



ESSENTIAL GUIDE TO OMEGA-3s

WHY THESE NUTRITIONAL
POWERHOUSES BELONG IN YOUR DIET

BROUGHT TO YOU BY NORDIC NATURALS®
AND NATURAL FOODS MERCHANDISER

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FATS ARE YOUR BEST FRIEND?

95%
OF HEALTHCARE
PRACTITIONERS
AGREE PEOPLE NEED
OMEGA-3 FATS

We all eat a wide variety of fats every day—salad dressings, snack foods, breakfast meats, baked goods made with shortening or butter. Understanding the world of fat can be challenging because too much of some fats can cause problems while others are essential to good health. What does this mean for you? Teaming up with good fats is more important than ever for your health, no matter what your age.

Organizations ranging from the American Heart Association to the American Pregnancy Association recommend omega-3 essential fats. Surveys show up to 95 percent of healthcare practitioners agree people need these nutrients in their diets.

Adding to this widespread acknowledgement, there is vast science supporting the benefits of good fats. Researchers say we have only just begun to realize how essential they are for human health.

So if you've ever wondered whether you and your family should be taking omega-3 supplements, the short answer is "yes."

With more than 8,000 human studies supporting their health benefits—making them among the most-researched nutrients in the world—omega-3s deserve to be in the supplement spotlight, thanks to science proving their ability to support the health of your heart, eyes, brain, skin, and more. "The body of evidence behind omega-3s is larger than any other nutritional ingredient by far," says Adam Ismail, Executive Director for the Global Organization for EPA and DHA Omega-3s (GOED).

As essential building blocks for the trillions of cells that make up our bodies, omega-3s like eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) give cell membranes their structure, enabling them to hold in fluid and nutrients and usher out waste. They also serve as roaming chemical messengers, supporting healthy cellular response, switching on production of beneficial hormone-like compounds and facilitating transmission between nerve signals.



10 REASONS YOU NEED OMEGA-3s

International organizations and health experts worldwide recommend omega-3s for optimal health. They agree that adults need a *minimum* of 500 mg of EPA+DHA daily just to maintain regular health and well-being. As a general guideline for kids, doctors recommend both omega-3s EPA and DHA to ensure that young children get adequate amounts of these essential nutrients. Omega-3 DHA is particularly important for brain development during the first few years of life. From around age four through adolescence, most kids benefit from a higher ratio of EPA to DHA. Specific functional benefits of adequate omega-3 nutrition range widely, as discussed in the following pages.

1

HEART HEALTH

Omega-3s support a thriving ticker in a range of ways that are related to triglyceride levels, blood pressure, heart rate, heart rhythm, and overall cardiovascular health. Research suggests they also promote production of nitric oxide, which helps blood vessels relax and allow better circulation, and influence the shape of LDL “bad” cholesterol molecules, making them easier to burn and flush. One 2013 Harvard School of Public Health study of 2,700 adults over 16 years old, found that having higher blood levels of EPA and DHA significantly supported heart health with age. The American Heart Association also acknowledges the importance of omega-3s for heart health, recommending 1 gram (1000 mg) of EPA+DHA daily for individuals with a history of heart concerns, and significantly more in certain cases.

2

BRAIN FUNCTION

For sharp thinking, omega-3s may be the catch of the day. The brain contains a significant amount of fat. In fact, 20 percent of the fatty acids in the brain’s cerebral cortex is DHA, where it promotes proper cell structure and fluidity and allows for optimal communication between neurons. As a result, studies suggest EPA and DHA can help support healthy memory and cognitive function with age. One paper in the *American Journal of Clinical Nutrition* strongly linked 180 mg of DHA supplementation daily with age-related brain health.

3

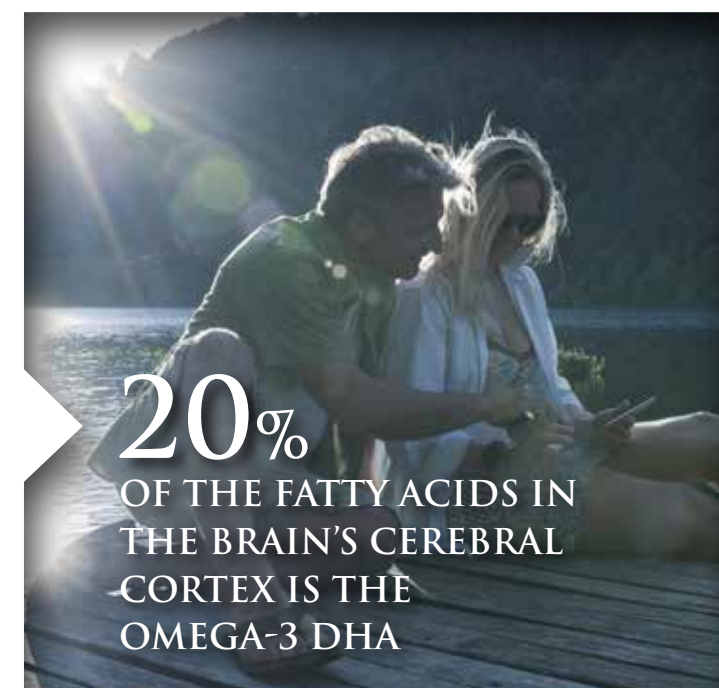
MOOD & BEHAVIOR

Another benefit of omega-3s: they may help you stay happy! The fatty acids in the brain help promote the flow of neurotransmitters like dopamine and serotonin, aka “feel-good chemicals.” One May 2014 review of 19 studies found those who took EPA and DHA alone, or alongside medication, had a significantly better mood than those who took a placebo. Another study, published in August 2014, looked at 200 youth ages 8 to 16 and found that those who took 1 gram (1000 mg) of omega-3s daily for 6 months saw greater improvements in behavior for up to a year.

4

EYE HEALTH

Omega-3 supplementation is looking good for your peepers, as mounting research suggests that these fatty acids maintain healthy structure and function of the ocular tissue, keep membranes in the retina fluid, support tear production, and protect cells in the eye from sun-, light-, oxygen-, and age-related damage. One study of 32,000 women showed that those who consumed more omega-3s had less dry eye. Other research shows that omega-3s support healthy vision with age.



20%
OF THE FATTY ACIDS IN
THE BRAIN'S CEREBRAL
CORTEX IS THE
OMEGA-3 DHA

5

SKIN HEALTH

While you may opt for skin creams and serums to fend off wrinkles, omega-3s can have major benefits when taken internally. Omega-3s nourish and hydrate skin cells, and help keep skin feeling great. One 2014 study of 45 participants with skin blemishes found those who took 2 grams (2000 mg) of EPA+DHA daily for 10 weeks saw improvements in skin health. Another examined the skin of 2,919 people aged 45 and 60 for signs of aging and then looked at it again 2½ years later. Women with the highest intake of EPA had significantly fewer topical signs of aging.

6

PREGNANCY

In addition to being critical for fetal brain, nervous system, and immune system development, omega-3s—particularly DHA—have been shown to support a healthy pregnancy by promoting a healthy gestational length and fetal development, as well as a positive mood in moms. Since a woman’s DHA levels naturally drop during pregnancy, supplementation is critical. The American Pregnancy Association cites the international expert-recommended dose of 300–600 mg of DHA daily for pregnant and lactating women. One study showed kids of women who took cod liver oil during pregnancy and while lactating had higher IQs. Some research also suggests that taking fish oil during pregnancy can have a positive effect on childhood allergies.

7

CHILD DEVELOPMENT

Omega-3s are crucial nutritional building blocks for kids. In early childhood when the brain is developing rapidly, the omega-3 DHA is especially important because the brain relies heavily on it for proper growth. Throughout childhood, omega-3s continue to play an important role in many aspects of health and development. They are important for healthy brain and eye function, nervous and immune system support, learning ability, and a healthy mood.



THE AMERICAN PREGNANCY ASSOCIATION RECOMMENDS 300–600 MG OF DHA DAILY FOR PREGNANT AND LACTATING WOMEN

8

JOINT HEALTH

Exercise-induced inflammation can lead to compromised cartilage and tissue in the joints, resulting in discomfort and limited mobility. Omega-3s help support joint health, while promoting production of tissue-restoring compounds called resolvins and protectins. Research shows that 1 gram (1000 mg) of EPA+DHA daily can help keep joints in check, and can even support the body’s anti-inflammatory response when confronting inflammation following exercise.

9

SPORTS PERFORMANCE

In addition to joint benefits, fish oil has been shown to help support a healthy immune system during training, boost blood flow, support normal respiration, and create an overall better post-workout experience. One study found that when elite athletes suffering from exercise-induced asthma were given 3.2 g (3200 mg) EPA and 2.2 g (2200 mg) DHA, they had healthier post-exercise lung function.

10

HEALTHY METABOLISM

Omega-3s support healthy metabolism and can improve weight-loss efforts. One study in the *American Journal of Clinical Nutrition* found that adding 360 mg EPA and 1560 mg DHA to an aerobic weight-loss program helped to keep the pounds in check.



1 GRAM (1000 MG) OF OMEGA-3S DAILY SUPPORTS HEALTHY JOINTS



WHAT TO CONSIDER WHEN CHOOSING A SUPPLEMENT

SEEK OUT LAB-TESTED PRODUCTS TO ENSURE THAT WHAT YOU ARE TAKING SURPASSES INTERNATIONAL FISH OIL QUALITY STANDARDS.

PURITY

When it comes to purity of your omega-3s, there are several things to consider. The first is that the fish oil comes from a sustainable species that lives in clean, healthy waters. Also consider how the manufacturer processed the raw fish oil, which should eliminate environmental contaminants such as heavy metals like mercury and lead, as well as dioxins and PCBs. A method such as molecular distillation is effective for ensuring necessary purity levels, while maintaining the nutritional integrity of the oil. And since you want to know that what you are buying is really what's in the bottle, seek out lab-tested products to ensure that what you are taking surpasses international fish oil quality standards. Consider connecting directly with the manufacturer to ask for a Certificate of Analysis.

POTENCY

Are you taking omega-3s for health maintenance, proactive support, or to target a specific health issue? Your answer will determine the potency you select. Five hundred milligrams of omega-3s daily is considered the minimum for general health maintenance. For those who consume a diet heavy in refined vegetable oils, processed foods, and grain-fed meats, international experts suggest upping that to at least 1000 mg daily. Doctors often recommended higher amounts when targeting specific health issues. Recommended potencies are based on the amount of the omega-3s EPA and DHA per serving. Make sure to read the supplement facts panel on product labels to know how much EPA and DHA you are getting.

500 MG OF OMEGA-3s EPA+DHA DAILY IS CONSIDERED THE MINIMUM FOR GENERAL HEALTH MAINTENANCE

Look for EPA and DHA levels!

The most important omega-3s are EPA and DHA. International experts recommend a minimum of 500 mg EPA+DHA combined (found on the supplement facts panel).

Total Omega-3s	1280 mg	†
EPA (Eicosapentaenoic Acid)	650 mg	†
DHA (Docosahexaenoic Acid)	450 mg	†
Other Omega-3s	180 mg	†



TASTE

Would you eat a piece of smelly fish? Of course not. Taste and smell are good indicators of freshness. Bite into a soft gel, and check for yourself. Oxidized (rancid) oil—especially fermented fish oil—is not healthy for the body, and is the cause of the fishy smell, taste, and burps that many people have experienced with poor-quality fish oil.

TASTE AND SMELL ARE GOOD INDICATORS OF FRESHNESS

EPA TO DHA RATIO

Both fats are very important, and for different reasons. Generally, EPA has stronger heart, mood, and joint health benefits, while DHA promotes brain development, memory, and cognition. Ratios of EPA to DHA per serving vary with the kind of fish used to make the omega-3 product. Arctic cod liver oil, for example, naturally has slightly more DHA than EPA, and the reverse is true for products made from sardines and anchovies. Of course, in concentrated products, wide differences in the EPA to DHA ratio can be found depending on the specific health benefits desired.

DELIVERY SYSTEM

Maybe you are the kind of person who can down a supplement without water, or perhaps you'd rather add a liquid to your smoothie. Regardless of what type of supplement user you are, finding an omega-3 product that can be easily integrated into your lifestyle is key to maintaining the consistency necessary to see results. Based on your preferences, you can find omega-3s in a range of delivery forms—including liquids, gummies, emulsion formulas, and soft gels. Algae-derived formulas are also available for vegetarians and vegans. Choose one that offers both EPA and DHA.

MOLECULAR FORM & ABSORBABILITY

More so than delivery, absorption and quality are really important when it comes to how you get your omega-3s. Though the topic can seem complex (lots of scientific jargon), the takeaway is simple: Choose triglyceride (TG)-form fish oil over fish oil products in the ethyl ester (EE) form. Studies have shown better absorption for the TG form likely because it is the natural molecular form of omega-3s fats, and the same form in which they exist in fish. Some research even shows that omegas in this form increase absorbability by up to 70 percent.

THE TRIGLYCERIDE FORM IS THE NATURAL MOLECULAR FORM OF OMEGA-3 FATS, AND THE SAME FORM IN WHICH THEY EXIST IN FISH

SUSTAINABILITY

Omega-3 fish oil production is responsible for just 4 percent of global fishing, according to GOED; however, sourcing sustainable species from well-managed fisheries helps to ensure that the fishing is in line with global oceanic health and that the fish used is high quality. Cold-water species like Arctic cod, sardines, and anchovies are good choices for high omega-3 content and sustainability. Also consider whether the manufacturer uses responsible fishing and manufacturing methods that reduce bycatch and that use the whole fish for human or animal consumption, in order to minimize waste.



COLD-WATER SPECIES LIKE ARCTIC COD, SARDINES, AND ANCHOVIES ARE GOOD CHOICES FOR HIGH OMEGA-3 CONTENT AND SUSTAINABILITY

A FAT GLOSSARY— KNOW YOUR OMEGAS

OMEGA-3 FATTY ACIDS COME IN VARIOUS FORMS, EACH WITH THEIR OWN UNIQUE BENEFITS. KEEP THESE TYPES AND TERMS ON YOUR RADAR.

OMEGA-3s

Omega-3 essential fatty acids (EFAs) are considered “essential” because they are required for optimal health but cannot be produced by our bodies, and, therefore, must be consumed daily through diet or supplementation.

EPA (EICOSPENTAENOIC ACID)

A long-chain omega-3 fatty acid that helps to support heart and joint health, mood, healthy circulation, and immune response. Found in cold-water fatty fish, fish oil supplements, and some algae supplements.

DHA (DOCOSAHEXAENOIC ACID)

A long-chain omega-3 fatty acid that is key to supporting health of the brain, nervous system, and eyes, and promoting activity of neurotransmitters. Found almost exclusively in cold-water fatty fish, fish oil supplements, and algae supplements.

ALA (ALPHA-LINOLENIC ACID)

A short-chain omega-3 found in flax, walnuts, chia, and leafy greens that can convert to EPA and DHA. However, contrary to popular belief, research shows that even under optimal lifestyle and health conditions, only about 5 percent of ALA converts to EPA, and just 1 percent converts to DHA.

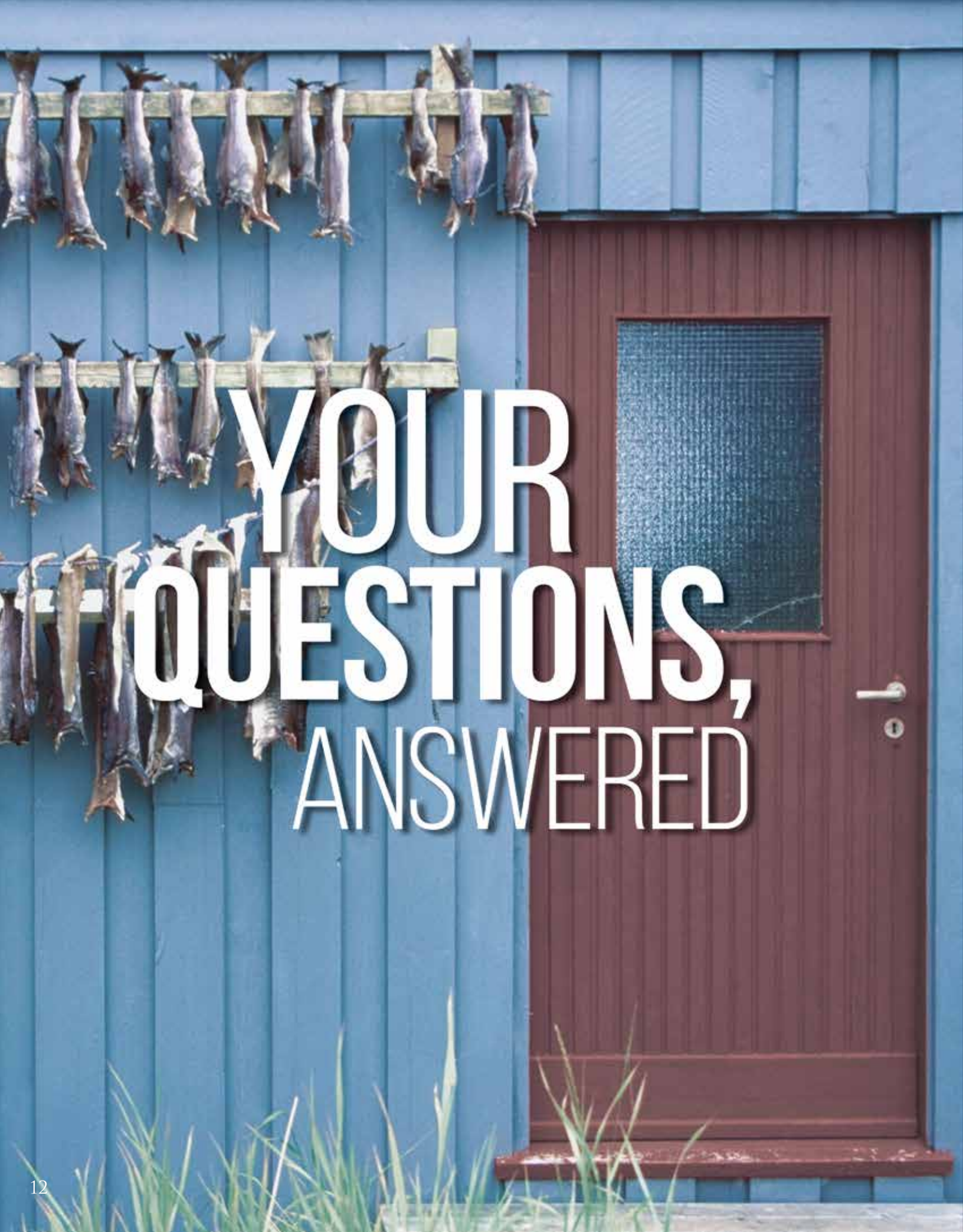
OMEGA-6s

Another family of essential fatty acids that your body needs but cannot make. The reason omega-6s can get a bad rap is that omega-6 linoleic acid (LA), found in vegetable oils such as sunflower, safflower, corn, peanut, cottonseed, and soy, is linked to your body’s inflammatory response. In the typical Western diet, the ratio of omega-6 to omega-3 is 20 to 1. A century ago, the ratio was 1:1. Remember that omega-6s are not bad in healthy amounts; however, they are currently over-consumed. Balancing the ratio of omega-6s and omega-3s is key.

GLA (GAMMA-LINOLENIC ACID)

In contrast to LA, this omega-6 fatty acid is often under-consumed and helps to foster healthy cellular response, including the support of healthy skin, joints, and mood. GLA and omega-3 fish oils work well to help balance the body’s omega-6 to omega-3 ratio, and are often recommended together by health practitioners. Natural sources of GLA include evening primrose, borage, and black currant oils. GLA works best when taken with EPA and DHA.





YOUR QUESTIONS, ANSWERED

What percentage of fish oil is made up of omega-3s EPA and DHA?

EPA and DHA, the two most important omega-3s, have been consistently shown to be the most beneficial fatty acids in thousands of published studies. Typical ratios of EPA and DHA in various forms of non-concentrated fish oil are as follows: Anchovy/sardine-based fish oils: 18 percent EPA, 12 percent DHA; cod liver oil: 9 percent EPA, 14 percent DHA.

Are there side effects to taking fish oil?

Generally, no. Although it is a good idea to consult your physician before taking fish oils if you are allergic to iodine, use blood-thinning medications, or anticipate surgery.

What's with a fishy burp?

If you experience repeat (burping) or a bad taste, your supplement may be rancid (oxidized), or your body may not be manufacturing enough lipase, the digestive enzyme your body makes to digest fats and oils. If you haven't ingested fish oils for a long time, it might take a week or so for your body to adjust and make more of this enzyme to digest fats and oils. Try taking fish oil with food, especially fat, to help with digestion.

Can I take fish oil with other supplements?

Yes, fish oil can be taken with a wide variety of supplements; they are extremely well tolerated, natural, health promoting, and safe to use every day.

What is the difference between fish oil and flaxseed oil?

Omega-3 sources fall into two major categories: plant derived (flaxseed) and marine derived (fish), and they are not interchangeable. Flaxseed oil contains alpha-linolenic acid (ALA), which can be partially converted to EPA and DHA, but that conversion is somewhat slow and can be inhibited by lifestyle and health factors. While flaxseeds and flaxseed oil may contain many health-promoting benefits, they do not provide the necessary dose of EPA and DHA.

What is the difference between fish oil and cod liver oil?

Cod liver oil is extracted from cod livers, whereas fish oil is extracted from the body flesh of fish. While both are good sources of the omega-3s EPA and DHA, they provide different ratios—cod liver oil generally contains about 9 percent EPA and 14 percent DHA, whereas fish oil generally contains about 18 percent EPA and 12 percent DHA. Another difference is that cod liver oil also generally contains naturally occurring vitamins A and D.

How are pet omega-3 products unique?

Dogs and cats also benefit from high-quality omega-3 products that contain the same essential fats found in omega-3 products for adults and children. Like humans, dogs and cats cannot produce omega-3s on their own and must consume them through their diets. In these animals, omega-3s support heart and kidney health, skin and coat health, and healthy joints, as well as brain and eye development and maintenance. However, while the nutrition is effectively the same, it is essential that you purchase omega-3 pet products specially formulated for dogs and cats—not humans—which should be unflavored and preserved with specific ingredients like tocopherols.

IF YOU EXPERIENCE REPEAT (BURPING)
OR A BAD TASTE, YOUR SUPPLEMENT
MAY BE RANCID (OXIDIZED)

ESSENTIAL GUIDE TO OMEGA-3s

Why these nutritional powerhouses belong in your diet

For a list of studies referenced in this guide,
please email omega-3@newhope.com