



# News *You* Can Use

## Omega-3 Fatty Acids: Even Better Than We Thought!

The latest scientific news is telling us that omega-3 fatty acids are even more beneficial than previously thought. From decades of research, scientists have established the benefits experienced when omega-3 fatty acids are part of our diet. We know that omega-3's play a critical role in the optimal function of heart, blood and blood vessels, balanced auto-immune response, and brain development.<sup>1</sup> Now, recent studies have confirmed the benefits of fish oil on mental health conditions, as well, including Alzheimer's and depression.

### Here's The Latest . . .

A recent study at Tufts University in Boston has revealed some exciting

news regarding the link between omega-3 fats in the diet and the risk of dementia in elderly men and women. Researchers used a questionnaire to determine the diet of a large group of men and women whose average age was 75. For the next ten years, the test group ate a diet rich in DHA, an omega-3 fatty acid, including approximately three meals of fish per week.<sup>2</sup>

The results showed a significant decrease in the onset of Alzheimer's and other forms of dementia, described as a "...48% reduction in risk of dementia in elderly men and women."<sup>2</sup> According to Dr. Ernst Schaefer, senior scientist and director of the Lipid Metabolism Laboratory at Tufts University, these results are

### What Are Omega-3's?

Omega-3 fatty acids are a form of polyunsaturated fats the body derives from food.<sup>4</sup> Increasingly recognized as important to our health, they have been shown to assist with improved heart health, reduction in hypertension, improvement in inflammatory diseases such as arthritis and auto-immune diseases such as Lupus and Raynaud's disease.<sup>6</sup>

Not created in the body, omega-3 fatty acids must be included in the diet. One of the best sources of omega-3's is freshwater fish, including salmon, anchovies, trout, and mackerel.<sup>6</sup>

One of the first clues to the heart benefits of omega-3 fatty acids came from studies of the Greenland Inuit population, which, despite consuming a diet high in both fat and cholesterol, displays a very low risk of heart disease. It is now thought that this low disease risk is the result of their high consumption of oily fish.<sup>5</sup>

Omega-3's act as a natural blood thinner that prevents blood clot formation, thus reducing hardening of the arteries, including coronary arteries of the heart and the carotid-brain arteries, thereby lessening the risk of heart attack and stroke.<sup>7</sup>

Omega-3's are also believed to play a role in preventing depression, particularly in pregnant women.



consistent with a previous study, which showed that in a sample of adults aged 65-94, those who ate fish at least once a week had a 60% lower risk of developing Alzheimer's.<sup>2</sup>

"These dramatic results show how older adults can play a significant role in their neurological health by increasing their intake of fish, fish oil, or especially DHA," noted Schaefer. DHA (docosahexaenoic acid) has been the subjects of thousands of scientific studies.<sup>3</sup>

## That's A Lot Of Fish!

Although the necessity for omega-3's in the diet is well documented, many people find the recent recommendation of the American Heart Association to eat oily fish at least two times per week to be impractical.

For this reason, many people are choosing to take dietary supplements containing these critical fatty acids. Not surprisingly, there are many omega-3 products on the market. Unfortunately, most fall well short of offering the best-sourced oils available. Some contain undesirable oils from shellfish, shark, other scavengers,

bottom-feeders, or sea mammals. Even those featuring salmon oil often fail to exclude the internal organs of the fish, which may increase exposure to substances that collect in organs (herbicides, pesticides, heavy metals, and vitamins A and D).

GNLD's Omega III Salmon Oil provides omega-3 fatty acids from one of nature's richest sources, salmon. Omega III Concentrate is an exclusive GNLD combination of omega-3 rich fish, all of which contain naturally high levels of omega-3 fatty acids. Both GNLD products are rich in the omega-3 fatty acid DHA. Also, both products are derived from healthy, fresh fish that are carefully screened, certified, and selected for human consumption. In addition, GNLD insists on "body oils" only for its omega-3 products. Only the edible portions of the fish are considered when selecting oils. Finally, GNLD maintains the same balanced ratios of omega-3's in its products that are found in nature. GNLD's omega-3 products have always been the best. And continued scientific research keeps showing how good they are!



## References

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# Americans Awarded Nobel Prize for Cell Research



Peter Agre and Roderick MacKinnon were awarded the Nobel Prize for Chemistry for 2003. Agre and MacKinnon have separately done extensive work in the area of cells and the permeability of cell membranes.

"Peter Agre and Roderick MacKinnon have contributed to fundamental chemical knowledge on how cells function. They have opened our eyes to a fantastic family of molecular machines," the Nobel jury said.

"To see this world-wide attention and recognition given to the importance of healthy cells is very exciting to all of us at GNLD," commented John Miller, Scientific Advisory Board Member and GNLD International Vice President of Science, Technology, and Marketing. "The health and efficiency of our cell membranes, and the ways in which nutrients get in and waste products get out, has been the centerpiece of GNLD's philosophy and product line, dating back to the formulation of Tre-en-en Grain Concentrates™ in 1958."



# The SAB Has The Answers!

GNLD's Scientific Advisory Board Answers Your Important Health Questions

**Q.** *Is taking omega-3's during pregnancy a good idea?*

**A.** Yes! The developing fetus can deplete the mother of these essential fatty acids, and depression during pregnancy has been linked to low levels of omega-3 fatty acids. Additionally, research indicates that it is beneficial for lactating women to supplement their diets with omega-3's. During infancy, it is critical for babies to receive sufficient essential fatty acids in order to enhance the development of eyes, nerves, and brain.<sup>1</sup>

**Q.** *What is the Recommended Daily Allowance for omega-3 fatty acids?*

**A.** There is currently no RDA for omega-3 fatty acids. However, the American Heart Association recommends that we consume at least two servings per week of fish oil sources high in EPA and DHA.<sup>6</sup>

**Q.** *The dosage of GNLD's Omega III Salmon Oil® is three capsules. What is the equivalent amount of fresh fish?*

**A.** A three-capsule dose of Omega III Salmon Oil provides the oil equivalent of 3 ounces of fresh salmon.

**Q.** *Why is fish called "brain food"?*

**A.** The reason may be that the omega-3 fatty acids in some fish support the structure and function of the

brain, nerves, and eyes.<sup>3</sup> The cells of the nervous system have particularly "fluid" membranes, and omega-3 fatty acids contribute to this permeability. Fresh water fish, such as salmon, tuna, sardines, and mackerel, are some of the sources of these essential fatty acids.

**Q.** *Can omega-3 supplements help my mother's arthritis?*

**A.** Research has shown that omega-3 fatty acids may be useful in reducing joint inflammation associated with rheumatoid arthritis. Additionally, some studies have shown that an increase in omega-3 fatty acids may actually help to prevent rheumatoid arthritis.<sup>6</sup>

**Q.** *I've heard that fish can contain dangerous levels of mercury. If I take supplements, will I avoid that danger?*

**A.** Fish can contain mercury and other toxins, but a quality supplement can reduce this concern. GNLD's omega-3 products, Omega III Salmon Oil and Omega III Concentrate®, contain only "body oils." This means they are derived only from the edible parts of the fish, which reduces exposure to substances that may collect in organs, including herbicides, pesticides, and heavy metals.

# More Brain Food!

## Flavonoids Protect & Serve



Pursuing considerable recent interest in the neuroprotective effects of flavonoids, a group of scientists from the Centre for Neuroscience Research at King's

College, London, set out to determine if dietary flavonoids are able to cross the blood-brain barrier (BBB). In so doing, they hoped to discover if these flavonoids were quickly and efficiently making their protective antioxidant properties available to the brain.

In a study recently published in the *Journal of Neurochemistry*, the King's College team reports that dietary flavonoids,

especially the citrus flavonoids hesperetin and naringenin, are taken up into the brain by the two cell lines that supply the brain with nutrients across the BBB. Cross-BBB intake was greatest for the two citrus flavonoids. Such flavonoids are known antioxidants and vascular/capillary protector nutrients that support long-term brain health.

Ground-breaking reports of flavonoids traversing the BBB certainly constitute good news for those supplementing with GNLD's Flavonoid Complex. (Hesperetin and naringenin are both key components of GNLD's flavonoid supplement.) BBB permeation, and the resulting neuroprotective effects, is just the latest known benefit offered by these powerhouse antioxidants.

**Source:** Interaction between flavonoids and the blood-brain barrier: in vitro studies, *Journal of Neurochemistry*, Vol. 85, No. 1, 2003, 180-192 © 2003

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