

Fish omega-3 linked to lower prostate cancer risk

6/26/2007 - Higher intake of the omega-3 fatty acids DHA (docosahexaenoic acid) and EPA (eicosapentaenoic acid) may cut the risk of developing prostate cancer by 40 per cent, says a new study from Harvard.

Intake of the [omega-6](#) linoleic acid (18:2n-6) was also associated with a decreased risk of the disease, the fatty acids that result from the metabolism of linoleic acid, gamma-linolenic and dihomo-gamma-linolenic acids were found to increase the risk of [prostate cancer](#), adding to a growing body of evidence linking an increased [omega-3](#) to omega-6 intake ratio to improved health.

"Our data suggest that intake of PUFA is unlikely to increase prostate cancer risk, and some of them, particularly linoleic and long-chain n-3 fatty acids, may actually decrease the risk of developing clinically aggressive prostate tumours," wrote researchers.

Over half a million new cases of prostate cancer are diagnosed every year world wide, and the cancer is the direct cause of over 200,000 deaths. More worryingly, the incidence of the disease is increasing with a rise of 1.7 per cent over 15 years.

"Because intake of polyunsaturated fats may help prevent other common chronic diseases, notably heart disease and diabetes, our findings, if confirmed by other studies, may have a broader implication in chronic disease prevention," said researchers.

The nested case-control study, published on-line ahead of print in the journal *Cancer Epidemiology, Biomarkers & Prevention*, compared blood levels of polyunsaturated fatty acids in 476 men diagnosed with prostate cancer, and the same number of healthy controls.

Comparing men with the highest and lowest long-chain n-3 fatty acids (EPA, DPA, DHA), Chavarro and co-workers report that the highest intake was associated with a 41 per cent reduction in prostate cancer risk.

Linoleic acid consumption was also associated with a reduction in risk of 38 per cent, comparing the highest versus lowest intakes. Blood levels of fatty acids resulting from linoleic acid metabolism were associated with prostate cancer risk, with increased gamma-linolenic associated with a 41 per cent increase and dihomo-gamma-linolenic acid associated with a 54 per cent increase.

"The relationship between PUFA and prostate cancer may be more complex than that suggested by animal models," said the researchers.

"Larger studies will be required to evaluate whether the associations between specific fatty acid levels in blood and prostate cancer differ by tumor characteristics as our findings suggest but could not confirm," they concluded.

The research tallies with other studies on the subject. In August of last year, researchers from the David Geffen School of Medicine at UCLA reported that changing the ration of omega-3 to omega-6 in the typical Western diet might reduce prostate

cancer tumour growth rates and PSA levels (*Clinical Cancer Research*, Vol. 12, Issue 15).

Moreover, researchers from the Paterson Institute, a cancer research institute funded by British charity Cancer Research UK and affiliated with the University of Manchester reported that omega 6 fats increased the spread of prostate tumour cells into bone marrow, while omega-3 fatty acids were seen to block this invasion.