



# PROSTATE CANCER AND DIET UPDATE

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**NHS Choices recently reviewed prostate cancer<sup>1</sup>. This was following the June 2009 publication of *Healthy Eating: The Prostate Care Cookbook*, which was produced in association with the Prostate Cancer Research Foundation. Prostate cancer is the most common cancer in men in the UK– it accounts for nearly a quarter (24%) of all new male cancer diagnoses. The lifetime risk of being diagnosed with prostate cancer is 1 in 10 for men in the UK<sup>2</sup>.**

World Cancer Research Fund says we all make lifestyle choices every day and there is overwhelming evidence that the choices we make can make a big difference to our cancer risk<sup>3</sup>. Cancer Research UK<sup>4</sup> and NHS Choices<sup>1</sup> have made the following comments about diet and prostate cancer:

Countries that have a low fat and high vegetable intake in the diet have lower rates of prostate cancer. However, it is not certain whether this is directly due to fat intake. Studies are ongoing.

Lycopenes are chemicals found in tomatoes and may help to prevent prostate cancer. It is noted some studies of lycopenes and prostate cancer have shown a reduction in risk but others have not.

Dairy products, as a source of calcium, have been extensively studied in relation to prostate cancer. Several studies show a small significant increase in risk but findings differ by whether it affects advanced or localised tumours. The EPIC<sup>5</sup> study showed overall a 32% increased risk for 35g/day higher intake of dairy protein and a 7% risk increase for a 0.3g/day intake of dairy calcium. Protein and calcium from non-dairy sources were not associated with risk.

Countries that have a high intake of soy in their diet tend to have much lower rates of prostate cancer (and other types of cancers) compared to countries where soy intake is low. This may be because of chemicals found in soy called phyto-oestrogens.

Several studies have shown a protective association for selenium, reporting a 30–80% risk reduction for prostate cancer. However, several studies showed no association.

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Green tea has been studied due to its regular consumption by Japanese and Chinese men whose prostate cancer risk is low. Green tea contains high level of polyphenols which have anti-oxidant effects. The evidence is not conclusive. More research into the possible chemopreventive properties of green tea is needed.

Confirming the message of Cancer Research UK and NHS Choices a 2009 systematic review of studies on soya consumption<sup>6</sup> suggested that consumption of soya foods is associated with a reduction in prostate cancer risk in men.

A large study in the United States<sup>7</sup> examined the associations between meat consumption and prostate cancer. “Red and processed meat may be positively associated with prostate cancer” was the study conclusion.

There has also been research looking at diet and survival after prostate cancer diagnosis<sup>8</sup>. This showed that adoption of a plant-based diet may slow disease progression and improve prognosis. However the authors commented additional long-term therapeutic clinical trials are needed to further elucidate the role of diet.

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4. Cancer Research UK. Prostate Cancer risk factors <http://info.cancerresearchuk.org/cancerstats/types/prostate/riskfactors/?a=5441> (accessed 23 October 2009)

5. Allen NE, Key TJ et al. Animal foods, protein, calcium and prostate cancer risk: the European Prospective Investigation into Cancer and Nutrition. *British Journal of Cancer* 2008; 98(9): 1574-81.

6. Yan L, & Spitznagel EL. Soy consumption and prostate cancer risk in men: a revisit of a meta-analysis. *American Journal of Clinical Nutrition* 2009; 89: 1155–63.

7. Sinha R, Park Y, et al. Meat and Meat-related Compounds and Risk of Prostate Cancer in a Large Prospective Cohort Study in the United States *American Journal of Epidemiology* 2009; 170(9): 1165-1177

8. Berkow S, Barnard ND, et al. Diet and survival after prostate cancer diagnosis. *Nutrition Reviews* 2007; 65-9: 391-493.