



# ETERNAL HEALTH

*with*  
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Current statistics indicate that one in four people will contract cancer sometime in their lives. One in nine women will develop breast cancer while for men those who will be diagnosed with prostate cancer is slightly over 11%. Clearly, despite all the advances that modern medicine has made we are not winning the battle against cancer.

Perhaps we need to look elsewhere in order to find viable solutions to this deadly puzzle. This is where sterols and sterolins may once again prove to be the godsend that modern science has so eagerly sought to discover.

It has become evident that those individuals who consume a predominantly plant based diet have a lower incidence of all cancers. What we are now beginning to realise is that the probable reason for this is the high presence of sterols and sterolins in this type of diet.

Epidemiological studies which examine trends amongst population groups show that in Asian countries the incidence of colon, prostate and breast cancer is low. Interestingly when Asian migrants relocate to the west and start to consume animal-based diets the rates of these cancers rises quite significantly. A number of studies have been carried out in recent times demonstrating the way in which sterols and sterolins may not only prevent cancer but may even offer new possibilities for treating cancer.

One of the leading researchers in this area is Professor Atif Awad from the department of physical therapy, exercise and nutrition science at the state university of New York, Buffalo. Professor Awad has found that feeding phytosterols to rats reduces the levels of two principal enzymes thought to be associated with the development of prostate cancer.

One of these enzymes called "5 Alpha Reductase" was reduced by 41%. This is the enzyme which is responsible for the conversion of testosterone to the more powerful androgen dihydrotestosterone. Some experts are of the opinion that it is the build-up of dihydrotestosterone which may lead to prostate cancer. For all those men interested in maintaining a reasonable head of hair it is also the accumulation of dihydrotestosterone which is thought to lead to baldness.

The other enzyme which was reduced by a substantial 55% was the enzyme called aromatase. This is the enzyme that converts testosterone to oestrogen and their are those who claim that an increase in oestrogen may be the guilty party in the initiation of prostate cancer. Either way by ensuring that sterols and sterolins are present in sufficient amounts these vital nutrients offer a viable means for preventing prostate cancer.

Professor Awad has examined the effects of beta-sitosterol on prostate cancer cells in the laboratory situation. He has discovered that after seven days those cells treated with sterols experienced a reduction in growth by 24%.

He was even able to uncover the mechanism for the action of beta-sitosterol indicating that this nutrient enhances the function of an intracellular signaling system which instructs cells not to divide. Professor Awad and his co-workers have isolated the presence of a cell signaling pathway called the sphingomyelin cycle which they have identified as being the one of the inhibitors of excessive cell growth.

They have found that the same process operates for breast and colon cancer. In similar experiments colon cancer cells were inhibited by 55% after five days while breast cancer cells diminished to the tune of 66% after the same period. This work has also been duplicated on laboratory animals showing that beta-sitosterol significantly reduces the level of prostate cancer cells.

Colon cancer is the second most common form of cancer in the USA. During this first year of the new millennium more than 55,000 Americans will succumb to this disease. It is thought that dietary cholesterol generated from a high consumption of animal fats leads to an increase in metabolites which promote colon cancer.

A diet rich in phytosterols reduces these promoters and decreases the risk for the development of colon cancer. Phytosterols are thought to abort the development of bowel cancer in the early stages. Although we still have a lot to learn about the prevention and treatment of cancer sterols and sterolins present an exciting option in the never ending war against this devastating disease.