

## **Omega-3 PUFA: Good or bad for prostate cancer?**

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#### FROM ABSTRACT:

The objective of this meta-analysis was to estimate quantitatively the associations between intake or status of omega-3 polyunsaturated (omega-3 PUFA) fatty acids and occurrence of prostate cancer in observational studies in humans.

#### Methods

We combined risk estimates across studies using random-effects models.

#### Results

The combined estimate showed an increased risk of prostate cancer in men with a high intake or blood level of alpha-linolenic acid (ALA) (36% increased risk).

The association is stronger in the case-control studies (84% increased risk) than in the prospective studies (10% increased risk).

Eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) were not significantly associated with prostate cancer.

#### Discussion

The association between high intake of ALA and prostate cancer is of concern and needs further study.

#### THIS AUTHOR ALSO NOTES:

“Prostate cancer is the second most common cancer in men in the World.”

This author reviewed the MEDLINE literature to determine the effect of different omega-fatty acids on the incidence of prostate cancer. Thirteen observational studies were found (7 were prospective studies and 6 were case-control studies).

“The combined estimate of all observational studies showed an increased risk of prostate cancer in men with a high intake or blood level of ALA” by 36%.

The association between ALA intake and prostate cancer was stronger in the case-control studies (84% increased risk) than in the prospective studies (10% increased risk).

The author found 8 observational studies on EPA intake or blood concentrations and prostate cancer: 5 studies were prospective and 3 were case-control studies.

Combined, EPA reduced the risk of prostate cancer by 10%.

The author found 7 observational studies on DHA intake or blood concentration and prostate cancer: 4 of these were prospective studies and 3 were case-control studies.

Combined, DHA reduced the risk of prostate cancer by 9%.

## DISCUSSION

This meta-analysis shows a combined increased risk for prostate cancer of 36% for men with a relatively high intake of ALA.

“In conclusion, intake or status of the very long-chain omega-3 fatty acids EPA and DHA do not seem to be associated with risk of prostate cancer.”

“Association between high intake of ALA and prostate cancer is of concern and needs further study.”

## KEY POINTS FROM DAN MURPHY

Alpha-linolenic acid (ALA) is an 18-carbon long plant omega-3 fatty acid. Sources include flax seed oil, hemp oil and walnut oil.

Eicosapentaenoic acid (EPA) is a 20-carbon long omega-3 fatty acid found in fish oil.

Docosahexaenoic acid (DHA) is a 22-carbon long omega-3 fatty acid found primarily in fish oil; there are algae sources of DHA.

In this meta-analysis study, the authors found 24 studies assessing the risk of prostate cancer as related to the intake of ALA, EPA, and DHA

- 1) “Prostate cancer is the second most common cancer in men in the World.”
- 2) Combined, higher intake or blood levels of ALA increased the risk of prostate cancer by 36%.
- 3) Combined, higher intake or blood levels of EPA reduced the risk of prostate cancer by 10%.
- 4) Combined, higher intake or blood levels of DHA reduced the risk of prostate cancer by 9%.