

## Different omega-3 may offer different colorectal protection

7/11/2007 - Increased intake of omega-3 fatty acids from marine source, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), may offer differing levels of protection against colorectal cancer, suggests a new study.

The epidemiological study, published in the *American Journal of Epidemiology*, adds to a growing body of science linking [omega-3](#) and fatty fish consumption to a reduced risk of [colorectal cancer](#), although more research is necessary, particularly randomised controlled trials.

*"The observed different effects of different types of fatty acids underline the importance of type of fat in the etiology and prevention of colorectal cancer,"* wrote researchers.

Omega-3 has been identified as one of the super-nutrients taking the food and supplements industry by storm. Much of its healthy reputation that is seeping into consumer consciousness is based largely on evidence that it can aid cognitive function and may help protect the heart against cardiovascular disease.

But one area in which the evidence is controversial is the fatty acid's role in reducing the risk of cancer.

The researchers recruited 1,455 subjects with colorectal cancer (cases), and 1,455 matched healthy controls.

Although trans-monounsaturated fatty acids and palmitic, stearic, and oleic acids were dose-dependently associated with colorectal cancer risk, these links were no longer observed after adjusting the results for potential confounding factors.

Consumption of omega-3 polyunsaturated fatty acids was associated with a 37 per cent reduction of colorectal cancer risk, comparing highest against lowest average intakes.

Increased intake of EPA was associated with a 41 per cent reduction in risk, while [DHA](#) was associated with a 37 per cent reduction in risk, comparing highest against lowest average intakes.

It has previously been proposed that omega-3 fatty acids may inhibit the omega-6 arachidonic acid (AA) cascade that has been linked to cancer formation and cell proliferation.

Metabolism of fatty acids produces compounds called prostaglandins, which can be either pro- or anti-inflammatory. The prostaglandins derived from omega-3 fatty acids are said to be anti-inflammatory and may protect against the development of cancer, while prostaglandins derived from omega-6 fatty acids, like AA, are proposed to be pro-inflammatory.

Colorectal cancer accounts for nine per cent of new cancer cases every year worldwide. The highest incidence rates are in the developed world, while Asia and Africa have the lowest incidence rates.

It remains one of the most curable cancers if diagnosis is made early.