

## **Fish Oils May Slow Genetic Aging in Heart Patients**

**New Research Suggests Omega-3s May Slow Aging on Genetic Level; Some Heart Doctors Skeptical**

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Heart disease patients have long been encouraged to eat more fish or take fish oil supplements containing omega-3 fatty acids. The reason? People who do, tend to live longer.

Now, some say a study out this evening in the Journal of the American Medical Association might explain why.

Specifically, the researchers behind the study report that for heart disease patients, omega-3 fatty acids may protect against death and illness by slowing biological aging.

However, the findings were met with skepticism from some cardiac experts who said the study had serious limitations.

In the study, Dr. Ramin Farzaneh-Far of the University of California San Francisco and colleagues followed more than 600 men with heart disease and found those taking the most omega-3 appeared "biologically younger" -- that is, the ends of their chromosomes, called telomeres, looked longer and healthier.

"Patients with the highest levels of omega-3 fish oils were found to display the slowest decrease in telomere length, whereas those with the lowest levels of omega-3 fish oils in the blood had the fastest rate of telomere shortening," Farzaneh-Far said. "This suggests that these patients were aging faster than those with higher fish oil levels."

Some doctors agreed that the findings seem interesting.

"Telomeres do help the body repair damage," said Dr. Stephen Kopecky, a cardiologist at the Mayo Clinic in Rochester, Minn., who was not involved with the study. "The longer they are, the more the damage repair that can occur."

"It's a risk-free way of potentially extending lifespan and reducing disability," said Dr. Michael Roizen, chief wellness officer of the Cleveland Clinic in Cleveland, Ohio.

Yet some cardiologists were quick to point out that the results are preliminary, and need to be replicated before physicians can use them in practice.

Since the study was observational and couldn't prove cause-and-effect, "we don't really know whether ingestion of omega-3 fatty acids resulted in this 'benefit,'" said Dr. Steven Nissen of the Cleveland Clinic. "It remains entirely possible that individuals who consume more fish also have other favorable healthy habits. ... The relationship between telomere shortening and cardiovascular health is not well established."

This concern was echoed in a statement by a spokeswoman for the National Heart, Lung and Blood Institute, who told ABC News that while the study "shows a possible association between omega-3 fatty acids and telomere length," it "does not show causation."

### **Is It the Telomeres?**

Researchers aren't entirely sure how omega-3s stop telomeres from getting smaller. While studies have shown that omega-3s appear to be effective for patients with coronary artery disease, the underlying mechanisms are not well understood. They may protect against oxidative stress, which is a major driver of telomere shortening and aging.

But what cardiologists do know is that omega-3s have been shown to have effects on other factors that contribute to heart disease risk -- a benefit that some said may have little to do with telomeres.

"We have a very good explanation already for why omega-3 fatty acids have a protective effect on heart disease," said Dr. Cam Patterson of the University of North Carolina at Chapel Hill McAllister Heart Institute. "Omega-3 fatty acids have a potent positive impact on lipids that circulate in the blood stream and damage the heart. The effects of omega-3 fatty acids on lipids are still the best advertisement for their use to prevent heart disease."

Dr. Merle Myerson of Columbia University agreed.

"[The researchers] don't mention that omega-3 fatty acids lower triglycerides and non-HDL cholesterol, and stabilize cell membranes -- all of which may reduce risk for coronary artery disease and sudden cardiac death," Myerson said.

Regardless of the reasons for the benefit, the study's researchers said that the findings uphold recommendations for patients with heart disease.

"The results of our study underscore the recommendations of the American Heart Association, that patients with known coronary artery disease should be getting at least one gram a day of omega-3 fish oil," Farzaneh-Far said.

*Kristina Fiore of MedPage Today contributed to this report.*

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