

Fish may protect against colorectal cancer

6/15/2005 - **People who regularly eat fish are less likely to develop colorectal cancer, reveals new data out today from the biggest ever investigation into diet's impact on cancer incidence.**

Eating fish has already been shown to protect against other cancers, with a direct association seen between oily fish fatty acids and lower risk of prostate cancer.

Yet the most recent prospective studies on colorectal cancer failed to confirm earlier observations that fish might be protective.

The new study, based on data from around half a million participants in the EPIC trial, also confirmed that red meat consumption significantly raises the risk of this cancer, while fibre protects against it.

The findings are reported in today's issue of the *Journal of the National Cancer Institute* (vol 97, no 12).

Adults from ten European countries have been questioned about their dietary habits and lifestyles since 1992 for the EPIC trial (European Prospective Investigation into Cancer and Nutrition). Epidemiologists at the International Agency for Research on Cancer (IARC) in Lyon, France, which coordinates EPIC, and colleagues from other EPIC study centres, assessed the relationship between meat and fish consumption and colorectal cancer risk in 1,329 new diagnoses of rectal and colon cancer since the study started.

They estimate that the risk of colorectal cancer increases by 49 per cent for each 100 grams of 'red' meat (pork, beef, veal, and lamb) consumed each day. An increase in daily sausage consumption by 100 grams elevates the risk even further - by 70 per cent.

In contrast, eating 100 grams of fish daily reduces the disease risk by half. People eating less than 14g of fish a day were 40 per cent more likely to develop the cancer than those eating more than 50g per day, the researchers report.

Furthermore, the benefit seen from fish intake cannot be explained by the displacement of meat eating (or vice versa) because the association did not disappear when fish and red meat were mutually adjusted for each other, they write.

The protective effect of fish consumption may be caused by specific long chain, polyunsaturated omega-3 fatty acids, known to inhibit cancers. But the researchers noted that they were unable to differentiate between fatty fish, which contains the majority of omega-3 fatty acids, and other fish.

They also noted that fibre was an important element in risk of the disease, as reported previously. The risk of colorectal cancer was higher in those women that ate less than 26g of fibre daily, irrelevant of their meat intake.

The findings accounted for the influence of different factors such as gender, body weight, alcohol consumption, physical exercise or smoking on the disease risk. In addition, the data were processed using a method that reduces inaccuracies in the information provided by study participants on their dietary habits.

Recent studies suggest that the intake of iron contained in meat may be behind the raised risk as the mineral can promote the formation of harmful nitroso compounds in the body. On average, 'red' meat or meat products have a higher iron content than poultry, which may explain why consumption of the latter did not influence colorectal cancer risk in this study.