

# 17 Science-Based Benefits of Omega-3 Fatty Acids

Omega-3 fatty acids have been linked to many health benefits. In particular, they may help promote brain and heart health, reduce inflammation, and protect against several chronic conditions.

Omega-3 fatty acids are incredibly important.

They have many powerful health benefits for your body and brain.

In fact, few nutrients have been studied as thoroughly as omega-3 fatty acids.

Here are 17 health benefits of omega-3 fatty acids that are supported by science.



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# 1. May benefit depression and anxiety

[Depression](#) is one of the most common mental disorders in the world ([1Trusted Source](#)).

Symptoms often include sadness, lethargy, and a general loss of interest in life ([2Trusted Source](#)).

[Anxiety](#), another common disorder, is characterized by feelings of fear, panic, and restlessness ([3Trusted Source](#)).

Interestingly, studies indicate that people who consume omega-3s regularly are less likely to have depression ([4Trusted Source](#), [5Trusted Source](#)).

What's more, studies in people with depression and anxiety suggest that [omega-3 supplements](#) may improve symptoms ([6Trusted Source](#), [7Trusted Source](#)).

There are [three types of omega-3](#) fatty acids: alpha-linolenic acid (ALA), eicosapentaenoic acid (EPA), and docosahexaenoic acid (DHA). Of the three, EPA appears to be the most beneficial for depression ([8Trusted Source](#)).

### summary

Omega-3 supplements may help treat and prevent depression and anxiety. EPA seems to be the most effective at reducing symptoms of depression.

## 2. May improve eye health

DHA, a type of omega-3, is a major structural component of the retina of [your eye](#) ([9Trusted Source](#)).

When you don't get enough DHA, vision problems may arise ([10Trusted Source](#)).

Interestingly, getting enough omega-3 is also linked to a reduced risk of [macular degeneration](#), one of the leading causes of permanent eye damage and blindness around the world ([11Trusted Source](#)).

### summary

An omega-3 fatty acid called DHA is a major structural component of your eyes' retinas. It may help prevent macular degeneration, which can cause vision impairment and blindness.

### **3. Could promote brain health during pregnancy and early life**

Omega-3s are crucial for brain growth and development in infants.

Getting enough omega-3s during [pregnancy](#) is associated with numerous benefits for your child, including ([12Trusted Source](#), [13Trusted Source](#)):

- improved cognitive development
- better communication and social skills
- fewer behavioral problems
- decreased risk of developmental delay

However, keep in mind that more research is needed, as some studies have turned up mixed results ([14Trusted Source](#), [15Trusted Source](#)).

#### **summary**

Getting enough omega-3s during pregnancy and early life is crucial for your child's development. Omega-3 supplementation is linked to improved cognitive

development and a lower risk of developmental delay.

## 4. May improve risk factors for heart disease

Heart attacks and strokes are the world's leading causes of death ([16Trusted Source](#)).

Decades ago, researchers observed that [fish-eating](#) communities had very low rates of these diseases. This was later linked to omega-3 consumption ([17Trusted Source](#), [18Trusted Source](#)).

Since then, omega-3 fatty acids have been tied to numerous benefits for [heart health](#) ([19Trusted Source](#)).

These benefits include:

- **Triglycerides:** Omega-3s can significantly reduce levels of [triglycerides](#) ([20Trusted Source](#)).
- **HDL cholesterol:** Some older studies suggest that omega-3s could raise HDL (good) cholesterol levels ([21Trusted Source](#), [22Trusted Source](#), [23Trusted Source](#)).
- **Blood clots:** Omega-3s can keep blood platelets from clumping together. This helps prevent the formation of harmful blood clots, according to some older research ([24Trusted Source](#), [25Trusted Source](#)).

- **Inflammation:** Omega-3s reduce the production of some substances released during your body's inflammatory response ([26Trusted Source](#), [27Trusted Source](#), [28Trusted Source](#)).

For some people, omega-3s can also lower [LDL \(bad\) cholesterol](#). However, evidence is mixed, as some studies find increases in LDL cholesterol levels ([29](#), [30Trusted Source](#)).

Despite these beneficial effects on heart disease risk factors, there is no convincing evidence that omega-3 supplements can prevent heart attacks or strokes and many studies find no benefit ([31Trusted Source](#)).

### summary

Omega-3s may help improve numerous heart disease risk factors. However, omega-3 supplements do not seem to reduce your risk of heart attack or stroke.

## 5. May reduce symptoms of ADHD in children

Attention deficit hyperactivity disorder (ADHD) is a behavioral disorder characterized by inattention, hyperactivity, and impulsivity ([32Trusted Source](#)).

Some research has found that children with [ADHD](#) have

lower blood levels of omega-3 fatty acids than those without ADHD ([33Trusted Source](#), [34Trusted Source](#)).

What's more, numerous older studies suggest that omega-3 supplements could help reduce the symptoms of ADHD.

In particular, omega-3s may help improve inattention and task completion. They might also decrease hyperactivity, impulsiveness, restlessness, and aggression ([35Trusted Source](#), [36Trusted Source](#), [37Trusted Source](#), [38Trusted Source](#)).

However, more research is needed, as other studies have found no benefit of omega-3 supplementation on ADHD symptoms ([39Trusted Source](#)).

## Summary

Omega-3 supplements may help reduce the symptoms of ADHD in children. However, more research is needed, as studies have turned up mixed results.

## 6. Could reduce symptoms of metabolic syndrome

Metabolic syndrome is a collection of conditions.

It includes central obesity — also known as [belly fat](#) — as well as high blood pressure, high triglycerides, high blood

sugar, and low HDL (good) cholesterol levels ([40Trusted Source](#)).

It is a major public health concern because it increases your risk of many other illnesses, including heart disease and diabetes ([40Trusted Source](#)).

Some research suggests that omega-3 fatty acids could help improve blood sugar levels, inflammation, and heart disease risk factors in people with [metabolic syndrome](#) ([41Trusted Source](#), [42Trusted Source](#), [43Trusted Source](#)).

### summary

Omega-3s may have numerous benefits for people with metabolic syndrome. They could improve blood sugar levels, reduce inflammation, and improve several heart disease risk factors.

## 7. May reduce inflammation

Inflammation is a natural response to infections and damage in your body. Therefore, it is vital for your health ([44Trusted Source](#)).

However, [inflammation](#) sometimes persists for a long time, even without an infection or injury. This is called chronic — or long-term — inflammation ([44Trusted Source](#)).



Long-term inflammation can contribute to almost every chronic illness, including heart disease and cancer ([45Trusted Source](#)).

Notably, omega-3 fatty acids can reduce the production of molecules and substances linked to inflammation, such as inflammatory eicosanoids and cytokines ([46Trusted Source](#), [47Trusted Source](#)).

In fact, studies have consistently observed a connection between omega-3 supplementation and [reduced inflammation](#) ([27Trusted Source](#), [28Trusted Source](#), [48Trusted Source](#)).

### summary

Omega-3s may reduce chronic inflammation, which can contribute to heart disease, cancer, and various other diseases.

## 8. Might benefit autoimmune diseases

In autoimmune diseases, your immune system mistakes healthy cells for foreign cells and starts attacking them ([49Trusted Source](#)).

Type 1 diabetes is one prime example, in which your immune system attacks the insulin-producing cells in your pancreas ([50Trusted Source](#)).

According to one study, increased intake of several types of fatty acids during infancy, including DHA, was linked to a lower risk of type 1 diabetes-associated autoimmunity later in life ([51](#)).

Omega-3s may also help treat lupus, rheumatoid arthritis, [ulcerative colitis](#), [Crohn's disease](#), and psoriasis, but more research is needed ([52Trusted Source](#), [53Trusted Source](#), [54Trusted Source](#), [55Trusted Source](#)).

### summary

Omega-3 fatty acids may help treat and prevent several autoimmune diseases, including type 1 diabetes, rheumatoid arthritis, ulcerative colitis, Crohn's disease, and psoriasis.

## 9. Could improve mental disorders

Low omega-3 levels have been reported in people with psychiatric disorders ([56Trusted Source](#)).

Interestingly, supplementing with omega-3 fatty acids has been shown to decrease violent behavior ([57Trusted Source](#), [58Trusted Source](#)).

Some studies also suggest that omega-3 supplements can improve symptoms in people with both schizophrenia and bipolar disorder ([59Trusted Source](#), [60Trusted Source](#),

[61Trusted Source](#)).

However, more research is needed, as other studies have turned up conflicting results ([62Trusted Source](#), [63Trusted Source](#)).

### summary

People with mental disorders often have low blood levels of omega-3 fats. Improving omega-3 status seems to improve symptoms, but more studies are needed.

## 10. May help prevent age-related mental decline and Alzheimer's disease

Many people experience a decline in brain function as they get older.

Several studies link higher omega-3 intake to decreased age-related mental decline and a reduced risk of Alzheimer's disease ([64Trusted Source](#), [65Trusted Source](#)).

One review of controlled studies suggests that omega-3 supplements may be beneficial at disease onset, when the symptoms of AD are very mild ([66Trusted Source](#)).

Keep in mind that more research is needed on omega-3s and [brain health](#).

## summary

Omega-3 fats may help prevent age-related mental decline and Alzheimer's disease, but more research is needed.

## 11. May help prevent cancer

[Cancer](#) is one of the leading causes of death in the United States, and omega-3 fatty acids have long been claimed to reduce the risk of certain cancers ([67Trusted Source](#)).

In fact, some older studies show that people who consume the most omega-3s have up to a 55% lower risk of colon cancer ([68Trusted Source](#), [69Trusted Source](#)).

Additionally, omega-3 consumption is linked to a reduced risk of prostate cancer and breast cancer in some older studies. However, not all studies have reported the same results ([70Trusted Source](#), [71Trusted Source](#), [72Trusted Source](#)).

## summary

Omega-3 intake may decrease the risk of some types of cancer, including colon, prostate, and breast cancer. However, more research is needed.

## 12. Could reduce asthma in children

[Asthma](#) is a chronic lung disease with symptoms like coughing, shortness of breath, and wheezing ([73Trusted Source](#)).

Severe asthma attacks can be very dangerous. They are caused by inflammation and swelling in the airways of your lungs ([73Trusted Source](#)).

What's more, asthma rates in the United States and around the world have been rising over the past few decades ([74Trusted Source](#)).

Interestingly, several studies associate omega-3 consumption with a lower risk of asthma in children ([75Trusted Source](#), [76Trusted Source](#), [77Trusted Source](#)).

### summary

Omega-3 intake has been associated with a lower risk of asthma in children.

## 13. May reduce fat in your liver

Non-alcoholic [fatty liver](#) disease (NAFLD) is a common condition characterized by the accumulation of fat in the liver ([78Trusted Source](#)).

It is believed to affect 25% of the global population and is considered the leading cause of several other liver

conditions, including [cirrhosis](#), or liver scarring ([79Trusted Source](#)).

However, research suggests that supplementing with omega-3 fatty acids may help reduce liver fat and inflammation in people with NAFLD ([80Trusted Source](#)).

### summary

Omega-3 fatty acids may help reduce liver fat in people with non-alcoholic fatty liver disease.

## 14. May improve bone and joint health

Osteoporosis and [arthritis](#) are two common disorders that affect your skeletal system.

Research suggests that omega-3s may help improve [bone strength](#) by boosting the amount of calcium in your bones ([81Trusted Source](#)).

Theoretically, this should lead to a reduced risk of osteoporosis. However, more research is needed, as studies have turned up mixed results on the effects of omega-3 fatty acids on bone health ([82Trusted Source](#), [83Trusted Source](#)).

Omega-3s may also help treat arthritis. According to one review of six studies, omega-3 supplements were able to significantly reduce pain in people with osteoarthritis of the

synovial joints ([84Trusted Source](#)).

Still, more large, high quality studies should be conducted to understand how omega-3 fatty acids may impact bone and joint health.

### summary

Omega-3s may improve bone strength and joint health, but more research is needed.

## 15. Might help alleviate menstrual pain

Menstrual pain occurs in your lower abdomen and pelvis and often radiates to your lower back and thighs ([85Trusted Source](#)).

It can significantly affect your quality of life.

However, studies repeatedly suggest that people who consume the most omega-3s may have milder menstrual pain ([86Trusted Source](#), [87Trusted Source](#)).

One 2011 study even determined that an omega-3 supplement was more effective than ibuprofen in treating severe pain during menstruation ([88Trusted Source](#)).

### summary

Omega-3 fatty acids might help reduce menstrual pain.

Plus, one study found that an omega-3 supplement was even be more effective than ibuprofen, an anti-inflammatory drug.

## 16. May improve sleep

[Good sleep](#) is one of the foundations of optimal health.

Sleep deprivation has been linked to many diseases, including obesity, diabetes, and depression ([89Trusted Source](#), [90Trusted Source](#), [91Trusted Source](#)).

In some older studies, low levels of omega-3 fatty acids were also associated with sleep problems in children and obstructive sleep apnea in adults ([92Trusted Source](#), [93Trusted Source](#)).

Additionally, low levels of DHA are linked to lower levels of the hormone [melatonin](#) in some animal studies, which helps you fall asleep. However, further research in humans is needed ([94Trusted Source](#), [95Trusted Source](#), [96Trusted Source](#)).

Studies in both children and adults also suggest that supplementing with omega-3 may improve certain aspects of sleep and could protect against sleep disturbances ([92Trusted Source](#), [97Trusted Source](#), [98Trusted Source](#)).



Omega-3 fatty acids — especially DHA — may improve the length and quality of your sleep.

## 17. Could support skin health

DHA is a structural component of your skin. It is responsible for the health of cell membranes, which make up a large part of your skin.

EPA also [benefits your skin](#) in several ways, including ([99](#), [100Trusted Source](#), [101Trusted Source](#)):

- promoting skin hydration
- preventing hyperkeratinization of hair follicles, which appears as the little red bumps often seen on upper arms
- protecting against premature aging of your skin
- reducing the risk of [acne](#)

Animal studies suggest that omega-3s may also help protect your skin against sun damage ([102Trusted Source](#)).

However, keep in mind that this doesn't mean that you should use omega-3 supplements in place of sunscreen.

### summary

Omega-3s can help keep your skin healthy, preventing premature aging and safeguarding against sun damage.

# The bottom line

[Omega-3 fatty acids](#) are vital for optimal health.

Getting them from whole foods — such as fatty fish two times per week — is the best way to ensure [robust omega-3 intake](#).

However, if you don't eat a lot of fatty fish, then you may want to consider taking an omega-3 supplement. For people deficient in omega-3, this is an affordable and effective way to improve health.