

3 popular supplements fall short in preventing prostate cancer: study

May 6 2011, by Deborah Braconnier

(PhysOrg.com) -- For some time it has been believed that vitamin E, selenium and soy were natural ways to prevent prostate cancer. However, a new study published in the *Journal of Clinical Oncology* shows that these supplements do not provide any additional benefit when it comes to prostate cancer prevention.

Dr. Neil Fleshner, head of the urology department at the University Health Network in Toronto led the study on 303 men. All the men chosen for the study were at high risk for prostate cancer as they already showed pre-cancerous cells.

The researchers randomly chose men to receive the supplements while the others received a [placebo](#). These men were required to take these supplements every day for three years. The supplements contained a combination of 40g of soy, 800U of [vitamin E](#), and 0.2 milligrams [selenium](#).

After three years, the results of both groups came back the same. Within each group, 26 of every 100 developed prostate cancer. These results are similar to a study that was done in 2008 on vitamin E and selenium, where no benefit was found.

Researchers had hoped that the addition of soy in this study would show promise. In countries like China and Japan, where soy is eaten in large amounts, the rates of prostate cancer are much lower than those in the United States and Canada. Fleshner says that this does not rule out the

benefits of a soy based diet for decades, but that three years of soy was not enough to show a change.

With 156 out of 10,000 men developing [prostate cancer](#) each year, Fleshner believes that this study provides enough proof that continued research into the benefits of these supplements should be abandoned and research funds turned to other possible ideas.

More information: Progression From High-Grade Prostatic Intraepithelial Neoplasia to Cancer: A Randomized Trial of Combination Vitamin-E, Soy, and Selenium, *Journal of Clinical Oncology* Published online before print May 2, 2011, [doi:10.1200/JCO.2010.32.0994](https://doi.org/10.1200/JCO.2010.32.0994)

Abstract

Purpose High-grade prostatic intraepithelial neoplasia (HGPIN) is a putative precursor of invasive prostate cancer (PCa). Preclinical evidence suggests vitamin E, selenium, and soy protein may prevent progression of HGPIN to PCa. This hypothesis was tested in a randomized phase III double-blind study of daily soy (40 g), vitamin E (800 U), and selenium (200 µg) versus placebo.

Patients and Methods Three hundred three men in 12 Canadian centers were analyzed. The main eligibility criterion was confirmed HGPIN in at least one of two biopsies within 18 months of random assignment. Treatment was administered daily for 3 years. Follow-up prostate biopsies occurred at 6, 12, 24, and 36 months postrandomization. The primary end point was time to development of invasive PCa. Kaplan-Meier plots and log-rank tests were used to compare two treatment groups for this end point.

Results For all patients, the median age was 62.8 years. The median baseline prostate-specific antigen (PSA; n = 302) was 5.41 ug/L; total testosterone (n = 291) was 13.4 nmol/L. Invasive PCa developed among 26.4% of patients. The hazard ratio for the nutritional supplement to prevent PCa was 1.03 (95% CI, 0.67 to 1.60; P = .88). Gleason score

distribution was similar in both groups with 83.5% of cancers graded Gleason sum of 6. Baseline age, weight, PSA, and testosterone did not predict for development of PCa. The supplement was well tolerated with flatulence reported more frequently (27% v 17%) among men receiving micronutrients.

Conclusion This trial does not support the hypothesis that combination vitamin E, selenium, and soy prevents progression from HGPIN to PCa.

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