



Technical Data Sheet

EQUAZEN[®] PRO

A medical food clinically shown to improve focus, attention, academic performance, and balanced mood in children and adolescents with ADHD^{†1-7}

Introduction

According to a national parent survey, attention-deficit/hyperactivity disorder (ADHD) is estimated to affect 6.1 million children across the US, with a prevalence of 11% in children aged 4-17 years of age.⁸ This common neurodevelopmental disorder is associated with hyperactivity, inattention and learning difficulties, and persists into adulthood in an estimated 50% of cases.⁹ It has traditionally been managed with pharmacotherapy, behavioral therapy or a combination of the two.⁸

Research over the past 40 years has shown that many children with ADHD have significantly lower levels of essential fatty acids in their brain, and due to genetic differences in the way they metabolize dietary fats, they are not able to rebalance this from the diet alone.^{6,11-15} These deficiencies are thought to affect cell membrane structure and integrity, which in turn affect the regulation of crucial signalling molecules and inflammatory pathways in the brain. †EQUAZEN[®] PRO is a medical food clinically proven to improve focus, attention, academic performance, and balanced mood in children and adolescents with ADHD.¹⁻⁷ Its unique composition of omega-3 and omega-6 fatty acids—in the unique ratio of 9:3:1 of EPA:DHA:GLA—promotes healthy fatty acid metabolism and balanced omega fatty acid levels, and offers an additional means to support those with ADHD to reach their potential.¹⁶

EQUAZEN[®] PRO clinically proven benefits



Supports children's attention control, vocabulary, and immediate memory recall^{† 4,7,29}



Improves inattentive behavior^{† 1-7,29}



Improves academic performance^{† 1-4}



Supports balanced mood^{† 1-4}



Product Features

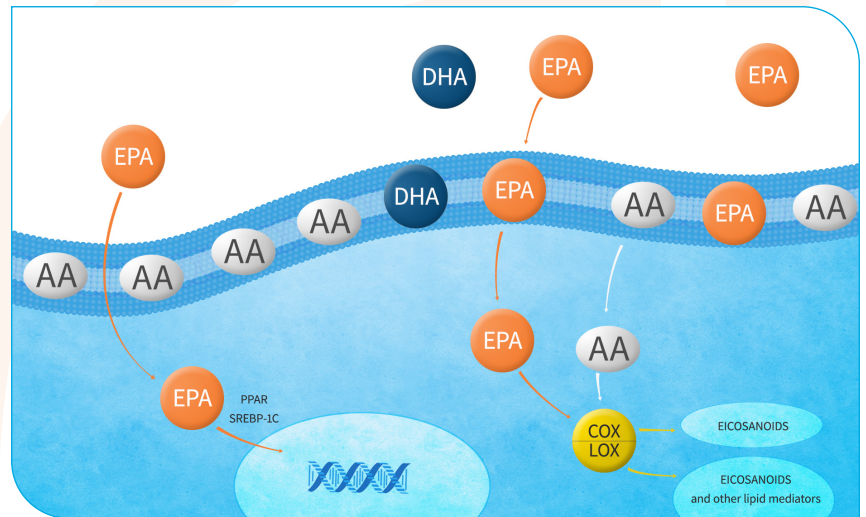
- + Supported by over 15 years of research and more than 19 clinical studies, including 6 ADHD clinical trials, which demonstrate improvements in focus, attention, academic performance, and balanced mood.[†]
- + Safe & effective nutritional support when used alone or in combination with common prescription ADHD medications.¹⁶
- + Our suppliers have been certified to Friend of the Sea[®] criteria for responsible and sustainable sourcing.
- + Produced with novel patented purification processes that reduce contaminants, oxidative impurities, environmental pollutants, and toxins to ensure exceptional clarity, quality, taste, and smell. Furthermore, the production of the fish oil utilizes technologies that run on 100% renewable energy.

†EQUAZEN[®] PRO is a medical food to address fatty acid deficiencies common in people with ADHD and some related neurodiverse conditions that cannot be resolved by normal diet modification alone. In clinical trials* among kids and teens with ADHD, the EQUAZEN[®] PRO formula showed on average significant improvements in focus, attention, academic performance, and balanced mood.
 USE UNDER MEDICAL SUPERVISION.
 *19 clinical studies include 6 ADHD clinical trials.

The numerous roles of fatty acids

Essential for healthy growth and development

Approximately 50–60% of the adult brain is composed of lipids, of which ~35% are PUFAs.¹⁷ Docosahexaenoic acid (DHA) and arachidonic acid (AA) are found in the highest concentrations. PUFAs such as these play a crucial role in development of the central nervous system; essential fatty acids (EFAs) and long chain polyunsaturated fatty acids (LC-PUFAs) are the building blocks of the membrane phospholipids of all cells. They contribute to the membrane's physiologic properties and thereby the functions of membrane-bound receptors, transporters, ion channels, enzymes, and other membrane-bound biochemical processes, such as those involved in signalling pathways.¹⁸ DHA in particular, has important functions in neuronal homeodynamic balance, linked to its role in neurogenesis, synaptogenesis, neuronal differentiation, neurite outgrowth and maintenance of membrane fluidity. The omega fatty acids—and their highly powerful metabolites—are also important modulators of inflammatory activity. DHA, eicosapentaenoic acid (EPA) and AA are key players, with the balance between them influencing the production of inflammatory promoting and inflammatory modulating molecules. Healthy inflammation modulation is paramount since prolonged neuroinflammation can lead to neuronal damage.¹⁹ In fact, recent research has suggested an association between the pathogenesis of ADHD and inflammatory processes.²⁰ It's clear that PUFAs are vital to our health across the entire lifespan, and that a lack of these essential fatty acids could result in considerable consequences.



Omega fatty acids and ADHD

The missing link

Increasing evidence has confirmed that many children with learning and behavioral difficulties, particularly ADHD, have deficiencies of omega-3 and omega-6 fatty acids.^{1,6,11-15} Compared to controls, young adults with ADHD were shown to have a smaller fraction of essential fatty acids in the blood, with significantly smaller fractions of EPA and DHA, and a significantly higher omega-6/omega-3 ratio.²¹

It appears that this deficiency could be a result of impaired fatty acid metabolism, which may be linked to the FADS-1 and FADS-2 genes found on the 11th chromosome in humans—in a genetically “hot” region for ADHD.^{6,12-15, 22, 23} These particular genes are responsible for coding desaturase enzymes (delta-6 and delta-5), that convert EFAs (such as α -linolenic acid [ALA]), to the more highly unsaturated fatty acids (such as EPA and DHA). Different alleles of these genes can result in slightly different forms of these enzymes, some of which are less efficient than others.^{12, 24} The resulting reduction in enzyme function can affect the way omega-3 and omega-6 fatty acids are metabolized, and slow

conversion to crucial PUFAs required for healthy homeodynamic function within the central nervous system. Interestingly, several studies have demonstrated that differences related to fatty acid metabolism genotype are masked by the consumption of ALA, EPA and/or DHA.¹⁴

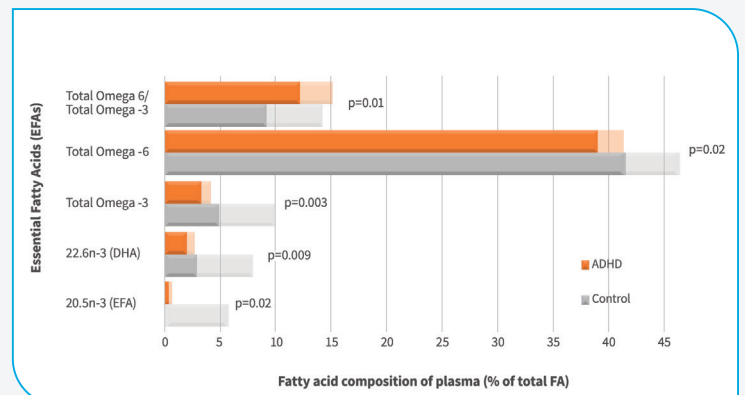


Figure 1. PUFA levels in the blood: Young adults with ADHD vs. healthy controls. Adapted from Antalis et al 2006.²¹

The unique EQUAZEN® PRO ratio

Supporting healthy fatty acid metabolism†

EQUAZEN® PRO contains a unique balance of omega-3 and omega-6 fatty acids, in the clinically proven ratio of 9:3:1 of EPA:DHA:GLA.¹⁻⁷ This ratio optimizes fatty acid metabolism, delivering omega fatty acids that bypass inefficient enzyme conversion steps and leverage the interrelationship between omega-3 and omega-6 biochemical pathways—promoting their inflammatory-modulating capabilities.

The incorporation of omega-6 y-linolenic acid (GLA) in the formulation plays a crucial role in supporting a proper inflammatory response and is key to healthy omega-6/omega-3 balance.²⁵ GLA is rarely present in the diet, and synthesis (from dietary linoleic acid [LA]) by the body is inefficient.²⁶ Evening primrose oil represents an excellent, plant-based source of GLA, which, when supplemented in the diet, is rapidly converted to dihomo-y-linolenic acid

(DGLA). DGLA is found to support a proper inflammatory response by balancing the production of metabolites that come from arachidonic acid (AA) by competing for the same COX and LOX enzymes, instead producing prostaglandins (PGE1) and thromboxane A1.

Omega-3 fatty acids alone increase EPA and DHA but at the expense of lowering levels of the desirable omega-6, DGLA.²⁷

In human studies, the addition of omega-3 EPA from fish oil, in a balanced ratio to GLA, has been shown to further support a proper inflammatory response by balancing the production of metabolites that come from AA and maintaining the supportive capabilities of EPA, DHA, and GLA.^{25,27}

EQUAZEN® PRO provides EPA:DHA:GLA in the ratio 9:3:1 to support healthy fatty acid metabolism

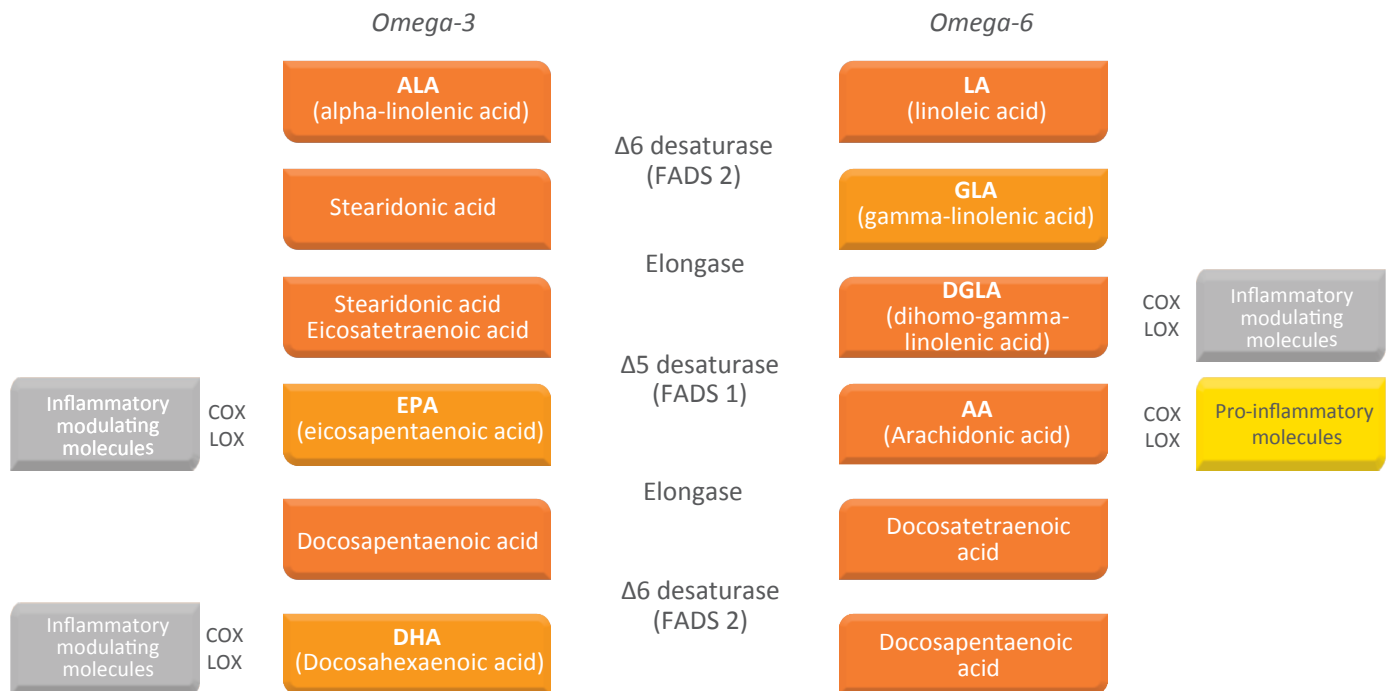


Figure 2. The metabolism of omega-3 and omega-6 fatty acids. Adapted from Roke 2017.²⁸

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USE UNDER MEDICAL SUPERVISION.

*19 clinical studies include 6 ADHD clinical trials.

Formula

EQUAZEN® PRO



About the ingredients

In EQUAZEN® PRO the natural source of EPA and DHA are harvested from wild anchovies from the South Pacific. The oil production process we use complies with the most rigorous international standards for reducing contaminants, oxidative impurities, environmental pollutants, and toxins. Our omega-3 suppliers are certified to Friend of the Sea® criteria for responsible and sustainable sourcing and are members of GOED, the benchmark for quality in the global omega-3 industry.

EQUAZEN® PRO's GLA comes from evening primrose oil. Evening primrose seeds are expeller-pressed without solvents to ensure safety, producing a GLA-rich oil.

Each serving contains:

Omega-3 & 6 oils	1,700 mg
Omega-3 Fatty Acids	732 mg
As EPA	558 mg
As DHA	174 mg
Omega-6 Fatty Acid	
As GLA	60 mg

Softgel Ingredients: Concentrated fish oil (wild anchovy), evening primrose oil, gelatin (bovine), glycerol, rosemary extract, mixed tocopherols, and sunflower oil.

Made without most common allergens (contains fish)

No added sugar | No synthetic colors, flavors, sweeteners

Suitable for ages 5+

Directions: 3 softgels daily with food or as directed by healthcare professional.

Jelly Chew Ingredients: Concentrated fish oil (wild anchovy), evening primrose oil, xylitol, purified water, sorbitol, gelatin (fish; tilapia & basa), natural flavors, trisodium citrate, gum arabic, asorbic acid, paprika extract, stevia leaf extract.

Made without most common allergens (contains fish)

Non-GMO | No added sugar | No synthetic colors or sweeteners

Suitable for ages 3+

Directions: 3 jelly chews daily with food or as directed by healthcare professional.

KEEP OUT OF REACH OF CHILDREN.

EQUAZEN® PRO is not a replacement for any medication. Consult with your healthcare professional if you are pregnant or lactating, have a medical condition, or taking prescription drugs.

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