

## NIH-Funded Study Shows Increased Prostate Cancer Risk from Vitamin E Supplements

*UC San Diego Experts Available to Discuss Results/Risks*

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Men who took 400 international units (I.U.) of vitamin E daily had more prostate cancers compared to men who took a placebo, according to an updated review of data from the Selenium and Vitamin E Cancer Prevention (SELECT) Trial. The results of this update will appear October 12, 2011, in the *Journal of the American Medical Association*.

"SELECT has definitively shown a lack of benefit from vitamin E and selenium supplements in the prevention of prostate cancer and has shown there are some real risks," said J. Kellogg Parsons, MD, MHS, one of the authors of the study and an investigator at UC San Diego Moores Cancer Center, which is part of the international network of research institutions (SWOG) that carried out SELECT at more than 400 clinical sites in the United States, Puerto Rico, and Canada. "Men who were part of SELECT should continue to see their primary care physician or urologist and bring these results to their attention for further consideration."

The findings showed a 17 percent increase in prostate cancers relative to those who took a placebo. For every 1,000 men, there were 76 prostate cancers in men who took only vitamin E supplements, as compared to 65 in men on placebo, or 11 more cases of prostate cancer per 1,000 men.

The SELECT study - which began in 2001 - included more than 35,000 men. Earlier research suggested that selenium or vitamin E might reduce the risk of developing prostate cancer. Participants were randomly assigned to take one of four sets of supplements or placebos: one group took both selenium and vitamin E; one took selenium and a placebo that looked similar to vitamin E; one took vitamin E and a placebo that looked similar to selenium; and the final group received placebos of both supplements. Men who took selenium alone or vitamin E and selenium together were also more likely to develop prostate cancer than men who took a placebo, but those increases were small and possibly due to chance.

"We are not yet certain why the men in SELECT who took both vitamin E and selenium supplements were more likely to be diagnosed with prostate cancer," explained Parsons. "Additional studies are currently underway."

Based on an independent safety monitoring review in September 2008, participants were told to stop taking their supplements because it had become clear that the trial would never produce the 25 percent reduction in prostate cancer the study was designed to show with the use of these supplements. In 2010, the study sites were closed and more than half of the participants consented to have their health monitored via mail questionnaires.

While SELECT did not study the effect of multivitamins on prostate cancer risk, it is important to note that the dose of vitamin E in SELECT was 400 IU per day - several times the amount in an average daily dose. Most multivitamins for adult men use a much lower dose of vitamin E, from about 22.5 IU to 60 IU per day. "Men not in the study who are taking vitamin E supplements may want to discuss the findings from SELECT with their doctor," said Parsons.

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