



EAT PLANTS FEEL WHOLE
Weekly Health Digest

July 19, 2026 | Heart Disease & Omega-3 Fatty Acids

Article: Effects of Omega-3 Fatty Acids Intake on Lipid Metabolism and Plaque Volume in Patients With Coronary Heart Disease: A Systematic Review and Dose-Response Meta-Analysis of Randomized Clinical Trials

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Journal: Food Science & Nutrition, 2025

Source: <https://doi.org/10.1002/fsn3.70372>

What did scientists study?

Researchers combined results from 23 randomized controlled trials with 2,061 people who already had coronary heart disease. This big study-of-studies, called a meta-analysis, asked whether omega-3 fatty acid supplements change blood fat levels and the amount of plaque built up inside heart arteries.

Why does it matter?

Coronary heart disease happens when arteries that feed the heart get narrowed by plaque, a sticky buildup of fat and cholesterol. It is one of the leading causes of heart attacks. People living with heart disease, and their doctors, are always looking for safe ways to help manage cholesterol alongside medications like statins.

What did they find?

People who took omega-3 supplements had modestly lower triglycerides and total cholesterol than people who did not. But omega-3 did not significantly change LDL ("bad" cholesterol), HDL ("good" cholesterol), or the actual amount of plaque in the arteries.

The researchers also looked at dose-response patterns. Higher omega-3 intake was linked to steadily lower triglycerides. But for total cholesterol and LDL, the relationship looked more like a "J" shape, meaning more isn't always better and the right dose may matter.

What can you do?

Talk to your doctor before starting any new supplement, especially if you take cholesterol or blood-thinning medication, since omega-3 can interact with some drugs.

You can also get omega-3s from food. Good sources include fatty fish like salmon, mackerel, and sardines. It is also available from plant sources such as walnuts, chia seeds, and

flaxseed. Plant sources are less likely than fish sources to have mercury or other toxins and so are likely safer. Eating more of these foods a couple times a week is a safe, heart-healthy habit for most people.

Keep in mind: omega-3 is not a magic fix for artery plaque. It works best as one piece of a bigger plan that includes medication, exercise, and a heart-healthy diet.

Bottom line

Omega-3 fatty acids can modestly improve the risk factors, triglycerides and total cholesterol, in people with heart disease, but they don't appear to shrink existing artery plaque on their own.

Definitions

Omega-3 fatty acids: A type of healthy fat found in fish, nuts, and seeds. Your body needs them, but can't make enough on its own. [Wikipedia](#)

Coronary heart disease: A disease where the arteries that supply blood to the heart become narrowed or blocked by plaque. [Wikipedia](#)

Randomized controlled trial (RCT): A study where people are randomly placed into groups, so researchers can fairly compare a treatment to a placebo or no treatment. [Wikipedia](#)

Meta-analysis: A study that combines results from many smaller studies to get a clearer, more reliable answer. [Wikipedia](#)

Plaque (artery): A sticky buildup of fat, cholesterol, and other substances on the inside walls of arteries. It can narrow blood flow over time. [Wikipedia](#)

Triglycerides: A type of fat found in your blood. Your body stores extra calories as triglycerides, and high levels are linked to heart disease. [Wikipedia](#)

Total cholesterol: A measure of all the cholesterol in your blood, including both LDL and HDL cholesterol. [Wikipedia](#)

LDL: Often called "bad" cholesterol. High levels can build up in artery walls and raise heart disease risk. [Wikipedia](#)

HDL: Often called "good" cholesterol. It helps carry extra cholesterol away from artery walls to the liver. [Wikipedia](#)

Dose-response: How the size of an effect changes depending on how much of something (like a supplement) a person takes. [Wikipedia](#)

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