

## Fish Oil (Omega-3) and the Primary Prevention of Cardiovascular Disease

**Weak Recommendation Against:** Based on the evidence below we make a weak recommendation against fish oil supplementation for the prevention of heart attacks and strokes. In these studies on men and women aged 49-70 years of age taking fish oil supplements (0.24-3.4g daily) compared with no supplements or placebo over 1-6 years there was no effect on overall mortality, cardiac death, sudden death, heart attacks or strokes. The studies included primary and secondary prevention and implantable cardioverter-defibrillator patients.

Outcome (Timeframe)	Study results and measurements	Certainty in effect estimates (Quality of evidence)	Absolute effect estimates		Summary
			No supplements or placebo	Omega-3 supplementation	
All-cause mortality (1 - 6.2 years)	Relative risk: 0.96 (CI 95% 0.91 - 1.02) Based on data from 63279 patients in 17 studies	Moderate risk of bias	<b>102 per 1000</b>	<b>98 per 1000</b>	Fish oil supplementation has little or no effect on all-cause mortality (95% CI crosses 1.0)
Cardiac death (1 - 6.2 years)	Relative risk: 0.91 (CI 95% 0.89 - 1.02) Based on data from 34492 patients in 14 studies	Moderate risk of bias	<b>79 per 1000</b>	<b>72 per 1000</b>	Fish oil supplementation has little or no effect on cardiac death (95% CI crosses 1.0)
Sudden death (1 - 6.2 years)	Relative risk: 0.87 (CI 95% 0.75 - 1.01) Based on data from 41751 patients in 8 studies	Moderate risk of bias	<b>26 per 1000</b>	<b>23 per 1000</b>	Fish oil supplementation has little or no effect on sudden death (95% CI crosses 1.0)
Myocardial infarction (1 - 6.2 years)	Relative risk: 0.89 (CI 95% 0.76 - 1.04) Based on data from 53805 patients in 14 studies	Moderate risk of bias	<b>33 per 1000</b>	<b>32 per 1000</b>	Fish oil supplementation has little or no effect on myocardial infarction (95% CI crosses 1.0)

Stroke (1 - 6.2 years)	Relative risk: 1.05 (CI 95% 0.93 - 1.18) Based on data from 52589 patients in 9 studies	Moderate risk of bias	<p style="text-align: center;"><b>28</b> <b>per 1000</b></p> <p style="text-align: center;"><b>29</b> <b>per 1000</b></p> <p style="text-align: center;"><b>Difference: 1 more per 1000</b> (CI 95% 2 fewer - 5 more)</p>	Fish oil supplementation has little or no effect on stroke (95% CI crosses 1.0)
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### References

EC R, EE N, E B, MS K, MS E Association between omega-3 fatty acid supplementation and risk of major cardiovascular disease events: A systematic review and meta-analysis. JAMA 2012/09/12;308(10):1024-1033

## Practical Issues



### Medical routine

How much fish oil would I take?

For most fish oil supplements you would need to take at least 4 tablets/capsule per day (although active ingredients varies between brands)



### Food and Drinks

Can I get the same dose of fish oil through diet?

The best way to meet a 1 g per daily quota through diet would be to consume approximately 600 g to 900 g of oily fish (e.g. salmon, tuna, sardines) per week with skin on. A small can of tuna/salmon is around 130 g.



### Adverse effects, interactions and antidote

Are there any side effects from fish oil?

Does fish oil interact with other medication?

High doses of fish oil greater than 3 g may increase LDL cholesterol levels and bleeding times. The most common side effect is nausea and a fishy aftertaste which may occur in as many as 6 to 7 out of 10 people.

Fish oil in doses of 3 g or more may interact with anticoagulants with an increased bleeding risk. Doses of 1 g to 1.5 g appear to be safe



### Cost and access

How much do fish oil tablets cost?

The cost of fish oil tablets vary from 0.05 to 0.40 AUD per tablet/capsule. That could be from 20 cents to \$1.60 per day.