The health benefits and advantages of omega-3 fatty acids are great — and important for our overall well-being. Scientifically speaking, they are essential polyunsaturated fats. This term “essential” means your body cannot make them on its own. You must get them from foods high in omega-3, including fish, seafood, vegetable oils, nuts (especially walnuts), flaxseed products, leafy vegetables and edamame, to mention a few.

We are fortunate today to understand how these fats work as an integral part of cell membranes throughout our bodies — and affect the function of the cell receptors in these membranes. Here are key understandings about the potent power of omega-3s for you and your loved ones, throughout life.

Are there different classes of fats?

Yes. Fats are generally classified as “healthy” or “unhealthy” for us based upon the number of bonds — single or double — that connect atoms to one another.

• Unhealthy fats have only single bonds that create “stiffness” and as a result are solid at room temperature — they are called “saturated” fats.

• Healthy fats have double bonds that make them “softer” or liquid at room temperature — they are called “unsaturated” fats. And, the more double bonds a fatty chain has, the healthier they are — they are termed “polyunsaturated” fats.

What are omega fatty acids?

A polyunsaturated fat, there are three types — omega-3, omega-6, and omega-9 — that play different roles in our body, based upon their configuration. The number after “omega” describes its chemical structure, specifically, where the double bond is located within the atom.

Our body can manufacture omega-9 fatty acids, but not omega-3 and omega-6 — hence, they are termed “essential” fats and we must get them from food. It should be noted that foods containing omega-6 fatty acids are abundant in our modern diets — seeds, nuts, and oils from seeds and nuts. However, many Americans do not get adequate quantities of omega-3 fatty acids.

What are omega-3 fatty acids?

Even among omega-3s, there are subtypes: eicosapentaenoic acid (EPA); docosahexaenoic acid (DHA); and alpha-linolenic acid (ALA). EPA and DHA come mainly from fish — as a result, they are sometimes referred to as marine omega-3s. And, because these marine omega-3s serve as building blocks for hormones that affect blood clotting, cell growth and immune function, along with being part of cell membranes, they are necessary to keep the body functioning optimally.
ALA is the most common omega-3 fatty acid in the American diet — it comes from vegetable oils and nuts, as well as flax seeds, leafy veggies and meat from grass-fed animals. Our body can convert ALA into DHA and EPA, provided you’re getting enough ALA every day.

What role do they play in our bodies?

At this time, we know that they are necessary for brain function as well as normal growth and development. And there is evidence to suggest that it can decrease disease burden:

• Heart disease: It is believed that omega-3s decrease the buildup of fatty plaques within artery walls, clot formation that can block arteries and overall inflammation — all of which contribute to the development of heart disease.

• Type 2 diabetes: Research suggests omega-3s decrease the risk of developing diabetes by improving insulin sensitivity. There is also some supporting evidence that they can decrease complications of diabetes such as abnormal heart rhythms and heart attacks. In fact, the American Diabetes Association recommends that diabetics would benefit from foods that are rich in omega-3s.

• Memory and thinking: Increased intake of omega-3s is associated with better performance on tests of cognitive flexibility — the ability to switch between tasks — memory and learning skills. This is likely because DHA is found in the fatty membranes that surround nerve cells, especially at the microscopic junctions where cells connect to one another. Thus, they support and protect nerve cell membranes.

• Depression and anxiety: In countries where the average fish consumption is high, we see lower rates of depression. It is possible that increased omega-3 intake makes it easier for serotonin — a chemical that carries messages from one brain cell to another and plays an important role in mood — to pass through cell membranes.

• Improved eye health: DHA is a major structural component of the brain and retina of the eye, and when you don’t get enough DHA, vision problems may arise. Getting enough omega-3 has been linked to a reduced risk of macular degeneration, one of the world’s leading causes of permanent eye damage and blindness.

• Promote brain health during pregnancy and early life: Omega-3s are crucial for brain growth and development in infants. The Harvard School of Public Health underscores that from the third trimester until the second year of life, a developing child needs a steady supply of DHA to form the brain and other parts of the nervous system. While some women have steered away from eating fish because of concerns that mercury and other possible contaminants might harm their fetus, the evidence of harm from lack of omega-3 fats has been found to be far more consistent. If you are pregnant or nursing, and have concerns, you should discuss the risks versus benefits with your attending obstetrician.

How much do we need to consume?

Adequate doses of EPA and DHA are generally attained from consuming 2 to 3 servings of oily fish per week. However, most Americans do not get enough EPA and DHA because there are extremely few food sources, aside from cold water fatty fish, seafood and fish oil that naturally provide them. And while your body can convert ALA into DHA and EPA, know this is not as efficient as consuming them from marine sources.

Today, we are seeing more and more of these healthy fats being added to everything from fortified eggs to yogurt to milk to peanut butter. And, although ALA isn’t as powerful as the other omega-3 fatty acids, it is good to know that sources including brussel sprouts, kale, spinach, broccoli and cauliflower have other benefits to our health — fiber, vitamins and minerals. As well, oils can provide a good source of ALA omega-3s, including olive, canola, walnut, cod liver, flaxseed and soybean oil.
When should I consider supplementation?

Fish oil supplements have increased in popularity over the past decades. I am a strong proponent that the best way to attain necessary vitamins, nutrients and antioxidants are from the foods and drinks we consume. When we “tease out” a particular component — or chemically compound it — to put it in a pill or capsule, we lose out on many beneficial effects of the food item, such as fiber, or other antioxidants, vitamins and nutrients. And, because dietary supplements do not have the same rigorous requirements that prescription medications do, there is no guarantee on the quality or that you are getting the dosage listed on the label.

That being said, attaining adequate amounts of omega-3 fatty acids to allow our body to function optimally may be challenging to, for example, vegetarians, those who lack access to fatty fish sources or those who have an inability to tolerate fish (e.g., allergic, find distasteful).

Omega-3 dietary supplements do not require a prescription (note: there are FDA-approved omega-3 medications to treat a condition called hypertriglyceridemia that do). And it is always recommended that before starting any supplement, you should talk with your health care provider to determine whether it is right for you (if indicated, interactions with another medication), what dosage you should take and side effects to watch out for. Again, taking a fish oil supplement is not necessary to get omega-3 fatty acids, since it is found in foods that you can eat every day.

A tremendous body of research has been conducted since it was first discovered in the 1950s that the type of fat — marine-derived — offered great health benefits and that these benefits were attributable to the polyunsaturated fat omega-3. Since then, studies — more than 30,000 — have confirmed that omega-3s in fish have a potent effect on our health. And good news, even if you are not a fan of fish, there are still a number of ways to get the healthful benefits of omega-3 fatty acids in your daily diet.

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