

Are fish oil supplements as healthy as we think? And is eating fish better?

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Credit: AI-generated image ([disclaimer](#))

Fish oil, which contains omega-3 fatty acids, is promoted for a number of health benefits—from boosting our heart health, protecting our brain from dementia, and easing the symptoms of rheumatoid arthritis.

But what exactly are omega-3 fats and what does the evidence say about

their benefits for keeping us healthy?

And if they are good for us, does eating [fish](#) provide the same benefit as supplements?

What are omega-3 fats?

Omega-3 [fatty acids](#) are a type of polyunsaturated fatty acid. They are essential to consume in our diet because we can't make them in our body.

Three main types of omega-3 fats are important in our diet:

- alpha-linolenic acid (ALA), which is found in [plant foods](#) such as [green leafy vegetables](#), walnuts, flaxseed and chia seeds
- eicosapentanoic acid (EPA), which is only found in seafood, eggs (higher in free-range rather than cage eggs) and breast milk
- docosahexaenoic acid (DHA) is also only found in seafood, eggs (again, higher in free-range eggs) and breast milk.

Omega 3s are key to the structure of our cells, and help keep our heart, lungs, blood vessels, and immune system working.

Eating fish vs. taking a supplement

The initial studies suggesting omega-3 fats may have health benefits came from [observational studies on people eating fish](#), not from fish oil.

So are the "active ingredients" from supplements—the EPA and DHA—absorbed into our body in the same way as fish?

An [intervention study](#) (where one group was given fish and one group

fish oil supplements) found the levels of EPA and DHA in your body increase in a similar way when you consume equal amounts of them from either fish or fish oil.

But this assumes it is just the omega-3 fats that provide health benefits. There are other [components of fish](#), such as protein, vitamins A and D, iodine, and selenium that could be wholly or jointly responsible for the health benefits.

The health benefits seen may also be partially due to the absence of certain nutrients that would have otherwise been consumed from other types of meat (red meat and processed meat) such as saturated fats and salt.

So what are the benefits of omega 3 fats? And does the source matter?

Let's consider the evidence for heart disease, arthritis and dementia.

Heart disease

For [cardiovascular disease](#) (heart attacks and stroke), a [meta-analysis](#), which provides the highest quality evidence, has shown fish oil supplementation probably makes little or no difference.

Another [meta-analysis](#) found for every 20 grams per day of fish consumed it reduced the risk of coronary heart disease by 4%.

The [National Heart Foundation](#) recommends, based on the scientific evidence, eating fish rich in omega-3 fats for optimal [heart health](#). [Fish vary in their omega-3 levels](#) and generally the fishier they taste the more omega-3 fats they have—such as tuna, salmon, deep sea perch, trevally,

mackerel and snook.

The foundation says fish oil may be beneficial for people with heart failure or high triglycerides, a type of fat that circulates in the blood that increases the risk of [heart](#) disease and stroke. But it doesn't recommend fish oil for reducing the risk of cardiovascular diseases ([heart attack](#) and stroke).

Arthritis

For rheumatoid arthritis, [studies](#) have shown fish oil supplements do provide benefits in reducing the severity and the progression of the disease.

Eating fish also leads to these improvements, but as the level of EPA and DHA needed is high, often it's difficult and expensive to consume that amount from fish alone.

[Arthritis Australia](#) recommends, based on the evidence, about 2.7 grams of EPA and DHA a day to reduce joint inflammation. Most supplements contain about 300-400mg of omega-3 fats.

So depending on how much EPA and DHA is in each capsule, you may need nine to 14 capsules (or five to seven capsules of fish oil concentrate) a day. This is about 130g-140g of grilled salmon or mackerel, or 350g of canned tuna in brine (almost four small tins).

Dementia

[Epidemiological studies](#) have shown a positive link between an increased DHA intake (from diet) and a lower risk of developing Alzheimer's disease, a type of dementia.

[Animal studies](#) have shown DHA can alter markers that are used to assess brain function (such as accumulation of amyloid—a protein thought to be linked to dementia, and damage to tau protein, which helps stabilize nerve cells in the brain). But this hasn't been shown in humans yet.

A systematic review of [multiple studies in people](#) has shown different results for omega-3 fats from supplements.

In the two studies that gave omega-3 fats as supplements to people with dementia, there was no improvement. But when given to people with mild cognitive impairment, a condition associated with increased risk of progressing to dementia, there was an improvement.

Another [meta-analyses](#) (a study of studies) showed a higher intake of fish was linked to lower risk of Alzheimers, but this relationship was not observed with total dietary intake of omega-3 fats. This indicates there may be other protective benefits derived from eating fish.

In line with the evidence, the [Alzheimer's Society](#) recommends eating fish over taking fish oil supplements.

So what's the bottom line?

The more people stick to a healthy, [plant-based diet](#) with fish and minimal intakes of ultra-processed foods, the better their health will be.

At the moment, the evidence suggests fish oil is beneficial for rheumatoid arthritis, particularly if people find it difficult to eat large amounts of fish.

For dementia and [heart disease](#), it's best to try to eat your omega-3 fats from your diet. While plant foods contain ALA, this will not be as

efficient as increasing EPA and DHA levels in your body by eating seafood.

Like any product that sits on the shop shelves, check the use-by date of the fish oil and make sure you will be able to consume it all by then. The chemical structure of EPA and DHA makes [it susceptible to degradation](#), which affects its nutritional value. Store it in cold conditions, preferably in the fridge, away from light.

Fish oil can have some annoying side effects, such as fishy burps, but generally there are [minimal serious side effects](#). However, it's important to discuss taking [fish oil](#) with all your treating doctors, particularly if you're on other medication.

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