Omega-3 Fatty Acids Explained

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What is Omega-3?

Omega-3 fatty acids (such as DHA, EPA, ALA) are a special portion of fat. Because our bodies don't make enough on their own we must consume omega-3 either through what we eat or through supplements (Harauma, A. et al., 2023).

Where is Omega-3 Found?

Foods like nuts, seeds, and fatty fish all contain Omega-3. Fish build their omega-3 stores by eating algae and seaweed. Likewise, humans can get omega-3s from eating fish, seaweed, as well as walnuts and chia seeds. When food sources are not an option, fish oil and algae-derived omega-3 supplements can be purchased over the counter or prescribed by a doctor (Kousparou, C. et al., 2023).

What is the Benefit of Omega-3?

The health benefits of omega-3 have been widely studied. For example, omega-3's are known to decrease inflammation in the body. Inflammation is a hallmark symptom of many diseases, so reducing it can be beneficial for reducing health disease risks. One large study found that when omega-3 and vitamin D supplements were combined they had an even greater effect on inflammation than omega-3 alone (Poggioli et al., 2023).

Heart Health

Studies have found that extra omega-3 may reduce risk for heart disease as it may help lower triglyceride levels in the blood and reduce plaque buildup in blood vessels (Mason et al., 2023). It has also been observed to lower blood pressure, another risk factor for heart disease (Zhang, X. et al., 2022).

Brain & Nerve Health

The DHA type of omega-3 is known to support brain growth and eye function, making it extra helpful to infants and children (Harauma, A. et al., 2023).

Mental Health

The effect of omega-3 on depression is a new area of research as well. There are several studies looking at the mental health of mothers.There are some findings that because of omega-3s positive impact on the brain chemicals, extra omega-3 during pregnancy may help decrease the risk for depression in mothers post-labor (Liscano, Y. & Sanchez-Palacio, N., 2023).

Healthy Pregnancy

Pregnant women who take an omega-3 supplement have also been found to have a reduced risk of problems like early birth or preeclampsia (Liscano, Y. & Sanchez-Palacio, N., 2023). Note that pregnant women should always check to make sure that the fish they eat or the fish oil they take are low in mercury.

While researched is limited, many other benefits have also been observed from consuming extra omega-3 such as improved brain function and memory, higher exam scores, decreased acne, and reduced rates of asthma(Guertler et al., 2024; Kousparou, C. et al., 2023; Liu et al., 2023; Vilches et al., 2023).

How Much Omega-3 is Recommended?

The omega-3 recommendations vary between organizations, but it is generally agreed upon that most people get the amount they need from the food they eat (NIH, 2022). For extra health benefits many groups suggest a focus on increasing omega-3 intake by having two or more servings of fatty fish per week (3 - 4 oz each) as well as eating nuts and seeds on a regular basis (Vannice & Rasmussen, 2014).

Other research suggests that what matters most is the balance between omega-3 and omega-6 (found in vegetable oils) fatty acids in the diet. However, many Americans tend to eat much higher levels of omega-6 causing an imbalance. Finding ways to include extra sources of omega-3 is one way to help correct this (Kousparou, C. et al., 2023). More research is needed, but in general, consuming additional omega-3s has few side effects and is thought to be safe for most people (Liscano, Y. & Sanchez-Palacio, N., 2023).

What Should I Look for in an Omega-3 Supplement?

It is important to check label claims made on any supplement that you buy since they are not checked by the Food and Drug Administration (FDA) the same way medicine is (Zargar & Ito, 2011). Checking these things when selecting an omega-3 supplement can help you sort through the many options.

- Make sure the supplement contains both DHA and EPA as these are often thought of as the most important types of omega-3 to increase (NIH, 2022).
- Verify that the dosage on the front of the product matches the label on the back.
- Check for supplements that have been tested by a third party group such as International Fish Oil Standards (IFOS) or National Sanitation Foundation (NSF) International, or have a Certificate of Analysis (COA).

If you do choose to take a supplement, keep in mind that the FDA suggests not consuming more than 3 grams (3,000 mg) per day of combined DHA and EPA and no more than 2 grams from supplements (Krupa et al., 2025).

What Foods Can I Eat to Increase My Omega-3?

Fish & other seafood	Salmon, mackerel, tuna, herring, sardines
Nuts & seeds	Flaxseed, chia seeds, walnuts, pistachios
Plant-based oils	Flaxseed oil, hemp seed oil, soybean oil, avocado oil
Other foods	Tofu, soybeans, edamame, avocados, brussel sprouts, kale, spinach, beans
Fortified foods	Some brands of eggs, yogurt, juice, and milk

Recipes

- https://extension.usu.edu/nutrition/recipes/chia-pudding
- https://www.bonappetit.com/recipes/healthy/slideshow/omega-3-recipes?srsltid=AfmBOooF9_y_U-mZo6ubJ9rHsriLXHVLc_xAuBjXvceRavunrEx-qTWG

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Author

Sarah Moore Smith, Utah State University Dietetic Intern

Reviewers

Jenna Dyckman, MS, RDN, Extension Assistant Professor; **Lea Palmer**, MBA, MPH, RDN, LD, Professional Practice Extension Assistant Professor