

# Medical Matters



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Headlines announcing a 71 per cent increased risk of high-grade prostate cancer in men with high levels of fatty acids derived from fish oils were nothing if not dramatic. Especially when omega-3 supplements have been a popular remedy for men hoping to ward off coronary heart disease.

The online study, published in the *Journal of the National Cancer Institute* was not an entirely new piece of research; rather it is a reworking of data originally collected as part of the Selenium and Vitamin E Cancer Prevention Trial (Select). Of note, researchers only measured omega-3 levels, they did not separate whether they came from eating oily fish or dietary supplements.

In the latest analysis, US researchers focused on 834 men who had been diagnosed with primary prostate cancers (156 had high-grade cancer) along with a comparison group of 1,393 men aged over 50 selected randomly from the 35,500 participants in Select. High-grade cancers are tumours that are more likely to spread aggressively and to be fatal. Their findings follow previous research that found a link between high blood concentrations of a single omega-3 fatty acid and a doubling of the risk for developing high-grade prostate cancer.

## Fatty acids

Omega-3 fatty acids are considered essential fatty acids: necessary for human health, the body can't make them – you have to ingest them as food. Omega-3 fatty acids can be found in fish, such as salmon, tuna, and halibut, other seafood including algae and krill, some plants, and nut oils. Also known as polyunsaturated fatty acids (Pufas), omega-3 fatty acids play an important role in brain function, as well as normal growth and development.

What is surprising about recent studies is that they fly in the face of the known anti-inflammatory properties of omega-3 fatty acids. We know that inflammation plays a role in the growth of some cancers.

But we also know that inflammation is a major factor in ischaemic heart disease, depression and many other illnesses. And yet initial evidence that fish oils be prescribed for a number of these conditions has not stood up to deeper scrutiny. It has been estimated that if an individual increases their fruit and vegetable intake up to 600 g daily, they could significantly reduce their risk of heart attack and stroke.

## Inconsistent findings

Unlike the evidence for fruit and vegetables, however, recent randomised controlled trials have reported inconsistent findings regarding the efficacy of vitamin and antioxidant supplementation on cardiovascular diseases. Two separate papers published last year found fish-oil supplements don't reduce heart attacks or strokes in people at high risk for them, and they don't prevent cognitive decline or dementia in healthy older people.

Another study from the *Journal of the American Medical Association*, published in November, looked at the effect of taking omega-3 before and after cardiac surgery; it found no beneficial effect on the incidence of cardiac rhythm disturbances that affect about one in three patients undergoing heart valve operations.

The answer may lie in having the correct ratio of omega-3 and omega-6 fatty acid in the diet. Omega-6 tends to promote inflammation; but a typical Mediterranean diet has a healthier balance between omega-3 and omega-6 fatty acids than does the more stodgy diet found elsewhere in [Europe](#) and the Americas. Another possibility is that some other substance present in fish themselves is acting as an anti-inflammatory agent and producing the positive effects that are absent in supplements.

What are the implications of the latest research? Firstly it suggests that people who follow a recommended diet of eating oily fish twice a week are doing the right thing. As for taking supplements, the latest research does not prove that omega-3 supplements cause prostate cancer, but it does suggest a surfeit of fish oils may be bad for you.

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