

## Frequent Consumption of Red Meat Linked to Colorectal Cancer

The association between high red meat intake and increased risk of colorectal cancer has been established in the scientific literature for approximately two decades. Less well-known is the association between colorectal cancer and the intake of fish. A recent study of men and women in 10 European countries has solidified the relationship between red meat and colorectal cancer, while finding that high fish consumption can substantially reduce colorectal cancer risk.

In this analysis, scientists examined the health records of more than 478,000 men and women (ages 35 to 70) who had participated in a prior study designed to investigate the relationships between diet, lifestyle, genetic and environmental factors, and the incidence of cancer. Among the variables measured in the study were intake red meat, processed meat, and fish. At the start of the study, all of the participants were free of cancer; after a mean follow-up examination of 4.8 years, 1,329 patients had been diagnosed with colorectal cancer.

Analysis of the questionnaires revealed that people who ate an average of 160 or more grams of red or processed meat per day were 35% more likely to develop bowel cancer than those who ate less than 20 grams per day. Increased fish intake, meanwhile, was associated with a reduced risk of colorectal cancer. Participants who consumed more than 80 grams of fish per day had a 31% reduction in the incidence of colorectal cancer compared to those eating less than 10 grams of fish per day. Subjects with high intakes of red meat and low intakes of fish were 63% more likely to develop colorectal cancer compared to subjects with low red meat intake and high fish intake.

"We found a consistent positive association between high intake of red and processed meat and colorectal cancer, and an inverse association between high intake of fish and colorectal cancer," noted the authors in their conclusion. "These findings held in models adjusted for age, sex, and energy and in models adjusted for other covariates."

[Norat T, Bingham S, Ferrari S, et al.](#) Meat, fish, and colorectal cancer risk: The European Prospective Investigation Into Cancer and Nutrition. *Journal of the National Cancer Institute*, June 15, 2005;97(12):906-916.