

[Cancer Epidemiol Biomarkers Prev.](#) 2014 Aug;23(8):1447-9. doi: 10.1158/1055-9965.EPI-14-0520.

Vitamin D in blood and risk of prostate cancer: lessons from the Selenium and Vitamin E Cancer Prevention Trial and the Prostate Cancer Prevention Trial.

[Schwartz GG.](#)

[Author information](#)

Abstract

The effects of blood levels of 25-hydroxyvitamin D (25-OHD) on the risk of total, low-, and high-grade prostate cancer were examined in the Selenium and Vitamin E Cancer Prevention Trial (SELECT) and the Prostate Cancer Prevention Trial (PCPT). In the SELECT study, plasma 25-OHD levels were associated with a linear decrease in prostate cancer risk for high-grade cancers in African American men and an apparent "U"-shaped effect in other men. The "U-shaped" curve may reflect detection bias. In the PCPT study, in which detection bias was minimized, serum 25-OHD levels were associated with a linear decrease in the risk of high-grade prostate cancers. The results from these large prevention trials support the hypothesis that circulating levels of 25-OHD decrease the risk of clinically relevant prostate cancers.

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