

Attention™ Gels Fact Sheet

Attention™ Gels are a beneficial nutritional supplement in a unique delivery system designed to meet the needs of children with attention-behavior related problems (such as hyperactivity, impulsiveness and inattentiveness) (1).** These symptoms can cause long term problems in learning, socialization, and behavior for those afflicted and put them at risk for serious psychopathology in adulthood (2).**** The direct causes are still unknown, however, neurochemical imbalances (3),** nutritional deficiencies (4),** food allergies (5),** hypoglycemia (6),** poor eating habits (7),** artificial food additives, preservatives (8,9)** and environmental chemicals (10)** have been implicated. Unfortunately, the most popular medical treatments available are central nervous system stimulants. According to the Physicians Desk Reference®, these medications may produce addictive tendencies and harmful side effects such as nervousness, insomnia, tachycardia and loss of appetite.

Nutritional Alternatives

Consisting of essential fatty acids, phospholipids, specific vitamins, minerals and herbs, this combination of nutrients is the ultimate nutritional supplement for children with behavior and learning problems. According to research, the individual nutrients in this formula have been shown to enhance neurologic function and learning capabilities as well as assisting in moderating blood sugar changes. It's no secret that most children intensely dislike swallowing tablets, capsules and medicinal type liquids. This combination of nutrients offers the perfect solution in assuring that children receive the appropriate nutrients essential for growth.

Fatty acids and Phospholipids

Essential fatty acids (EFA's) are vital for human growth and optimum neurological development (11).** Humans lack the necessary enzymes to produce these fatty acids so we must get them from the diet or through supplementation. One EFA that has generated successful research results is docosahexaenoic acid (DHA). DHA is a polyunsaturated omega-3 fatty acid formed from alpha-linolenic acid or obtained directly from fish oils. DHA has been shown to be essential for proper brain function and development (12,13).** Several studies have looked at the relationship between DHA and attention deficit and hyperactivity disorder. Investigators at Purdue University reported that serum and red blood cell concentrations of DHA were significantly lower in boys with attention/behavioral problems than those boys considered normal (14).** In a study of individuals that suffer from reading complications, British researchers reported marked improvements in reading ability and behavior when adult patients were supplemented with DHA (15).**

Phosphatidylserine (PS)

A naturally occurring phospholipid found in the brain, PS influences a number of metabolic and pharmacologic functions (16).** Numerous studies have documented the impact of PS on specific brain neurotransmitters including acetylcholine, serotonin, norepinephrine and dopamine. Many researchers agree that these neurochemical systems are involved in behavior and cognitive function. Several studies have shown a significant improvement in behavior, concentration, attention and memory when patients supplement with PS daily (17).**

Vitamins and Minerals

Vitamin and mineral deficiencies have been implicated in mental performance (18).** Several studies have shown the importance of the B vitamins (folic acid, B-6, and B-12) for behavioral changes, depression and personality disorders. Scientists at Baylor University Medical Center reported that B-12 and folic acid deficiencies could alter neurotransmitter function and contribute to neurologic and psychiatric conditions (19).** Vitamin B-6, an important coenzyme for the biosynthesis of neurotransmitters, is required for optimal brain function. Researchers in Spain observed a clinical improvement in behavior and school performance when patients supplemented with B-6 and folic acid (20).** The results of a Canadian study showed adolescents with behavior problems had a striking iron deficiency (21)** while zinc deficiency has also been implicated (22).**

Betaine (trimethylglycine)/Magnesium

Betaine is found commonly in animals and plants such as broccoli and beets. In conjunction with B-vitamins, betaine supplementation has shown to improve behavior and school performance (20).** A recent study revealed hyperactive children had significantly lower blood magnesium than the control group and found it necessary to supplement in order to improve behavior (23).** Several other vital nutrients in this special nutrient combination have been related to mood, mind, memory and behavior problems. DMAE (deanol), tyrosine, glutamic acid, choline and inositol play an important role in neurotransmitter action, with deficiencies possibly contributing to impaired cognitive function.

Moderation of Blood Sugar Changes

There may be an association between excessive sugar consumption and behavior problems. Researchers performed oral glucose tolerance tests on several hundred hyperactive children and found the majority to exhibit abnormal carbohydrate metabolism (24).** Erratic blood sugar concentrations may eventually lead to low blood sugar concentrations. The body responds to the low blood sugar by releasing adrenaline and other hormones, thereby possibly contributing to aberrant and hyperactive behavior. Scientists have discovered excessive refined carbohydrates and sugar consumption may promote the lowering effects of blood sugar concentrations (25).**

This combination incorporates several nutrients designed to help modulate blood sugar. Chromium, a fundamental trace element required for all insulin-regulating activities (26)** , plays a central role in regulating blood sugar (12).** Therefore, deficiencies of chromium can disrupt the normal insulin-glucose relationship contributing to a hypoglycemic condition (27).** *Gymnema sylvestre*, an herb native to India, has been used in traditional folk medicine for blood sugar related disorders. Animal studies indicate this herb helps to moderate blood sugar by optimizing serum insulin levels (28).** *Opuntia streptacantha* is a species of nopal prickly pear cactus commonly found in Mexico and other arid lands around the world. Numerous international studies have demonstrated that *Opuntia streptacantha* has positive effects on cholesterol and can help moderate blood sugar (29).** Alpha-Lipoic acid is an antioxidant produced naturally in the body and is also found in red meat and the leaves of some plants. It functions as a cofactor for a number of important enzymes responsible for the conversion of food to energy (ATP). Clinical experiments have shown lipoic acid to help moderate blood sugar levels by increasing cellular uptake and the burning of glucose (30).**

Active Ingredients:
(Amount per 3 softgel capsules)

Marine Oil (Yielding 250 mg, DHA - Docosahexanoic acid)

L-Tyrosine - 20 mg

DMAE (Dimethylamine Ethanol Bitartrate) - 100 mg

PS (Phosphatidylserine from 100 mg of Soy) - 20 mg

Choline Bitartrate - 100 mg

Inositol - 100 mg

Grape Seed Extract - 50 mg

L-Glutamic acid - 50 mg

Magnesium Chelate - 50 mg

Vitamin B-6 (Pyridoxine HCl) - 50 mg

Alpha Lipoic Acid - 25 mg

Betaine (Trimethylglycine) - 25 mg

Opuntia Streptacantha (Prickly Pear Cactus) - 20 mg

Vitamin E - 15 IU (10 mg)

Gymnema Sylvestre Extract - 5 mg

Folic Acid - 800 mcg

Vitamin B-12 (Cyanocobalamin) - 200 mcg

Chromium Chelate - 200 mcg

Available Doses:

482 mg - 90 soft gel capsules - 63003

References:

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