

## **The truth of omega-3: Is it really a “Good Fat”? Cons**

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I will introduce the reviews on randomized trials examining the effects of fish- and plant-based omega-3 fats on heart and circulatory disease, lipids, including cholesterol, triglycerides, high-density and low-density lipoprotein cholesterols. The main types of omega-3 fats are alpha-linolenic acid (ALA), a fat found in plant foods, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), both found in fish. Twenty-five studies were very trustworthy. Participants were adults, some with existing illness and some healthy, living in North America, Europe, Australia and Asia. Participants increased omega-3 fat intakes, or maintained their usual fats for at least a year. Most EPA and DHA trials provided capsules, few gave oily fish. Increasing EPA and DHA has little or no effect on all-cause deaths and cardiovascular events (high-quality evidence) and probably makes little or no difference to cardiovascular death, coronary deaths or events, stroke, or arrhythmias (moderate-quality evidence). EPA and DHA slightly reduce serum triglycerides and raise HDL (high-quality evidence). Eating more ALA probably makes little or no difference to all-cause or cardiovascular deaths or coronary events but probably slightly reduce cardiovascular events, coronary mortality and arrhythmias (moderate/low-quality evidence). Effects of ALA on stroke are unclear as the evidence was of very low quality. There is evidence that taking omega-3 capsules does not reduce heart disease, stroke or death. There is little evidence of effects of eating fish. Although EPA and DHA reduce triglycerides, supplementary omega-3 fats are probably not useful for preventing or treating heart and circulatory diseases. However, increasing plant-based ALA may be slightly protective for some heart and circulatory diseases. I will re-interpret the results of IMPROVE-IT Study with the view-point of this skeptical review.