

Omega-3 fatty acids reduce risk of advanced prostate cancer

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Omega-3 fatty acids appear protective against advanced prostate cancer, and this effect may be modified by a genetic variant in the COX-2 gene, according to a report in *Clinical Cancer Research*, a journal of the American Association for Cancer Research.

"Previous research has shown protection against [prostate cancer](#), but this is one of the first studies to show protection against advanced prostate cancer and interaction with COX-2," said John S. Witte, Ph.D., professor of epidemiology and biostatistics at the University of California San Francisco.

For the current study, researchers performed a case-control analysis of 466 [men](#) diagnosed with aggressive prostate cancer and 478 healthy men. Diet was assessed by a food frequency questionnaire and researchers genotyped nine COX-2 single nucleotide polymorphisms.

Researchers divided omega-3 fatty acid intake into four groups based on quartiles of intake. Men who consumed the highest amount of long chain omega-3 [fatty acids](#) had a 63 percent reduced risk of aggressive prostate cancer compared to men with the lowest amount of long chain omega-3 fatty acids.

The researchers then assessed the effect of omega-3 fatty acid among men with the variant rs4647310 in COX-2, a known inflammatory gene. Men with low long chain omega-3 fatty acid intake and this variant had a more than five-fold increased risk of advanced prostate cancer. But men

with high intake of omega-3 fatty acids had a substantially reduced risk, even if they carried the COX-2 variant.

"The COX-2 increased risk of disease was essentially reversed by increasing omega-3 fatty acid intake by a half a gram per day," said Witte. "If you want to think of the overall inverse association in terms of fish, where omega-3 fatty acids are commonly derived, the strongest effect was seen from eating dark fish such as salmon one or more times per week."

Source: American Association for Cancer Research ([news](#) : [web](#))

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