



LEARNING FACTORS[®] ADVANCED SCHOOL-AID[™]

Supports brain development and visual function

ENHANCING CONCENTRATION, ATTENTION AND LEARNING

Essential fatty acids (EFAs) are key components of the brain, eyes and nervous system. They are an integral part of every cell in the body, where they maintain proper cell structure and function, and support optimal health and well being. EFAs must be consumed in the diet as the body is unable to make them, although some EFAs are “conditionally essential”, meaning the body, can theoretically manufacture them from the primary EFAs. But the body’s ability to manufacture them is often compromised due to poor absorption of nutrients, disease conditions, or other factors. Three of the most significant EFAs are eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA) and gamma linolenic acid (GLA). EPA, DHA and GLA are extremely important for brain development, behaviour, and mood. They also generate biologically active metabolites, including eicosanoids, that help reduce the risk or likelihood of learning, behaviour, and mood disorders.

EFA deficiencies may be widespread in the general population. Low levels of EFAs, or an imbalance of fatty acids, such as too many trans fats, saturated fats and omega-6 EFAs, and insufficient omega-3 EFAs, may contribute to a number of illnesses and non-optimal conditions. Deficiencies in dietary EFAs and poor nutritional status, as well as increased exposure to environmental neurotoxins such as mercury and pesticides, have been linked to reduced concentration and attention, poor learning, and behavioural problems.

Studies show that adequate amounts of EFAs early in life, and on a continuing basis, can promote healthy brain development and positively influence learning, behaviour and visual acuity. In double-blind, randomized, controlled trials, EFAs have improved attention disorders such as attention deficit disorder (ADD), attention deficit hyperactivity disorder (ADHD), dyslexia, autism, aggression, depression, antisocial behaviour and other mood, learning, and behavioural disorders (Kidd).

Learning Factors Advanced School-Aid contains EPA, DHA and GLA in the ideal ratio to promote healthy brain function and visual acuity, improve concentration, attention, and memory, and optimize learning.

THE MANY BENEFITS OF LEARNING FACTORS ADVANCED SCHOOL-AID

- Supports healthy brain and visual development
- Improves concentration and attention
- Optimizes learning, memory skills and problem solving
- Improves behaviour and mood
- Improves attention disorders such as ADD and ADHD

SUPPORTING DEVELOPING MINDS

The brain is largely comprised of lipids (fats), primarily EFAs and their derivatives. DHA is particularly important as a brain “building block” in prenatal and early life, and for ongoing cellular repair. DHA comprises as much as 60% of the fatty acids in the brain and in the retina of the eye. Studies suggest that there is a critical period during retinal development when inadequate DHA will result in permanent visual abnormalities (SanGiovanni). Optimal visual transduction and function is necessary for healthy cognitive performance.

While not as structurally significant as DHA for brain development, EPA has more of a functional role. EPA increases blood flow and positively influences hormones and the immune system, which support the developing brain. EPA is also crucial for moment-to-moment brain cell signalling. GLA supports normal nerve function, which is particularly important for learning and memory.

NEUROPROTECTION AND BRAIN PLASTICITY

Learning Factors Advanced School-Aid provides the ratio of EFAs (EPA, DHA and GLA) that is ideal for building and repairing cell and nerve membranes, and enhancing brain and visual function. Together they increase the fluidity of cell membranes, improve protein performance, support cell signalling and regulatory processes, and are converted into cerebrally active eicosanoids (Tassoni). Recently, novel mediators known as resolvins and neuroprotectins, produced from DHA, have been identified. These bioactive lipids are anti-inflammatory, and have pro-resolution and protective abilities. Resolvins and neuroprotectins protect cells against neurological damage and aid in repair and recovery processes while also providing protection against the development of neurodegenerative diseases (Farooqui).

EFAs and their biologically active metabolites support brain “plasticity”, also known as neuroplasticity (Tassoni). This refers to the changes that occur in the organization of the brain and the ability of the brain to produce new neural

connections over time and with experience. Enhancement of brain plasticity is an extremely important concept as the processes of thinking, learning and acting can change the brain's functional ability and enhance brain function and the capacity to learn and process information. Moreover, plasticity means that brain function can be restored to damaged areas and neurological impairment can be reversed.

IMPROVING ACADEMIC PERFORMANCE

Learning Factors Advanced School-Aid was developed especially to help children and teens improve their ability to learn, concentrate and do well in their studies and in life. However adults also require EFAs, which can reduce the risk of cognitive dysfunction, cardiovascular disease, arthritis and skin disorders. Supplementation with EPA, DHA and GLA has been found to improve mental health, including symptoms of inattention, restlessness, impulsiveness, anxiety and learning difficulties. Improvements are usually noted after daily supplementation for three months. Further improvements are common with continued use. Individuals who take EFA supplements often find an improved quality of life as well as increased calmness and better mood.

A BALANCED BLEND OF QUALITY EFAS

Most studies support supplementation with EPA, DHA and GLA in combination rather than individually because the right combination is critical in supporting proper brain function in both children and adults with ADD and other attention disorders. Children with ADD have consistently shown lower levels of EPA, DHA, and GLA compared to those without ADD (Richardson). There is considerable evidence that supplementation with EPA, DHA, and GLA can produce improvement in all symptoms of ADD. Some of the studies showed results superior or equal to conventional drug therapy (Kidd).

The EPA, DHA and GLA in Learning Factors Advanced School-Aid are derived from high quality fish oils and borage oil. The fish oil concentrate is derived from fatty fish such as anchovy and sardine, which provide high levels of EPA and DHA, about 40%. Purification of the fish oil by molecular distillation ensures that the oil is free from lipid peroxides and environmental contaminants such as heavy metals, pesticides, dioxins, and PCBs. Borage oil is obtained from the seed by cold pressing, which does not utilize harmful solvents such as hexane, or external heat. Borage oil is a superior source of GLA, providing about 20% GLA, compared to evening primrose oil, which typically contains 8-10% GLA. Vitamin E is added to the formula to naturally protect the oil from oxidative processes.

Learning Factors Advanced School-Aid comes in two formats. The Extreme Peach emulsified liquid format has a creamy peach flavour (with a hint of orange and vanilla), that kids will love, and the Extreme Peach chewable softgels have a similar taste if chewed, but can also be swallowed whole. Both are formulated with naturally-sourced flavours and sweeteners, and neither has any fishy smell or aftertaste.

DOSAGE

Recommended dose (children under 18): Chewable softgels: 2 chewable softgels, twice daily, preferably with meals, or as directed by a health care practitioner. Liquid: 1 teaspoon twice daily, preferably with meals, or as directed by a health care practitioner.

Recommended adult dose: Chewable softgels: Two chewable softgels, 2-3 times daily, preferably with meals, or as directed by a health care practitioner. Liquid: One teaspoon, 2-3 times daily, preferably with meals, or as directed by a health care practitioner.

This formula may be combined with the Learning Factors Daily Nutrient Boost smoothie mix for comprehensive nutritional brain support and optimal mental function. Both formulas may be used safely in both children and adults, and in conjunction with other therapies, including prescription medication.

SAFETY

Learning Factors Advanced School-Aid contains pharmaceutical-grade EFA-containing oils which are free from environmental pollutants, including heavy metals such as mercury and lead, pesticides, dioxins, PCBs and other harmful compounds. Individuals may experience mild gastrointestinal upset or loose bowel movements. These normal side effects are minimized by consuming with or after meals, and increasing the dose gradually over one to two weeks.

Pregnancy and lactation: Suitable for pregnant and lactating women or as recommended by a health care practitioner.

Children: Suitable for children.

Drug Interactions: EFAs may decrease the stickiness of platelets and have blood thinning effects. Individuals taking anticoagulants, antiplatelet or anti-aggregatory drugs such as Warfarin, acetylsalicylic acid or Dipyridamole should contact their health care practitioner and use this supplement with caution.

Contraindications: None known.

Learning Factors Advanced School-Aid is a concentrated blend of the omega-3 and omega-6 EFAs that: are critical to brain development and visual function; enhance learning; improve concentration, attention and focus; combat anxiety and mood disorders; and support overall well-being.

KEY REFERENCES

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