

Dynamic Duo

Omega-3, Vitamin D: Two Nutrients Proven to Boost Heart Health

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More than 200 years ago Scottish philosopher David Hume wrote, “A wise man proportions his belief to the evidence.” Today, that advice still holds true, especially when it comes to nutritional supplementation.

In the multi-billion dollar vitamin and supplement industry, products often claim more “sizzle” than “steak.” However, when you look at the research, evidence shows that supplementation with appropriate nutrients makes sense for most people. The key being “appropriate nutrients,” and when it comes to heart health there are two nutrients in particular we should pay close attention to—omega-3 and vitamin D.

Connecting Healthy Hearts to Omega-3s

The cardiovascular benefit of omega-3 fats is not a new health discovery. It was identified in the early 1970s by Jørn Dyerberg, MD, DMSc, and his colleagues in Greenland. They sought to understand how Eskimos living in Greenland could eat a high-fat diet—consisting mostly of fish and seal—and still have one of the lowest death rates from cardiovascular disease in the world. Through research they found the answer—omega-3 fats. Their work was published in *The Lancet* and *The American Journal of Clinical Nutrition*.

Today more than 18,000 published studies show the benefits of omega-3 fats, especially for the heart because they help lower blood pressure, resting heart rate, risk of arrhythmia, sudden death and triglycerides. Omega-3 fats

also improve the HDL/LDL cholesterol ratio and reduce the risk of developing metabolic syndrome.

Noted omega-3 researcher William Harris, PhD, touts the cardiovascular benefits stating, “There is no nutrient more important for decreasing risk of cardiovascular death—and more lacking—than omega-3.”

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— WILLIAM HARRIS, PHD
An Internationally-Recognized Expert on
Omega-3 Fats

It's in the Label

When it comes to buying nutritional supplements it pays to be an educated consumer. This is particularly the case with omega-3 fats, which are often referred to, almost interchangeably, as fish oil and or poly-unsaturated fatty acids. Not all omega-3 products are created equal—the important ingredients to look for are the amounts of EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid) in the product.

EPA and DHA are the “long chain” omega-3s that are so beneficial for the heart as well as the brain, eyes and immune system. EPA and DHA come

from the micro-algae that fish eat, especially fatty fish such as salmon, trout, mackerel, anchovies and sardines.

For maximum benefit most experts recommend at least 1,000-2,000 mg of EPA and DHA combined every day. If you are eating fatty fish at least three to four times a week, you are probably getting enough omega-3 fats from your diet. However, studies indicate that Americans eat fish once every 11 days on average.

When determining which omega-3 supplement product is the best buy, you will need to do some detective work. That is, read the small print on the back of the bottle. Well over half of omega-3 products provide only a 30 percent concentration of EPA and DHA. That means every 1,000 mg (1 gram) soft gel will give you 300 mg of EPA and DHA. With that in mind you will need to take four soft gels per day to total 1,200 mg of EPA and DHA.

The higher quality—and often best value—fish oils provide a 50-60 percent concentration, which means you need to take just two 1,000 mg soft gels per day to reach the target daily dose.

The Vitamin D Dilemma

The other nutrient that deservedly is currently getting lots of positive press is vitamin D, which actually is not a vitamin at all. It's a steroid hormone manufactured, or synthesized, by our body when UVB light from the sun hits our skin. We can also get some vitamin D from our diet by consuming fish, milk

and fortified cereal. But it's difficult to get the proper dosage through food alone.

Vitamin D was "discovered" when many children in New England began developing rickets during the winter months. Rickets is a softening of the bones in children that can potentially lead to fractures and deformity (osteomalacia is a similar condition in adults). There was limited sunshine during the day and everyone wore long pants, coats and hats due to the cold temperatures, making it difficult for the children's bodies to synthesize enough vitamin D. Because vitamin D regulates the uptake of calcium into the bones, without enough of it the bones simply won't calcify.

As it turns out though, vitamin D is involved in much more than just bone health. Thousands of studies now link low vitamin D status to many conditions including cardiovascular disease, hypertension, several cancers, depression, diabetes, chronic pain, macular degeneration, poor lung function and arthritis.

Cedric Garland, DrPH, a recognized vitamin D expert contends, "The benefit of vitamin D is as clear as the harmful link between smoking and lung cancer."

A 2008 study of 1,354 men, ages 40-75, published in *The Archives of Internal Medicine*, showed those deficient in vitamin D (a blood level less than 15 ng/ml) were 2½ times more likely to suffer a heart attack than those with the highest levels and those heart attacks were more likely to be of the fatal variety.

Yet at the same time, studies indicate that vitamin D levels are dropping throughout much of the world. One factor is most of us spend a majority of our days inside—working and doing indoor leisure activities. And when we do go out in the sun we've been taught to wear sunscreen to reduce our risk for skin cancer. Sunscreen with a SPF of 15 or greater decreases the synthesis of vitamin D by 99 percent. Keep wearing your sunscreen, but give yourself 15 minutes in the sun before applying it.

Determining D Levels

There is only one way to determine your vitamin D level—a blood test known as 25 hydroxyvitamin D.

- Insufficiency – level less than 30 ng/ml
- Deficiency – level less than 20 ng/ml
- Toxicity – level of at least 150 ng/ml

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- CEDRIC GARLAND, DRPH
A Recognized Vitamin D Expert

Of interest, most lifeguards and people who live near the equator (where UVB light is most prevalent) have vitamin D levels around 70-100 ng/ml.

The recommended target level for vitamin D is open to debate. Most experts agree your vitamin D level should be at least 30 ng/ml. However, Cooper Clinic in Dallas, Texas, recommends patients target at least 40 ng/ml as a baseline.

Supplement the Sun

One of the best ways to ensure your vitamin D level is appropriate is to use supplements. Vitamin D-3 is recognized to be more bioavailable than D-2. How much is needed varies greatly based on age, skin tone, time of year, sun exposure, where you live, weight and other factors.

While Dr. Garland and other researchers recommend a daily oral intake of 2,000 to 2,400 IU of D-3 for adults, it's best to consult with your physician on what your specific intake should be based on your vitamin D test results, age and other health issues.

There are two things to keep in mind. One, don't be surprised if your level is low. If your level is very low (less than 15 or 20 ng/ml), your physician may place you on a prescription vitamin D at a dose of 50,000 IU once or twice a week for a period of eight to 12 weeks.

This is known as a "hyper dose" to quickly get your blood level where it needs to be.

Secondly, if your level is low, even real low, don't worry. Correcting the problem is easy and inexpensive.

There are a number of things we can do to keep our hearts healthy including exercise, weight management and preventive medical exams, but making sure our omega-3 and vitamin D levels are appropriate is certainly a great place to start. Stay well!



Cooper Complete® is a pure, potent vitamin and supplement line scientifically proven to improve well-being. Included are Advanced Omega-3 and Vitamin D-3.

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