

## **Fatty fish consumption and risk of prostate cancer**

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### FROM ABSTRACT

Consumption of fatty fish might reduce the risk of prostate cancer, although epidemiological studies of fish consumption are rare.

We studied the association between fish consumption and prostate cancer in a population-based prospective cohort of 6,272 Swedish men.

During 30 years of follow-up, men who ate no fish had a two-fold to three-fold higher frequency of prostate cancer than those who ate moderate or high amounts did.

Our results suggest that fish consumption could be associated with decreased risk of prostate cancer.

### THESE AUTHORS ALSO NOTE:

"Essential fatty acids contained in fish inhibit the growth of prostate cancer cells in vitro and in vivo."

Studies support an inverse association between fatty acids from fish and prostate cancer.

"Only fish high in omega-3 fatty acids are likely to lower the risk of prostate cancer."

The authors examined fish consumption in relation to prostate cancer in Sweden, a country with a traditionally high consumption of fatty fish from Northern (cold) waters, such as salmon, herring, and mackerel, which contain high amounts of omega-3 fatty acids.

The authors found:

(1) Increasing proportion of fish in the diet was associated with a decreasing frequency of prostate cancer in both age-adjusted and multivariate-adjusted risk-factor models.

(2) Adjustment for other dietary and lifestyle factors strengthened the association of increasing proportion of fish in the diet being associated with a decreasing frequency of prostate cancer.

(3) Controlling for genetic and shared environmental factors did not alter the results.

“Adjustment for confounding variables, including genetic and shared environmental factors, strengthened rather than weakened our results.”

“Our results support the hypothesis that fatty fish consumption lowers the risk of prostate cancer, possibly through inhibition of arachidonic acid-derived eicosanoid biosynthesis.”

Other studies show greatly increased (three-fold to four-fold) plasma concentrations of eicosapentaenoic acid (EPA) in people from Sweden and Denmark who consumed high amounts of fatty fish.

EPA competes with arachidonic acid.

“Therefore, high concentrations of EPA can lead to important changes in relative concentrations of tumour growth enhancing prostaglandins.”

FROM DAN MURPHY:

This is another article noting the importance of Omega-3 fatty acids in the diet. The key points are:

(1) Omega-3 fatty acids are primarily derived from cold water fatty fish, such as salmon, herring, and mackerel.

(2) The primary omega-3 fatty acid for prostate cancer prevention is eicosapentaenoic acid (EPA).

(3) Eicosapentaenoic acid (EPA) competes with and inhibits arachidonic acid.

This supports the contention that omega-3 fatty acids, and especially EPA, alter the pro-inflammatory effects of arachidonic acid, resulting in an alteration of immune system function.