



# Healthy Living

## Nutritional beverages and foods



## High DHA supplementation supports normal brain function, including memory, cognition and vision

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Omega-3 fatty acids are important for normal brain development and function. Studies show that the brain has up to 300 times more DHA (docosahexaenoic acid) than EPA (eicosapentaenoic acid).

Studies show that DHA elevates the Omega-3 Index more rapidly than EPA<sup>1</sup>.

DHA has been shown to have a greater impact on memory function and verbal fluency than EPA in the elderly with minor cognitive impairment<sup>2</sup>.

The European Food Safety Authority (EFSA) supports the recommendation that children aged 2-18 years should consume 250mg of DHA per day for normal brain development<sup>3</sup> and that pregnant and lactating women consume up to 200mg of DHA per day in addition to general adult Omega-3 requirements<sup>4</sup>.

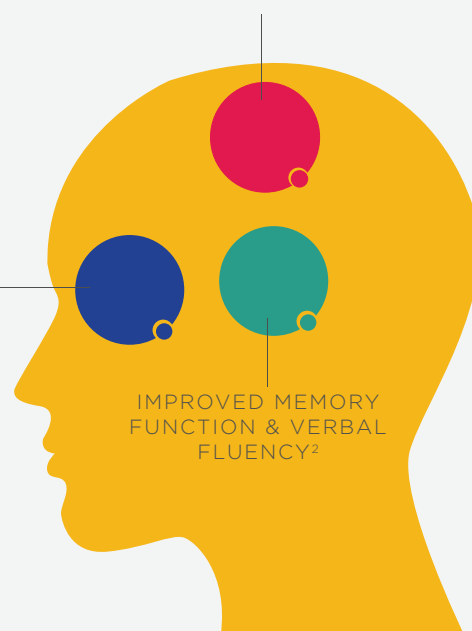
DHA is important for the entire lifecycle, from pregnancy through childhood to adulthood.

**32% of recent studies showed high DHA had positive effects on the brain<sup>7</sup>. High DHA studies were associated with:**

REDUCED DEPRESSION IN CHILDREN & ADOLESCENTS WITH MENTAL DISORDERS<sup>5</sup>

IMPROVED VISUAL ACUITY<sup>6</sup>

IMPROVED MEMORY FUNCTION & VERBAL FLUENCY<sup>2</sup>



Nu-Mega™ Ingredients high performance DHA oils and powders enable higher fortification of food and beverages, with up to 350 mg of DHA per serve.

**Nu-Mega™ is a world leader for microencapsulating high Omega-3 DHA. Its ground-breaking products, including Driphorm® HiDHA® 360 from fish oil, vegetarian DHA option Driphorm® SCO DHA-S 50 and vegan option Driphorm® HA DHA-S 30 offer:**

- Ultra-high DHA levels (Driphorm® HiDHA® 360 contains three times more DHA from fish than comparable products)
- Higher fortification rates of up to 350 mg of DHA per serve with no negative sensory impact
- Remarkable 24 month shelf life at ambient temperature
- Multiple product development opportunities for nutritional foods and beverages including gummies, beverages, bakery and dairy products
- Key accreditations for worldwide applications
- Organic input certification
- All ingredients non-GMO by origin
- Halal certified.



## Nu-Mega™ Ingredients a global research leader in high DHA fish oils

Nu-Mega™ Ingredients is internationally recognised for its collaboration with research institutions into the scientifically validated benefits of high DHA fish oils. In 2018, a critical review ***How does high DHA fish oil affect health? A systematic review of evidence***<sup>7</sup> was driven by Nu-Mega™ Ingredients' research and development team and published in the globally prestigious Food Science and Nutrition journal.

In what is the first major review of DHA research studies in nearly 20 years, the review focused on 113 studies published since 2000 into the effects of high DHA. These studies showed positive DHA outcomes for the heart, brain and other medical aspects.

The studies used fish oil requested from a number of international suppliers. Nu-Mega™ Ingredients was the largest supplier, with 40% of trials using Nu-Mega™ Ingredients' HiDHA® fish oil. However Nu-Mega™ Ingredients had no influence on the design, outcome or publication of the studies.

<sup>1</sup> Supplementation with high-dose docosahexaenoic acid increases the Omega-3 Index more than high-dose eicosapentaenoic acid. Allaire J, et al. *PLEFA*, 2017. <sup>2</sup> Effects of n-3 fatty acids, EPA v. DHA, on depressive symptoms, quality of life, memory and executive function in older adults with mild cognitive impairment: a 6-month randomised controlled trial. Sinn N, et al. *Br. J. Nutr.* 2012. <sup>3</sup> European Food Safety Authority (EFSA) scientific opinion on the substantiation of health claim related to DHA and contribution to normal brain development pursuant to Article 14 of Regulation (EC) No.1924/2006. *EFSA Journal*, 2014. <sup>4</sup> EFSA Panel on Dietetic Products, Nutrition, and Allergies (NDA); Scientific Opinion on Dietary Reference Values for fats, including saturated fatty acids, polyunsaturated fatty acids, monounsaturated fatty acids, trans fatty acids, and cholesterol. *EFSA Journal* 2010. <sup>5</sup> Reduced mania and depression in juvenile bipolar disorder associated with long-chain omega-3 polyunsaturated fatty acid supplementation. Clayton E H, et al. *Eur. J. Clin. Nutr.* 2009. <sup>6</sup> The effects of 90-day supplementation with the Omega-3 essential fatty acid docosahexaenoic acid (DHA) on cognitive function and visual acuity in a healthy aging population. Stough, C., et al. *Neurobiol. Aging*. 2012. <sup>7</sup> How does high DHA fish oil affect health? A systematic review of evidence. Ghasemi Fard S, et al. *Critical Reviews in Food Science and Nutrition*. 2018.

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