GOED OMEGA-3

GLOBAL ORGANIZATION FOR EPA AND DHA OMEGA-3

Top 20 Most Common Questions from the *Today's Dietitian* Webinar

1. How do you know if the supplement is of good quality? Are there ways to check?

My best advice to find a quality supplement is to visit the GOED Quality page of AlwaysOmega3s.com, which lists GOED member companies that sell supplements. As a condition of membership to GOED (which stands for the Global Organization for EPA and DHA Omega-3s), all companies must adhere to a voluntary monograph, which incorporates some of the strictest quality and purity standards from regulations around the world. By setting and adhering to these standards, GOED member companies collectively help ensure that omega-3 oils reaching consumers are both safe and of high quality.

2. How can you prevent omega-3 supplements from oxidizing? I've heard that if it smells fishy, it's rancid.

Heat and light will cause oxidation, so it is recommended to store supplements in a cool place, out of direct sunlight. That' s why many supplement pills come in dark or opaque bottles. Fish oil that has oxidized (in other words, has become rancid) to the point where it shouldn't be consumed is putrid smelling. A fishy smell is fine. The human body is equipped to deal with some oxidation, and any negative effects associated with consuming oxidized oils have not been demonstrated in humans.

3. Is it possible to take too much omega-3s? In other words, is there an upper limit or potential to overdose?

Both the U.S. Food and Drug Administration (FDA) and the European Food Safety Authority (EFSA) recognize that long-term intake of 5g/day of EPA+DHA is safe. The human body tends to self-regulate if omega-3 intake exceeds needs in the sense that adverse reactions are limited to minor side effects, which may include gastrointestinal discomfort, diarrhea, bad breath and smelly sweat.

4. When you say 250-500mg of EPA and DHA omega-3s, do you mean 250-500 mg of EPA and 250-500mg of DHA? Or 250-500 mg of combined EPA and DHA, total? Is there a ratio of EPA to DHA should we be looking for?

EPA and DHA exist together in nature, and the ratio can vary by source (whether it's salmon oil or anchovy oil, for example) and also from fishing season to fishing season. EPA and DHA actually convert back and forth easily to cover deficits in the body (only the step from ALA to elongate and be desaturated is the slower, rate-limiting step in metabolism). So when we talk about dosage we mean a combined amount of EPA

© 2020, Global Organization for EPA and DHA Omega-3s
1075 Hollywood Avenue, Salt Lake City, UT 84105 | +1 801-746-1413

and DHA. Only in some instances is it important to measure DHA only, such as during pregnancy and lactation.

5. **Does supplementing with omega-3s interfere with drugs, such as Coumadin and other blood thinners/anti-coagulants?**

   While omega-3s can help prevent clotting, studies show that even at high doses they do not interfere with anti-coagulants. In fact, a recent study found that patients who had high omega-3 status prior to surgery were at no increased risk of bleeding before or after surgery, and required fewer blood transfusions.

6. **Do supplements need to be taken daily, or could you do a week's worth at one time? Similarly, could you eat 8 ounces of fish for a meal to get your recommended EPA and DHA, or do you have to break it up over two meals with 4-oz. portions?**

   As with any food, you should have adequate portions spaced out over time, rather than "front load" and hope it all evens out in the end. Besides, taking a supplement daily leads to better habit-forming and adherence than trying to remember to take a mega-dose just once per week.

7. **Are there any vegetarian food sources of EPA and DHA omega-3s? What about seaweed? What would you tell vegetarians or vegans who don't want to take a supplement?**

   EPA and DHA are marine-based omega-3s, which means the nutrients are naturally found in sea (marine) sources. Fatty fish are considered to be abundant sources of EPA and DHA omega-3s, but the nutrients originate in marine microalgae, at the bottom of the food chain. Seaweed is a type of algae but it is not a microalgae. It's the marine microalgae that creates EPA and DHA which is then stored by fatty fish and used by humans for cell functions. Seaweed such as spirulina, chlorella, dulse and nori are not good sources of EPA and DHA omega-3s.

   Vegetarians and vegans who need to increase their EPA and DHA levels need to take supplements made from marine microalgae or eat foods with added DHA and/or EPA (which often come from non-animal-based sources). There is no other good food source of EPA and DHA.

8. **What do you recommend for people who are allergic to fish or seafood?**

   Omega-3s from marine microalgae should be safe for people with fish allergies, since they come from a plant-like source. Since most marine microalgae omega-3 sources are

© 2020, Global Organization for EPA and DHA Omega-3s

marketed to a vegan audience, it would follow that no traces of fish would be used in production and therefore no fish protein would be present in the final product. Be sure to read the package carefully and contact the manufacturer if you have any questions.

9. What about tuna, or black cod, or canned salmon (vs. fresh) – are those good sources of omega-3s?

Salmon, in all its forms: canned, fresh, frozen, is a great source of omega-3s. Some types of salmon can provide more omega-3s, but generally speaking you can't go wrong with salmon. Tuna is also a good source of omega-3s, with the larger, fattier tuna such as albacore a more concentrated source than what you'd find in canned chunk light tuna. But still, generally speaking tuna is also a good source. Black cod, or sablefish, is another fatty fish and thus a great source of omega-3s. One of my favorite charts about omega-3 content in 4-oz portions of fish comes from the Seafood Nutrition Partnership: https://www.seafoodnutrition.org/wp-content/uploads/2018/04/Omega-3-Chart.pdf.

10. What improves absorption of omega-3s? Should you take them with meals? Is absorption better when you get the omega-3s from seafood vs. from a supplement?

Fat increases absorption of omega-3s, so it's helpful to take omega-3 supplements after a meal that has some fat.

Research comparing omega-3 absorption between fish and supplements is scant, so I can't easily answer the second part to this question. What I can say is that the most important thing is to get your omega-3s, no matter the method. Yes, certain types of fish will give you omega-3s plus other important nutrients, but most people simply aren't eating enough fish, or the right type of fish.

11. How about flax and flaxseed oil – does flax provide enough EPA and DHA?

Flax seeds and their oils provide ALA omega-3s, not EPA and DHA omega-3s. According to FoodData Central, the USDA's food and nutrient database, flax seeds, per 100 g, provide 22.813 g of ALA omega-3s, and 0.0 g each of EPA and DHA omega-3s.

12. Is there is a risk of mercury contamination with fish oil supplements? How does the risk of mercury intake compare with the benefits of consuming 2+ servings of fatty seafood per week?

The benefits of eating fish far outweigh the potential risks. In a paper published in 2019, the authors found that for pregnant women, the benefits of consuming as little as 4 ounces of fish per week up to amounts greater than 100 ounces per week corresponds

© 2020, Global Organization for EPA and DHA Omega-3s
1075 Hollywood Avenue, Salt Lake City, UT 84105 | +1 801-746-1413

to increased measures of neurocognitive development in their children, including an average increase of 7.7 IQ points.

As for omega-3 dietary supplements, manufacturers purify/refine the oil to reduce the level of environmental contaminants in the end product. Omega-3 supplement products from GOED member companies must meet the GOED industry standard for contaminant levels.

13. If DHA is the principal omega-3 in the brain and retina, why do most supplements contain more EPA than DHA?

The amounts of EPA and DHA in most supplements tends to mimic what's found in nature. That is, most fish tend to have more EPA than DHA in their fat stores. So when the fish oil is extracted from the fish, the amount of EPA vs. DHA tends to match what was in the original fish, and studies have shown that the brain needs both EPA and DHA.

14. Is there any difference in omega-3 levels in wild fish vs farm raised fish?

Whenever I get this question, I put it in the context of land animals: are there more nutrients in wild animals – let's say, venison – than there is in farm-raised cattle? The answer isn't straightforward. Just like with land-based animals used for food, the nutritional composition of fish is dependent upon what the fish eats. Some farmed fish are fed very specialized omega-3 rich diets, and they in turn will yield fish with more omega-3s for human consumption. Wild fish have a more varied diet since they forage for their own food.

15. What are the recommended amounts of EPA and DHA during pregnancy? Is there any concern about intake and mercury/heavy metals?

The Dietary Guidelines for Americans 2015-2020 recommend that pregnant women eat 2-3 servings of seafood, preferably fatty fish, per week and avoid higher mercury fish in order to meet their bodies' increasing needs for EPA and DHA omega-3s. GOED's recommendation for pregnant and lactating women is to aim for 700 mg per day of EPA and DHA, of which at least 300 mg should be DHA.

16. What is the recommended amount of EPA and DHA for children?

As mentioned in the webinar, there is no dietary reference intake or recommended daily intake of EPA and DHA. The Dietary Guidelines for Americans 2015-2020, which are for all Americans ages 2 and older, are to eat two servings of seafood per week to get a daily

© 2020, Global Organization for EPA and DHA Omega-3s

average of at least 250mg EPA and DHA.

17. Would the conversion rate of ALA to EPA/DHA be different for someone on a mostly vegetarian diet?

No, the conversion rate of ALA to EPA and DHA is highly variable. It largely depends on genetics, but it also can be affected by omega-6s competing for the desaturase and elongase enzymes at the time of metabolism.

18. I've heard that over-the-counter omega-3s are worthless and that people should get their omega-3s from food or, if necessary, from a prescription. What does the research say?

First let me say that ***of course*** we should be getting our omega-3s from food. But we know from decades of intake data that we're not even close to where we should be in terms of seafood intake.

As for over-the-counter dietary supplements, the fact is that the omega-3 oils used in both pharmaceutical and dietary supplements are produced by the same companies. The reason why some are available behind the counter is because of their potency, not because of the quality, and because the pharmaceutical company went through the drug approval process in order to make disease-specific claims. It's the same reason why you can buy over-the-counter ibuprofen or prescription ibuprofen. To suggest that readily available, over-the-counter omega-3s are worthless would be a false statement.

19. Which brands of omega-3 supplements would you recommend?

There are a number of omega-3 products on the market – and that's a good thing! What works for me might not be what works for you or your patient. For example, I don't mind taking large pills and I prefer to buy mine in bulk, so whatever is available at Costco or similar is what I tend to have in my medicine cabinet. Other people might want smaller, more concentrated pills. Even others might prefer a vegan EPA+DHA supplement made from marine microalgae.

20. What omega-3 test kits could we use in our practice? Are there any in particular you would recommend?

The most common omega-3 blood test, and the one I've used many times myself, is the Omega-3 Index. The Omega-3 Index has three different types of results you can receive, from basic to complete. It also has tests specifically for prenatal DHA and omega-3 intake for pregnant women, and to measure DHA in breastmilk for nursing moms.

© 2020, Global Organization for EPA and DHA Omega-3s
1075 Hollywood Avenue, Salt Lake City, UT 84105 | +1 801-746-1413