Vita Aid®
Professional Nutrition Product

Verdha

VA-007

Vegetarian source DHA for neural and brain development

Key Points:

- Plant-source DHA instead of fish oil. Carefully screened to contain no PCB.
- Light and pleasant fruit flavour with no fishy-aftertaste. Easily accepted by children and adults.
- All omega-3 fatty acid in DHA form to be more bioavailable for direct use by brain and neurons.

Indication:

For development of eyes, brain and nerves in children.

For protection of cognitive, ocular and cardiovascular health in adults.

Description:

Verdha contains high potency plant-derived docosahexanoic acid (DHA) to aid in brain, neural and eye development. The source of the DHA is algae oil, instead of the more typical fish source. The vegetable-source DHA used in Verdha has been carefully screened to contain no heavy metals or fat-soluble organic chemicals, such as PCB or DDT, that may be found in fish oil.

The central nervous system is rich in highly unsaturated DHA, an omega-3 fatty acid which makes up a large percentage of neuron plasma membranes. Where eicosapentaenoic acid (EPA) has to first be converted to DHA before being utilized in the phospholipids of the brain, nerves and eyes, DHA can be used directly.

Verdha provides children with essential DHA, which is most important for children whose eyes and brain are rapidly growing and developing. In adults, Verdha can help to prevent depression, age-related memory loss and Alzheimer's disease, and support cardiovascular health.

Infant Health

A number of studies have shown that infant health and brain development may be improved when pregnant women take DHA supplements, or the infants are given DHA, either through breastmilk or mixed into their formulas. Pregnant women who took DHA supplements had babies who performed better on eye tests, reflecting better brain development.[1]

Quantity: 60 ml | Dosage Form: Liquid

Ingredients (per serving):

Each teaspoon (approx. 5ml) of algae oil provides (*life's* DHA™):

Decosahexanoic acid.....1,485 mg

Non-Medicinal Ingredients:

Vitamin E (as d-alpha-tocopherol), rosemary extract (*Rosmarinus offcinalis*), stevia extract (*Stevia rebaudiana*), natural fruit flavour

Suggested Use:

Children – 7 drops to 1 teaspoon daily to as directed by a health care practitioner.
Adults – 1/2 teaspoon to 2 teaspoons daily or as directed by a health care practitioner.

Vegetarian formulation.

Of particular note is a double-blind study to evaluate the safety and benefits of feeding preterm infants formulas containing DHA until 92 weeks postmenstrual age (PMA), with follow-up to 118 weeks PMA.[2] 361 preterm infants were randomized across three formula groups: (1) control with no supplementation; (2) algal-DHA (DHA from algal oil, arachidonic acid (ARA) from fungal oil); and (3) fish-DHA (DHA from fish oil, ARA from fungal oil). Term infants breast-fed for 4 months (n = 105) were used as a reference group. The results showed that preterm infants fed algal-DHA infants had enhanced growth, resulting in weight similar to term infants at 118 weeks PMA. Both DHA groups had higher Bayley mental and psychomotor development scores at 118 weeks PMA than did the control group. The authors concluded that supplementation with DHA provided significant developmental benefits for preterm infants, including those with extremely low birth weights and concurrent medical conditions associated with prematurity.[2]

Cognitive Development

Unsaturated fatty acids are essential for normal brain development and function. DHA makes up a large percentage of neuron plasma membranes.[3] EPA, while also important, has to be first converted to DHA for utilization in the brain. Fatty acid deficiencies or imbalances have been shown to contribute to a range of children and adult psychiatric and neurologic disorders such as ADHD, autism, and developmental coordination disorder (DCD).

A recent study assessed the effects of supplementation with 400 mg/day of DHA for 4 months on measures of cognitive functions among healthy 4-year-olds in a multicenter, randomized, double-blind, placebo-controlled trial.[4] The authors found that DHA supplementation was significantly and positively associated with improved scores on the Peabody Picture Vocabulary Test, a test of listening comprehension and vocabulary acquisition. This test is considered to be a screening test for memory and cognitive function and there is substantial evidence that the PPVT may predict school success and verbal ability.

It has also been shown that omega-3 fatty acid supplementation to school aged children showed an improvement in reading and spelling ability above chronologic age and above those given placebo.[3]

Alzheimer's Disease

The DHA concentration in the hippocampus has been found to be extremely reduced in patients with Alzheimer's disease (AD), which is characterized by the formation of neurofibrillary tangles and neuritic plaque of amyloid peptides, such as amyloid-beta peptide, resulting in neuronal and memory loss. The reduced level of DHA concentration in AD patients, according to a number of studies, may be attributable to low dietary intake, as well as losses from elevated lipid peroxidation.[6]

The results of recent studies built on earlier pre-clinical studies using genetically modified mice, report that DHA may provide prophylactic effect against AD by slowing down the accumulation of the tau protein, which leads to the development of neurofibrillary tangles.[7]

Depression

Low levels of DHA are often associated with a reduction of serotonin levels resulting in depression. Studies have shown that DHA and omega-3 fatty acid levels are decreased in depressed individuals, compared with levels in healthy controls and in individuals with minor depression. A relationship seems to exist between omega-3 fatty acids and central nervous system neurotransmitters. Increased omega-3 fatty acid levels cause increased membrane fluidity, leading to increased serotonin transport by endothelial cells, which might account for the alleviation of depressive symptoms.

In a double-blind, placebo-controlled study involving 30 bipolar-disordered patients, of the subjects who received the omega-3 mix supplement, only one had a recurrence of the symptoms, and subjects in the test group also had a longer period of remission.[8]

Cardiovascular Health

Numerous studies have shown the beneficial effects of DHA on cardiovascular health over the years. The possible mechanisms of the effects involve the level of triglycerides, thrombosis, blood pressure, and arrhythmias. The ingestion of DHA-rich fish oil has been shown to decrease serum triglyceride concentration and increase HDL cholesterol levels. Postprandial triglyceridemia is especially sensitive to chronic omega-3 fatty acid intake (<2 g/day).[9]

A double-blinded study demonstrated the effect of algae-sourced DHA, devoid of any EPA, on serum/platelet DHA status, the estimated retro-conversion of DHA to EPA, and risk factors for heart disease in vegetarian subjects.[10] Healthy vegetarians (12 male, 12 female) consumed 1.62 g/day of either DHA or corn oil for 6 weeks. Consumption of DHA capsules increased DHA levels in serum phospholipids by 246% (from 2.4 to 8.3 g/100 g fatty acids) and in platelet phospholipids by 225% (from 1.2 to 3.9 g/100 g fatty acids). EPA levels increased in serum phospholipids by 117% (from 0.57 to 1.3 g/100 g fatty acids) and in platelet phospholipids by 176% (0.21 to 0.58 g/100 g fatty acids) via metabolic retro-conversion. The estimated extent of DHA retro-conversion to EPA was 11.3 and 12.0%, based on the serum and platelet analyses, respectively. The total cholesterol:HDL-cholesterol ratio decreased, as did the LDL-cholesterol:HDL-cholesterol ratio and serum triglyceride concentrations. The authors concluded that DHA supplementation markedly enhanced the DHA status (of serum and platelets), provided for the formation of substantial EPA, and lowered the total and LDL-cholesterol:HDL-cholesterol ratios.[10]

Omega-3 fatty acids have also been shown to have anti-platelet aggregation effect, which may contribute to the reduced risk of thrombosis and hypertension. Omega-3 fatty acids may reduce risk of sudden cardiac death as demonstrated in a cohort study, a case-control study, and for four prospective dietary intervention trials. Proposed mechanism is the stabilizing effect of omega-3 on the myocardium itself.[7]

Cautions:

Consult a health care practitioner prior to use if pregnant or breastfeeding, or in cases of a history of non-melanoma skin cancer. Consumption with alcohol, other drugs or natural health products with sedative properties is not recommended.

References:

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The information in this guide is for use by health care practitioners as a reference only.

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