

## Patient information from Gordon Muir, Consultant Urological Surgeon

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### Nutrition and Prostate disease information sheet

There is growing evidence that diet can play a crucial role in the development and probably also in the progression and behaviour of some cancers among which prostate cancer is certainly a prime candidate. What we do know is that some groups of men are much more likely to get prostate cancer than others and the risks are modified by diet. For example, Chinese and Japanese men seem to have one of the lowest risks of prostate cancer but if they move to a Western lifestyle in the United States of America their risk of developing the disease goes up. It is also known that Japanese men who consume a lot of Soya protein have a lower risk of developing the disease than those who do not.

For patients who are concerned about or who have been diagnosed with prostate cancer, we usually recommend a number of dietary strategies which, while not proven to be of specific benefit in the clinical situation have certainly been shown to have activity in both our research labs and others. There is also mounting evidence for their place in the overall development of the disease and thus strategy to supplement the diet seems sensible.

The first rule is that one shouldn't change one's life so dramatically that one feels depressed by the changed lifestyle! Therefore it is important to approach everything in moderation. Certainly men who have a high fat and particularly a high animal fat diet do seem to have increased risk of tumours. In laboratory animals which are fed a higher fat diet the tumours grow at a more rapid rate. We therefore recommend that men should try to cut out where possible, red meat fats and substitute lean poultry, game or fish where appropriate. Green and yellow vegetables particularly those of the brassica (cabbage, cauliflower and broccoli) family are certainly beneficial in some population studie; and pumpkin seeds have phytosterol chemicals which can help.

From the point of view of supplementation the tomato pigment Lycopene may have an effect in delaying the progression of prostate cancer at least in the very short term and it does seem to be a general protective element in whether men get the disease or not. We therefore recommend a Lycopene supplement in the dose of between 5 to 15mg per day. Lycopene may not be fully absorbed from the gut in the absence of certain vitamins and it is therefore appropriate to take a multivitamin supplement with the antioxidant vitamin E and C included in it.

As mentioned above, Soya seems to have a beneficial effect probably through the chemicals dadzein and genestein so a Soya supplement or one Soya protein meal per week will do no harm and may do some good.

Lastly the trace elements zinc and selenium are very important for prostate metabolism; there is evidence that men who are deficient in zinc may have an increased risk of prostate cancer and certainly there is also evidence that selenium deficiency may also increase the risk of the disease and that selenium supplementation may reduce the risk, although recent studies have not confirmed this in a US population. Thus, for men living in countries where selenium deficiency is common (eg the UK) it may still be worth supplementing selenium and zinc, but this should be looked at in the light of a possible deficiency.

For benign prostatic enlargement, some studies have shown benefit with pumpkin seed extracts (Urostemol®) and saw palmetto may be helpful in reducing symptoms.

There is also reasonably strong evidence for pomegranate juice having a beneficial effect. Consumption of at least three cups of coffee a day may also be protective (although it may irritate the bladder if too much is taken!)

To summarise, men who are concerned about their prostate health would do well to follow a diet rich in vegetables and low in animal fat with not too much alcohol. A supplement of Lycopene as well as a Soya supplement makes sense and these may be complemented by taking a general antioxidant vitamin supplement as well as a supplement of zinc and selenium. A pumpkin seed or saw palmetto extract seems sensible. Coffee and pomegranate juice will do no harm at all.

All of the supplements mentioned above can be obtained from any reputable health food shop although it is still the case that the Lycopene may need to be ordered.