Blood levels of omega-3 fatty acids associated with slight increase in prostate cancer incidence.

Why is this important?

Despite inconclusive evidence, omega-3 polyunsaturated fatty acids (PUFAs) are often heralded for health benefits including anti-inflammatory properties. Prior studies have suggested that PUFAs might be associated with risk of prostate cancer.

Facts

- Participants were from SELECT, a clinical trial of an unrelated treatment for prostate cancer prevention, which was designed for a different purpose. ¹

- This was a sub-study of 834 men who developed prostate cancer and 1364 men who did not. ²

- Baseline blood levels of a chemical marker of PUFA intake were tested in all participants.

- Plasma level of phospholipid fatty acids was higher in patients who developed prostate cancer, with the highest levels conferring the highest risk.

Harms and concerns:

- These data do not allow an accurate numerical or visual display of the magnitude of risk.

- This was an observational study, and therefore it can suggest possible associations, but not causation.

- The measurement of PUFAs was not perfectly reliable, and the clinical significance of the biomarkers is unclear.

- Consumption of omega-3 supplements was not assessed.

- The safety and benefit of PUFAs for other health reasons is controversial. Most notably, a long-believed benefit in preventing heart disease may be unfounded.

- PUFA intake for primary prevention of heart disease has been shown ineffective ³, ⁴.

- No specific recommendations about fish oil consumption can be made with certainty based on this study.

In a preliminary study, the development of prostate cancer was associated with presence of higher blood levels of omega-3 fatty acids. These results are unlikely to inform practice regarding taking omega-3 supplements.
The Bottom Line

Blood levels of omega-3 fatty acids associated with slight increase in prostate cancer incidence.

Strength of Evidence
(Adapted from Guyatt G BMJ, 26 April 2008)
This refers to the degree to which the findings of this study are likely to be free of bias.

Tips for Discussion of Results with Patients
- This study did not examine fish oil or other omega-3-containing supplements. It examined blood markers related to omega-3 ingestion.
- This was an observational study, which found associations between ω-3 PUFA and prostate cancer, but did not establish cause-and-effect relationships.
- If omega-3 fatty acids do affect development of prostate cancer, the magnitude of the effect is likely to be small.
- The decision to take Omega-3 fatty acids should include an understanding that there may be risks associated.

References

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The Bottom Line summaries reflect the expertise and opinions of the SGIM EBM Task Force as of the date of release of this summary.