

Are Omega 3 Supplements Worth It?

Do omega 3-fatty acids really reduce the risk for cardiovascular disease and cancer?

Scientific Method

Observation

- Omega 3-fatty acids (or n-3 fatty acids) have been linked with reduced risk of cardiovascular disease and cancer
- Study focuses on the impact of omega 3-fatty acids when taken as a supplement

Hypothesis

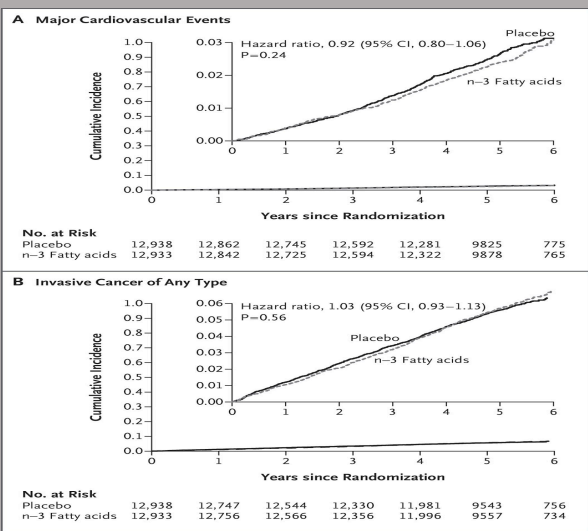
- Omega 3-fatty acid supplements reduce the risk of developing cardiovascular disease and cancer.

Experiment

- “Randomized, double-blind, placebo-controlled trial, two-by-two factorial design” (Mason et al, 2019)
- Questionnaires and blood were used to collect baseline data and monitor participants
- Independent variable: intake of omega 3 supplement (840mg/day)
- Dependant variable: no significant positive or negative impact of supplement
- Variables were measured by endpoints:
 - Primary endpoints – “major cardiovascular events and invasive cancer of any type”
 - Secondary endpoints – “non-major cardiovascular events site-specific cancers, and death from cancer” (Mason et al, 2019)

Examine and Interpret Data

- Study used various tables and figures to compare data between the two groups
- This figure shows the rates of major cardiovascular events and invasive cancer for those who took the omega-3 fatty acid supplement and the placebo group over a period of six years.
- **Correlation:** “possible lower incidence of major cardiovascular events, due to supplementation of omega 3-fatty acid for patients with a low fish intake” (Mason et al, 2019)



Evaluating Results

- **Main Conclusions:** “supplementation with omega 3-fatty acids did not result in a lower incidence than placebo of the primary end points of major cardiovascular events and invasive cancer of any type” (Mason et al, 2019)
- **Implications**
 - Mean age was 67.1
 - Validity of questionnaires
- **Potential Bias**
 - Only Americans were patients
 - Study funded by grants

Peer Review

- Similar study: “Association between omega-3 fatty acid supplementation and risk of major cardiovascular disease events” found that omega 3-fatty acid supplements are “not associated with a lower risk of all-cause mortality, cardiac death, sudden death, myocardial infarction or stroke” (Rizoz, et al, 2019)

	Positive Aspect	Negative Aspect
Study in General	• No risk to participants	• Did not explore dose-relationships
Scientific Method	• Large sample size (25 871)	• Vitamin D supplement also taken

References

Manson, J. E., Cook, N. R., Lee, I. M., Christen, W., Bassuk, S. S., Mora, S., ... & D’Agostino, D. (2019). Marine n– 3 fatty acids and prevention of cardiovascular disease and cancer. *New England Journal of Medicine*, 380(1), 23-32.

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Zimmerman, E. (2019). Why Are Fish-Oil Pills Supposedly Good For Me? Retrieved from <https://www.thecut.com/2019/09/why-are-fish-oil->