Diet Exercise & Prostate Cancer Prevention

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Arguably the most effective way to reduce the risk of prostate cancer is to make lifestyle changes.

According to the American Cancer Society,i for most Americans who do not use tobacco, the most important cancer risk factors that can be changed are body weight, diet, and physical activity. One-third of all cancer deaths in the United States each year are linked to diet and physical activity, including being overweight or obese, while another third is caused by tobacco products. This article will examine the relationship between diet, exercise and prostate cancer prevention.

Diet and prostate cancer prevention

To help prevent all types of cancers, the American Cancer Society (ACS) recommends that individuals consume a healthy diet, with an emphasis on plant foods. Specifically, people should eat at least 2.5 cups of vegetables and fruits each day, and choose whole grains instead of refined grain products. ASC sensibly advises that people choose foods and beverages in amounts that help achieve and maintain a healthy weight. ACS also recommends limiting the consumption of processed meat and red meat, as well as limiting the consumption of alcoholic beverages (no more than 1 drink per day for women or 2 per day for men).ii In general, these recommendations are consistent with research on dietary practices for the prevention of prostate cancer as discussed below.

High-fat

Diets high in fat are associated with increased risk of prostate cancer. In a multicenter study,i researchers compared the diets of 194 patients with newly diagnosed prostate cancer to those of 317 healthy patients. What they found was that there was an increase in prostate cancer associated with diets high in fat. A studyii conducted in 12 cities in China also found that dietary fat, both saturated and unsaturated, are associated with an increased risk for prostate cancer. Likewise, research in Greece found that seed oils (e.g., safflower, etc.), were significantly associated with prostate cancer risk, while butter and margarine had a lesser association. Olive oil was not associated with prostate cancer risk.iii A studyiv in the United States linked greater consumption of fat from animal sources to increased risk for prostate cancer among American blacks, and to advanced prostate cancer among American blacks and whites. Research concluded, "A reduction of fat from animal sources in the diet could lead to decreased incidence and mortality rates for prostate cancer, particularly among American blacks." The results of a joint U.S./ Canadian studyv suggested that a high intake of omega-6 fatty acids, (typically from vegetable oils), promoted inflammation might be associated with increased prostate cancer risk.

Dairy

There is a strong association between the consumption of dairy products and increased prostate cancer risk. A large studyi conducted in ten European countries found that a high intake of dairy-based protein was associated with an increased risk of prostate cancer. n fact, researchers estimated a 32% higher risk of prostate cancer from increased consumption of dairy proteins. Calcium from dairy products was also positively associated with risk, but not calcium from other foods—suggesting that dairy foods rather than calcium were the culprit. Another large studyi conducted in the United States and Canada found that dietary calcium from dairy products increased the risk of low-grade prostate cancer but reduced the risk of high-grade cancer.

This relationship with dairy foods and prostate cancer was again seen in a large study conducted by the National Cancer Institute. The results showed that a greater dietary intake of calcium and dairy products, particularly low-fat dairy products, may be modestly associated with increased risks for nonaggressive prostate cancer, but was unrelated to aggressive disease. In case you're wondering why the low-fat dairy products would pose a greater risk, the reason probably has to do with the fact that with less fat there is a higher percentage of dairy protein, as one of the culprits. A French study verified the relationship between dairy product consumption and prostate cancer risk. They also found that the risk was not associated with the calcium content, "and may be related to some other component." Research in Greece also found that milk and dairy product consumption was associated with risk for prostate cancer.

Vegetables

Research among diverse populations in the United States and Canada found that the consumption of legumes (i.e., beans, especially soy foods), significantly reduced the risk of prostate cancer. The consumption of yellow-orange and cruciferous vegetables (e.g., broccoli, cabbage, Brussels sprouts, etc.), was also shown to reduce prostate cancer risk.i Another studyii of almost 2000 men found that there was a decreased prostate cancer risk with increasing intakes of vitamin C-rich vegetables, including bell peppers and broccoli. Likewise, Canadian researchers demonstrated that increasing

dietary consumption of green vegetables, tomatoes, beans/lentils/nuts, and cruciferous vegetables also decreased the risk of prostate cancer.iii Still other researchiv found that diets providing substantial amounts of tomatoes/tomato products and garlic may protect against prostate cancer. Research in Greece also found that cooked tomatoes, and to a lesser extent raw tomatoes, were associated with a reduced risk for prostate cancer.

Well-done meat

When meat is cooked at high-temperatures for a long period of time, it forms certain compounds that can increase the risk of prostate cancer. This was seen in a study where very well done meat was strongly associated with prostate cancer risk.

Apples

Researchers studying the diets of people in Italy found that those who ate at least one apple per day had a reduced risk for prostate cancer.i Maybe an apple a day really does keep the doctor away—or in this case, the oncologist.

Glycemic index and glycemic load

Glycemic index (GI) is a numerical system of measuring how fast a carbohydrate triggers a rise in circulating blood glucose, and glycemic load (GL) measures a rise in glucose from an individual serving size of food. In either case, the higher the number, the greater the blood glucose response. So a low GI/

GL food will cause a small rise, while a high GI/GL food will trigger a dramatic spike. Carbohydrate foods with more fiber are likely to have a lower GI/GL. The fiber causes the food to break down more slowly in the digestive system, and also slows the absorption of any sugars it contains. The result is a slower increase in blood glucose levels.

By contrast, simple or refined carbohydrates such as most desserts or white bread/white pasta, break down rapidly and yield their sugars quickly, so they will generally be higher on the GI/GL.This is an important consideration in prostate cancer, since the higher the rise in blood glucose, the more insulin will be secreted to deal with it, and insulin has been implicated as a risk factor for several cancers, including that of the prostate. Consequently, it makes sense that researchers conducted a study examining the relationship between GI/GL and prostate cancer risk. They found that with increasing levels of GI/GL, there was a corresponding increase in risk for prostate cancer.

Exercise and prostate cancer prevention

As with dietary recommendations, the American Cancer Society (ACS), also has exercise recommendations to help prevent all types of cancers. Specifically, ACS advises that adults should engage in at least 150 minutes of moderate intensity or 75 minutes of vigorous intensity activity each week, or an equivalent combination, preferably spread throughout the week. Likewise, children and adolescents should engage in at least 1 hour of moderate or vigorous intensity activity each day, with vigorous intensity activity occurring at least 3 days each week. Sedentary behavior such as sitting, lying down, watching television, or other forms of screen-based entertainment should be limited. ACS's bottom line is to do some physical activity. These recommendations for an active lifestyle make good sense and can be of benefit to individuals with and without prostate cancer.

A large European study examined the association between risk of prostate cancer and physical activity. The results showed that a higher level of occupational physical activity was associated with lower risk of advanced stage prostate cancer. A review of several studies found that heavy occupational physical activity and leisure-time physical activity seemed to reduce the risk of advanced prostate cancers. Another scientific reviewiv indicated that 22 studies have shown physical activity to be associated with some reduced risk of prostate cancer. Other research has shown similar results.v Additionally, a studyvi in Malaysia found that men with a past history of not engaging with any physical activities at the age of 45 to 54 years old increased risk of prostate cancer by approximately three fold.