Women Who Eat Fish Have Lower Colon Polyp Risk

Source: HealthCanal

The research, led by first author Harvey Murff, M.D., M.P.H., associate professor of Medicine, was published online in the American Journal of Clinical Nutrition.

The VICC researchers believe that omega-3 fats in fish may reduce inflammation in the body and help protect against the development of colon polyps. Polyps are small growths on the lining of the intestinal tract that may develop into cancer.

Earlier research in animals has suggested a link between inflammation and colon polyp formation but studies in humans have not been conclusive.

Colorectal cancer is the fourth most common cancer and the second leading cause of cancer-related death in the United States.

More than 5,300 participants were enrolled in the Tennessee Colorectal Polyp Study and received colonoscopies at Vanderbilt or the Veterans' Affairs Tennessee Valley Health System in Nashville. Study participants completed food frequency questionnaires to determine how often they ate fish and investigators obtained urine samples from some of the patients to measure biomarkers for a hormone related to inflammation.

Women who ate the equivalent of three servings of fish per week had about a 33 percent reduction in the risk for colon polyps. They also had a lower level of a hormone called prostaglandin E2 which is linked to inflammation.

"That was the aspect of the study we were particularly excited about because prostaglandin E2 is known to be associated with adenomas or polyps in colorectal cancers," said Murff.

Murff said fish oil appears to have the same beneficial effect as aspirin in reducing inflammation and this may protect against the formation of polyps.

"Women who ate more fish had lower numbers of polyps and they had lower levels of prostaglandin E2 which reassured us that these results may be real findings and not just a statistical fluke," Murff explained.

While women who ate the most fish saw some protective effect, men who ate more fish did not have a reduced risk of developing colon polyps.

The VICC investigators were surprised by this difference.

"The difference between men and women may be linked to their background diet. Even though men are eating more omega-3 fatty acids they may also be eating more omega-6 fatty acids and that may be blunting the effect," said Murff.

Omega-6 fatty acids which are found in meats, grains and seed oils, including corn, safflower and sunflower oil, may counteract the protective effect of omega-3 fatty acids.

While eating more fish appeared to be beneficial, not all types of fish contain high levels of the protective omega-3 fatty acids. Tuna, salmon and sardines are high in omega-3 acids, while tilapia and catfish have low levels.

To validate the findings from their study, the authors are currently conducting a clinical trial to determine the effect of fish oil supplementation and prostaglandin E2 production.

The National Cancer Institute funded the study through a series of research grants.