

# Fish Intake Tied to Reduced Colorectal Ca Risk in Men

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BOSTON — Diets rich in fish may substantially reduce the risk of colorectal cancer in men, according to a new analysis of data from the U.S. Physicians' Health Study.

Of the 22,071 male physicians who participated in the randomized chemoprevention trial of aspirin and  $\beta$ -carotene initiated in 1982, those men who ate fish at least five times per week were 40% less likely to develop colorectal cancer, compared with men who ate fish less than once a week, Dr. Megan N. Phillips reported at the annual international conference of the American Association for Cancer Research.

In a previous case-control study nested within the Physicians' Health Study (PHS), Dr. Phillips of the Harvard School of Public Health in Boston and colleagues reported an inverse association between blood levels of long-chain n-3 fatty acids—which, in the diet, primarily come from fish—and colorectal cancer risk, as well as an interaction between n-3 fatty acids and aspirin.

In the current study, the investigators used data from the full PHS cohort to assess the associations between fish, n-3 fatty acid intake, and colorectal cancer risk, and to determine if fish consumption had a different effect on men who received aspirin for 5 years, compared with men who didn't use aspirin.

The information on fish intake was gleaned from a one-time abbreviated food questionnaire given to PHS participants 12 months after starting the study.

That questionnaire asked about average intake of four types of fish and shellfish, including a fatty "dark meat" category, in order to accurately estimate n-3 intake, said Dr. Phillips.

About 11% of the respondents reported eating fish 5 times or more per week, 48% ate fish 2-5 times per week, 31% ate it 1-2 times per week, and nearly 11% ate it less than once a week.

The investigators compared this information with rates of colorectal cancer that developed over a follow-up period that averaged 19.4 years.

By controlling for such factors as smoking, exercise, and multivitamin use, a Cox regression model showed relative reductions in risk of developing colon cancer, compared with men who ate fish less than once a week. In men who ate fish 1-2 times weekly, the reduction was 13%. Risk reduction was 20% for those who ate fish 2-5 times weekly, and 40% for those who ate it at least 5 times per week.

"The findings for n-3 fatty acids were similar to those for fish, with a statistically significant inverse trend with relative risks for increasing quartiles [of n-3 fatty acid] intake," Dr. Phillips reported.

With respect to aspirin intake, "there was no significant additional risk-reduction advantage among men in the study who had been randomized to take aspirin for 5 years," said Dr. Phillips, noting the

possibility that "it may take more years of aspirin use to see an effect."

Although the results appear robust, the findings of this study may be confounded by the fact that the patterns of fish consumption reported in the initial questionnaire might not have been maintained over time, Dr. Phillips noted.

Dr. Phillips had no financial disclosures related to her presentation. ■

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Are her symptoms  
more *typical*  
than *atypical*?

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Although chest pain is the most common symptom of myocardial infarction among both sexes,<sup>1</sup> women often present with symptoms that are not typically seen in men.<sup>2</sup> Coronary heart disease can be different in women, and many challenges exist in risk stratification and decision making.<sup>3,4</sup>

Myocardial perfusion imaging (MPI) can provide important risk stratification information in women.<sup>4</sup> Approximately 40% of women referred for MPI are candidates for pharmacologic stress.<sup>3</sup> For those unable to exercise adequately, Adenoscan stress provides interpretable MPI results in 98.7% of patients.<sup>5</sup>

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Approximately 2.6% and 0.8% of patients developed second- and third-degree AV block, respectively. All episodes of AV block have been asymptomatic, transient, and did not require intervention; less than 1% required termination of adenosine infusion.

Fatal cardiac arrest, sustained ventricular tachycardia (requiring resuscitation), and non-fatal myocardial infarction have been reported coincident with Adenoscan infusion. Patients with unstable angina may be at greater risk.

Side effects that were seen most often included flushing (44%), chest discomfort (40%), and dyspnea (28%). Side effects usually resolve quickly when infusion is terminated and generally do not interfere with test results.

Despite adenosine's short half-life, 10.6% of the side effects started several hours after the infusion terminated, and 8.4% of the side effects that began during the infusion persisted for up to 24 hours after infusion. In many cases, it is not possible to know whether these late adverse events are the result of Adenoscan infusion.

Please see brief summary of prescribing information on the next page.

1. Isaac D, et al. *Can J Cardiol*. 2001;17(suppl D):38D-48D. 2. Wenger NK. *Cardiovasc Res*. 2002;53:558-567. 3. Mieres JH, et al. *J Nucl Cardiol*. 2003;10:95-101. 4. Hachamovitch R, et al. *J Am Coll Cardiol*. 1996;28:34-44. 5. Cerqueira MD, et al. *J Am Coll Cardiol*. 1994;23:384-389.

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