Children's **Omega-3** Natural lemon flavour

Code: FE1856 – 120 chewable softgels

CHILDREN'S OMEGA-3 provides essential omega-3 fatty acids, with EPA and DHA in a 2:1 concentration for optimal and proven efficacy on brain health. This formula has been especially designed for children and adolescents in sugar-free chewable pearls, sweetened with stevia and with a pleasant natural lemon flavour.

CHILDREN'S OMEGA-3 contains oil from small species of wild fish, sardines and anchovy guaranteed free of environmental contaminants (heavy metals, PCBs, dioxins) which has additionally been purified through molecular distillation to obtain a highly pure oil, while maintaining all of its beneficial properties intact. The rigorous analysis applied to the product confirms that it is a pharmaceutical grade oil. It contains vitamin E in its natural, non-GMO tocopherol form.

Ingredients: Wild **fish** oil: sardines (*Sardinops sagax sagax*), anchovies (*Engraulis ringens*) and/or tuna (*Thunnus obesus*), natural flavour (essential lemon oil), antioxidant (d-alpha-tocopherol), softgel (glacing agent: bovine gelatin; humectants: vegetable glycerol and purified water; gelatin from tapioca starch; natural lemon flavour; sweetener: steviol glycoside from *Stevia rebaudiana*; acidulant: citric acid).

Nutritional information:	**4 softgels (2 060 mg)**
Wild **fish** oil*	1 200 mg
Providing essential fatty acids omega-3	
EPA (eicosapentaenoic acid)	552 mg
DHA (docosahexaenoic acid)	216 mg

*High purity oil obtained by molecular distillation.

Contains no: Preservatives, artificial flavour or colour, sugar, milk or milk products, wheat, corn, or yeast.

Format and size:
120 chewable softgels

Recommended daily dose:
1 softgel four times daily.

Do not exceed the stated recommended daily dose.

Indications and uses:
Different studies have shown that the ingredients in CHILDREN'S OMEGA-3 can be helpful for:
The development and function of the brain and the visual system, prevention and improvement of the symptoms of neurocognitive disorders in children (ADHD, dyslexia, autism), and inflammatory diseases (Crohn's disease, ulcerative colitis, psoriasis etc.), the promotion of growth during early postnatal life, and the improvement of bronchial asthma and pulmonary function.
This product is intended for children as of one year and for pregnant and/or breast-feeding women.

Cautions:
It has been observed that omega-3 fatty acids can increase risk of excessive bleeding with patients treated with anticoagulants (warfarin, heparin). Caution when combining with herbs which slow blood clotting (garlic, ginkgo). Joint administration of omega-3 acids with antihypertensive medication can cause hypotension.

Eicosapentaenoic acid (EPA): This essential fatty acid plays a fundamental role in the brain since it is a structural component of neuron membranes, and deficient intake is related with a malfunction of the neurotransmitter pathways in the brain, which can cause diverse psychiatric and neurocognitive disorders[1,2]. The mechanism by which omega-3 fatty acids, especially EPA, exert this action is based on their ability to modify the fluidity and composition of phospholipids in cell membranes of the central nervous system, modifying the structure and function of the proteins involved. This is the reason an increased concentration of omega-3 fatty acids in cell membranes has been shown to affect the neurotransmission of serotonin and dopamine, especially in the frontal cortex, which would explain the activity of EPA in different psychiatric disorders such as psychosis, depression, dementia and ADHD[2,5]. Studies such as the one carried out by Mitchel et al., on 53 children with ADHD, show the importance of treating attention deficit and hyperactivity disorder (ADHD) to improve brain function and the symptoms of this disorder, especially attention and impulsive behaviour. The study showed that children with ADHD have significantly lower levels of EPA both in plasma and red blood cells, compared to children without the disorder[14]. In another study it was proven that a combination of EPA and DHA is also effective for antisocial behaviour, aggressiveness and hostility.

In addition to its positive effects on the brain, EPA is also important for pregnant women since this fatty acid is associated with the prevention of post-partum depression, hypertension, gestational diabetes and preeclampsia. A good supply is essential for the transport and uptake of DHA by fetal cells through increased expression of fatty acid transport proteins (FATPs) in the umbilical cord[8].

EPA maintains the balance between prostaglandins, thromboxanes and leukotrienes, regulating allergic and inflammatory reactions. Thanks to these properties, EPA improves the symptoms of bronchial asthma in children and prevents its onset, since it protects the lungs from possible inflammation and improves their function. Recent publications have also confirmed its positive effect for the treatment of Crohn's disease, ulcerative colitis and psoriasis, among other inflammatory diseases.

A daily dose of 400-600 mg of EPA has been established as sufficient for obtaining all of its benefits[2].

Docosahexaenoic acid (DHA): This fatty acid is found in high concentrations in the retina (93% of total omega-3) and in the phospholipids of brain cell membranes (97% of total omega-3) and is therefore essential for the development of the visual system as well as the formation of the human brain, especially during gestation, breastfeeding and childhood. DHA accumulates in the frontal cortex between birth and age 20, and it is in this time period that neuron maturation, synapse formation and grey matter expansion occur. DHA supplementation has been shown to increase grey matter in erythrocyte membranes, favouring the functional activity of the cortex and decreasing children's response time in an attention test (*Continuous performance task*)[1,2,3,9]. Other studies such as those carried out in the United States by Zhang et al. (with over 3 600 participants) and Ryan et al., have shown DHA's ability to increase psychosocial and cognitive performance in healthy children, finding a significant association between higher blood DHA levels and better scores in a comprehension and vocabulary test[6,10].

More trials such as that of the Lauritzen et al. team (double-blind and randomized with 97 children) show that this fatty acid positively influences sight development, increasing a child's ability to process information received, therefore helping acquire better visual sharpness[13].

DHA content in tissues is positively associated with a child's general growth, possibly acting as a growth promoter during early postnatal life, improving postural, motor and social functions. DHA and EPA fatty acids have been recommended for preventing premature birth (or increasing gestational age)[7,11,12].

A minimum dose of 150mg DHA/day is considered adequate for toddlers and school aged children[12].

References:
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