

## Eating fatty fish once a week reduces men's risk of heart failure

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(PhysOrg.com) -- Eating salmon or other fatty fish just once a week helped reduce men's risk of heart failure, a recent study shows, adding to growing evidence that omega-3 fatty acids are of benefit to cardiac health. Led by researchers at Beth Israel Deaconess Medical Center (BIDMC) and reported in the April 22 online issue of the *European Heart Journal*, the study is one of the largest to investigate the association.

“Previous research has demonstrated that fatty fish and [omega-3 fatty acids](#) help to combat risk factors for a range of heart-related conditions, such as lowering triglycerides [fats in the blood], reducing blood pressure, heart rate, and heart rate variability,” explains first author Emily Levitan, a research fellow in the Cardiovascular Epidemiology Research Center at BIDMC. “Collectively, this may explain the association with the reduced risk of [heart failure](#) found in our study.”

A life-threatening condition that develops when the heart can no longer pump enough blood to meet the body's needs, heart failure (also known as congestive heart failure) is usually caused by existing cardiac conditions, including high blood pressure and [coronary artery disease](#). Heart failure is the leading cause of hospitalization among patients 65 and older, and is characterized by such symptoms as fatigue and weakness, difficulty walking, rapid or irregular heartbeat, and persistent cough or wheezing.

The researchers followed 39,367 Swedish men between the ages of 45

and 79 from 1998 to 2004. The researchers recorded details of the men's diet and tracked the men's outcome through Swedish inpatient hospital registers and cause-of-death registers. During this period, 597 men in the study (with no previous history of heart disease or diabetes) developed heart failure. Thirty-four men died.

Analysis of their numbers showed that the men who ate fatty fish (herring, mackerel, salmon, whitefish, and char) once a week were 12 percent less likely to develop heart failure, compared with men who ate no fatty fish. Although this association did not reach statistical significance, notes Levitan, the researchers also found a statistically significant association with the intake of marine omega-3 fatty acids, which are found in cod liver oil and other fish oils: The men who consumed approximately 0.36 grams a day were 33 percent less likely to develop heart failure than the men who consumed little or no marine omega-3 fatty acids.

“We divided the men into five groups based on their intake of fatty fish,” explains Levitan. “The first group consumed little or no fatty fish; at the other end of the spectrum, the fifth group consumed significant quantities, three or more servings per week. We found that while the ‘middle group’ - who ate one serving per week - had a 12 percent reduced risk of heart failure, the next two groups, who ate either two servings a week or three or more servings a week, had nearly the same heart failure risk as the men who ate no fish at all.”

The findings were similar when the researchers looked at fish oil consumption: Among five groups based on fish oil consumption, the middle group, those who consumed 0.36 grams per day of omega-3 fatty acids, showed a 33 percent reduced risk of heart failure, while the men who consumed greater quantities (approximately 0.46 grams per day or 0.71 grams per day) had a risk of heart failure similar to the men who consumed little or no fish oils.

“The higher rates of heart failure in men who consumed the most fatty fish or marine omega-3 fatty acids compared with the men who had moderate consumption may be due to chance,” explains Levitan. Alternatively, she explains, the men who ate more fish may already be in poor health, and may be trying to improve their health through fish consumption.

“Our study reinforces the current recommendations for moderate consumption of fatty fish,” notes Levitan. “Current guidelines from the American Heart Association recommend eating fatty fish twice a week. It will be important, going forward, to replicate these findings in other populations, particularly those including women, as our study looked at men only.”

More information: [eurheartj.oxfordjournals.org/](http://eurheartj.oxfordjournals.org/)

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