Supplements That May Slow HIV Can Fuel Prostate Cancer

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High-dose supplementation with selenium and vitamin E can raise the risk of high-grade prostate cancer among certain men. This is of notable relevance to people living with HIV because of a recent study that found that supplementation with particular combination of multivitamins, including vitamin E, as well as with selenium, could slow HIV disease progression among those who are treatment naive and have a CD4 count above 350.

Publishing their findings in the Journal of the National Cancer Institute, researchers conducted a randomized, placebo-controlled trial involving 35,000 men who received high-dose vitamin E (400 IU per day), high-dose selenium (200 micrograms per day) or both. Designed to run for 12 years, the study started in 2001 but was halted early, in 2008, because it was apparent that selenium offered no protection against prostate cancer and it appeared that vitamin E might raise the risk. The men were then followed for an additional two years.

Among the men who started the study with a high level of selenium and who then took high-dose supplements of the element, the risk of prostate cancer increased by 91 percent. Their selenium levels became toxic.

The men who started with low selenium levels and who then took only high-dose vitamin E supplements raised their risk of prostate cancer by 63 percent and their risk of high-grade prostate cancer by 111 percent. Among the low-selenium participants, taking selenium in addition to vitamin E actually protected against vitamin E's harmful effects.

"Many people think that dietary supplements are helpful or at the least innocuous. This is not true," said corresponding and first author Alan Kristal, DrPH, a faculty member in the public health sciences division of Fred Hutchinson Cancer Research Center and the study's lead author, said in a release. "We know from several other studies that some high-dose dietary supplements—that is, supplements that provide far more than the daily recommended intakes of micronutrients—increase cancer risk. We knew this based on randomized, controlled, double-blinded studies for folate and beta carotene, and now we know it for vitamin E and selenium."

To read the press release, click here.

To read the study abstract, click here.

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