

Dietary Recommendations for Men with Prostate Cancer

CASE PRESENTATION

A man presents to the urology clinic after a diagnosis of clinically localized prostate cancer. He says he has been reading online content about prostate cancer as he considers his primary treatment options. At today's visit, he inquires about a news article describing a link between red meat and lethal prostate cancer. He is motivated to make lifestyle changes after his cancer diagnosis and is wondering if he should change his diet to optimize his health.

COMMENT

Patients often ask about lifestyle changes to promote prostate health, and guidance on diet and nutrition is a key component of holistic survivorship care. But, as urologists, what dietary recommendations should we make to patients with prostate cancer?

Ideally, patients with prostate cancer should consume a *plant-based diet rich in cooked tomatoes and cruciferous vegetables*. Not only can this diet reduce the risk of cardiovascular disease, the leading competing cause of death, it may also improve prostate cancer outcomes.¹⁻³

In a recent systematic review of the impact of an overall plant-based diet on prostate cancer outcomes, interventional trials generally showed improvements in short-term oncologic outcomes and general health/nutrition among men who adopted a plant-based diet.⁴ For example, in the Prostate Cancer Lifestyle Trial, men on active surveillance who were randomized to a low-fat vegan diet experienced improved general health and a significantly reduced rate of progression to treatment compared to men in the control group at 2 years.⁵⁻⁶ Adherence to a vegan diet remained at 95% even a year after the intervention, indicating the potential feasibility and acceptability of a vegan diet in this patient population.⁶ In addition, multiple trials have demonstrated an improvement in PSA kinetics among men with biochemical recurrence after primary treatment who adopted a plant-based diet.⁷⁻¹²

Plant-based foods that have been shown to be particularly beneficial to prostate cancer outcomes include cooked tomatoes and cruciferous vegetables.¹³⁻²⁰ Cooked tomatoes are rich in lycopene, an antioxidant. In the Health Professionals Follow-Up Study, a 2-serving/week increase in intake of cooked tomatoes was associated with a 20% reduction in prostate cancer progression.²¹ Cruciferous vegetables contain isothiocyanates and indoles, 2 potential anticancer compounds. In a study of 1,560 men with clinically localized disease, men who had a high consumption of cruciferous vegetables (~1 serving/day) had an almost 60% reduced risk of recurrence in an adjusted model compared to men who did not consume cruciferous vegetables.²²

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Patients should also be counseled to avoid processed/red meats and whole milk, even if they do not fully adopt a purely plant-based diet. The World Health Organization classifies processed meat as a Group 1 carcinogen and red meat as a Group 2A carcinogen, and both types of meat have been associated with an increased risk of death due to cardiovascular disease.²³⁻²⁵ Among patients with prostate cancer, intake of processed/red meat has also been associated with an increased risk of prostate cancer recurrence and mortality in multiple studies.²⁶⁻²⁸ In addition, men with prostate cancer should avoid whole milk consumption. Multiple studies have demonstrated that men with clinically localized disease who have higher levels of whole milk consumption have an increased risk of disease progression and prostate cancer mortality.²⁸⁻³² Many alternatives such as almond, soy, and oat milk are fortified with levels of calcium comparable to dairy milk and can serve as a healthy replacement for patients with prostate cancer.

Overall, a prostate cancer diagnosis is a highly teachable moment, and urologists can help promote improved overall health and prostate cancer outcomes by counseling patients on the benefits of adopting a plant-based diet in conjunction with their primary treatment plan. As part of the dietary counseling conversation, urologists can direct patients toward evidence-based online resources about plant-based diets and prostate cancer such as the Physicians Committee for Responsible Medicine and NutritionFacts.org. To build on the currently available information, NYU Langone Urology is creating tailored multimedia resources and tips on how to adopt a plant-based diet for patients with prostate cancer and for caregivers of patients with prostate cancer. Stay tuned!

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