Omega-3 Fatty Acid Spotlight: DHA

Omega-3 fatty acids are a group of polyunsaturated fatty acids that play a variety of important roles in health. EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid) are two of the most important omega-3 fatty acids, and they are commonly found together in seafood and in fish oil supplements. While DHA and EPA most often function together, DHA plays a starring role in several crucial areas. DHA has a longer carbon chain and a higher degree of unsaturation, which gives it unique structural and functional properties in cell membrane phospholipids, particularly those in the retina and the neuronal synapses in the brain.

Important DHA Functions:	
The Brain	DHA is one of the most prevalent fatty acids in the brain. An emerging body of research is exploring a unique role for DHA in the prevention of neuropsychiatric and neurodegenerative disorders. Low DHA levels are found in the brains of people with neurodegenerative diseases like Alzheimer's. Supplemental DHA has shown some success in decreasing the cognitive decline associated with dementia.
The Eyes	DHA plays a crucial role in the growth and development of vision in infants, and may also contribute to improved vision as we age. One study of adults age 45-77 discovered that supplementing the diet with DHA for 90 days led to better vision than a placebo.
The Heart	It's well-established that fish oil containing both EPA and DHA has a protective effect against cardiovascular disease. Some research shows that DHA lowers triglyceride levels more than EPA, also increases the particle size of LDL, and increases HDL levels to reduce risk of cardiovascular disease. DHA may also have a greater impact on reducing cardiac arrhythmia than EPA.
Inflammation	DHA plays a role in reducing inflammation within the body. One European study showed that people with the highest consumption of DHA had 77% reduced risk of developing ulcerative colitis. Consuming more DHA may also decrease joint swelling and pain found in arthritis.
Pregnancy and Infant Development	DHA is crucial for optimal development and function of the brain and retina in the fetus and infants. DHA availability to the fetus is dependent on the mother's diet, with DHA levels higher in women who consume seafood more often. Infants need DHA, especially during the first 6 months of their lives, so that their brains, eyes, and nervous systems develop optimally.

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