up before anyone should take therapeutic action on these results," he says.

Jaakko Mursu, the epidemiologist at the University of Eastern Finland who was lead author on the study showing vitamins could even be a little bit harmful, says the new result

doesn't change his overall take on the totality of the data. "My opinion is that there is no clear evidence for either benefits or harmful effects," he writes via email.

For every 100 people who took the vitamins for 10 years, Mursu says, taking Centrum would reduce the number of cancers from 18 to 17.3; put differently, Murku says, you'd have to treat 83 people for 11 years to avoid one cancer case. As Sledge and Dubois both noted, that is a very small impact on the number of cancers, and taken with all the other research that has been done it's difficult to make a clear recommendation about what patients should do.

Dubois would like to see studies that focus specifically on patients who have some vitamin deficiencies — and to figure out exactly which subset of patients are getting the benefit. But at the end of the day the decision to take a vitamin is probably a personal choice. There is unlikely to be great benefit or great harm in doing it. At the end of the day, people take these pills as much because they like to, because it gives them some measure of control over their health. (I'm not sure I believe in the mental benefits of taking fish oil, but I'm taking it every day because I think it improves my mood; if that's a placebo effect, I'll take it.)

This study is good news for [Pfizer](#), which makes Centrum. Recent studies have piled on negative results that there aren't benefits for taking a multi-vitamin; even if this study doesn't change the scientific consensus, it does change the public narrative about vitamins. You might not think that would matter much to Pfizer, which is gigantic. But sales of Centrum are probably in the high hundreds of millions per year, and this will help them stay there or grow. Because vitamins aren't protected by patents, this is a steady, and valuable, revenue stream for the company.

Updated from original post with additional reporting.