

Attention Deficit Hyperactivity Disorder

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Attention deficit hyperactivity disorder (ADHD) has become a commonly diagnosed behavioural disorder affecting school age children.

Children with this disorder are characterized as inattentive, impulsive, aggressive, and hyperactive. Learning becomes challenging and frustrating and often leads to low self-esteem. Stimulant medications like Ritalin are continually being prescribed by well-meaning physicians to help ease these symptoms, however, the important role that nutrition plays in learning and behaviour is often overlooked.

The Role of Omega-3s

Correcting a child's diet may improve the management of ADHD and complement conventional treatments. The science of nutrition reveals a particularly beneficial effect on behavioural problems with supplementation of essential fats, specifically omega-3 fats, also known as long chain polyunsaturated fats. Omega-3 fatty acids are found predominantly in fish fat, flaxseed, and soybeans. They are essential to human nutrition.

The omega-3s in fish, known as eicosapentaenoic acid (EPA), and docosahexaenoic acid (DHA), have been studied in relation to behavioural disorders. Inadequate consumption of foods rich in omega-3s could lead to deficiencies in these important fats, increasing the risk for cardiovascular disease, depression, and behavioural and emotional disorders. Children with ADHD have been reported to have lower plasma levels of these essential fats. Double-blind studies show that intake of the omega-3 fat DHA reduces aggressive behaviour in students during periods of increased mental stress. Further clinical studies have reported that supplemental intake of fish oils can significantly reduce markers for mental stress and reduce depression.

These healthy fats may improve our cellular membranes, assisting cellular fluidity and neurotransmission. This means that the cells in our brains and nervous system may communicate more effectively, making it easier for us to concentrate and learn. I encourage my clients to consume omega-3 fats regularly. This could be as simple as enjoying a serving of cold-water fish three times per week or supplementing with a good quality fish oil supplement, preferably a concentrated pharmaceutical grade oil, free of contaminants and heavy metals.

Nutrients for a Child's Brain

The role that vitamins and minerals play in the production and regulation of neurochemicals (brain-stabilizing chemicals) has also been studied and has shown promising results. Some children with ADHD have lower than normal plasma levels of iron, zinc, and magnesium. Clinical studies have yet to conclusively prove that supplementation with these minerals will help reduce ADHD symptoms specifically, but researchers have found that supplementation with vitamins and minerals helped to improve learning and nutritional status in a group of students without ADHD. Optimizing nutrition is not only important for overall growth and development but may help improve brain function. In addition to eating a well-balanced diet, children should be given a balanced, high quality children's multivitamin and mineral supplement to help fill any nutritional gaps.

The Elimination Test Diet

Recent research suggests that ADHD symptoms may be improved by identifying and removing potential food sensitivities, intolerances, and food dyes from the diet of children with ADHD. A proper elimination test diet, conducted under the supervision of a dietician or nutritionally oriented physician, may be a good first step. Dr. Christine Laurell and Dr. Michael Lyon have published an excellent book on this topic called *Is Your Child's Brain Starving? Food Not Drugs for Life and Learning* (Sandhill Books, 2003), which makes the elimination test diet simple to follow.