

Prostate Cancer & Chemical Substances

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Prostate cancer is so common in late life, that it is hard to identify causative carcinogens, dietary factors and lifestyles. Being male is the strongest risk factor, one which most men choose not to change. Which brings us to...

Testosterone stimulates growth of the prostate. This occurs with either a man's own testosterone or with pills, patch or cream supplements. If early prostate cancer is present, testosterone stimulates the cancer's growth.

One of the primary prostate cancer treatments is to remove testosterone, either by giving medication that blocks its production or by removing the testicles. Therefore, men who have prostate cancer should not take testosterone replacement therapy. It is important for all men considering testosterone replacement therapy to undergo prostate screening before starting this therapy.

Tobacco: Once diagnosed with prostate cancer, men who smoke have a greater risk of dying, compared to those who don't. If prostate cancer hits at least ten years after quitting smoking, outcome is similar to those who have never smoked.

Food carcinogens: Nitrosamines, plentiful in charred red meat, promote prostate cancer growth. Cadmium is a toxic heavy metal found in industrial waste, tobacco and water, air, soil and food exposed to industrial waste. Exposure increases risk of prostate cancer. These toxins are more dangerous in men with certain genetic variants that hamper the body's ability to rid itself of toxins.

Alcohol: Men who drink alcohol heavily and on a regular basis may be putting themselves at increased risk for aggressive prostate cancer. A number of studies confirm an association. In addition, the Prostate Cancer Prevention Trial (PCPT) indicates that alcohol may reverse any beneficial effect of finasteride (described below) in preventing prostate cancer.

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Vitamin E: The Alpha-Tocopherol (vitamin E), Beta-Carotene trial done in Finland identified less prostate cancer in men who took vitamin E. This led to the Selenium and Vitamin E Cancer Prevention Trial (SELECT) to study the association further.

The study of 35,533 healthy, average-risk men older than age 50 years, was stopped by the safety committee after 5.5 years. Preliminary results, published in the Journal of the American Medical Association in October, suggested that 400 IU of vitamin E daily increased the number of prostate cancer cases and selenium increased new diabetes diagnoses. Neither finding was statistically significant, but there was enough concern to terminate the trial. While the results can't be construed to say that vitamin E causes cancer, they certainly argue against vitamin E protection.

Hints at Chemical Prevention, but don't bet your life on them. Eating tomatoes, high in lutein is associated with a less prostate cancer risk. Cooked tomatoes are especially good, possibly because cooking releases the lutein for better absorption into the body.

Other vitamins: Attempts to prevent prostate cancer with vitamins haven't been persuasively positive. Vitamins C and D have variably helped or had no effect in prevention.

Testosterone production blockers: Five-alpha-reductase inhibitors (5-ARI) block testosterone production. Two trials of 5-ARI treatment reduced prostate cancer risk by about 6%. One, the PCPTrial, evaluated the daily use of finasteride vs. placebo for 7 years, and the other, the REDUCE trial, evaluated dutasteride vs. placebo for 4 years. Each drug impacted only the rate of milder cancers.

The incidence of more severe cancers increased in both trials by 0.5-0.7%. Doctors don't believe the drugs themselves cause severe cancer. Instead, the drugs

lower prostate antigen (PSA) levels, which are used to detect cancer. These artificially lowered PSA levels might lull doctors into thinking that the prostate is normal, missing cancers until they are more advanced. Any confirmed *increase* in PSA during 5-ARI treatment may signal the presence of prostate cancer and should be evaluated, even if that PSA level is in the “normal range.” 5-ARIs are not approved for the prevention of prostate cancer.

So, to prevent prostate cancer, eat your tomato soup and sauce, avoid carcinogens, drink alcohol only in moderation and don't smoke.