

What is ADHD (Attention Deficit Hyperactivity Disorder)?

Health experts say that ADHD (attention deficit hyperactivity disorder) is the most common behavioral disorder that starts during childhood. However, it does not only affect children - people of all ages can suffer from ADHD. Psychiatrists say ADHD is a neurobehavioral developmental disorder.

An individual with ADHD finds it much more difficult to focus on something without being distracted. He has greater difficulty in controlling what he is doing or saying and is less able to control how much physical activity is appropriate for a particular situation compared to somebody without ADHD. In other words, a person with ADHD is much more impulsive and restless.

Health care professionals may use any of the following terms when describing a child (or an older person) who is overactive and has difficulty concentrating - *attention deficit, attention deficit hyperactivity disorder, hyperkinetic disorder, hyperactivity*.

North Americans commonly use the terms ADD (attention deficit disorder) or ADHD (attention deficit hyperactivity disorder).

ADHD in children is completely different from normal childhood excited and boisterous behavior. Many children, especially very young ones, are inattentive and restless without necessarily being affected by ADHD.

The Centers for Disease Control and Prevention (CDC) estimates that approximately 4.4 million children aged 4 to 17 have been diagnosed with ADHD in the USA by a healthcare professional. As of 2003 two-and-a-half million American children aged 4 to 17 are being treated for ADHD with medicines. The CDC adds that in 2003 7.8% of all school-aged American children were reported to have an ADHD diagnosis by their parent.

Three types of ADHD:

According to the CDC, there are three types of ADHD. They are defined according to which symptoms stand out the most.

Predominantly Inattentive Type

The person finds it very difficult to organize or finish a task. They find it hard to pay attention to details and find it difficult to follow instructions or conversations.

Predominantly Hyperactive-Impulsive Type

The person finds it hard to keep still - they fidget and talk a lot. A smaller child may be continually jumping, running or climbing. They are restless and impulsive - interrupting others, grabbing things and speaking at inappropriate times. They have difficulty waiting their turn and find it hard to listen to directions. A person with this type of ADHD will have more injuries and/or accidents than others.

Combined Type

A person whose symptoms include all those of 1 and 2, and whose symptoms are equally predominant. In other words, all the symptoms in 1 and 2 stand out equally.

What are the general signs of ADHD in children?

- the child is restless, overactive, fidgety
- the child is constantly chattering
- the child is continuously interrupting people
- the child cannot concentrate for long on specific tasks
- the child is inattentive
- the child finds it hard to wait his/her turn in play, conversations or standing in line

The above signs may be observed in children frequently and usually do not mean the child has ADHD. It is when these signs become significantly more pronounced in one child, compared to other children of the same age, and when his/her behavior undermines his/her school and social life, that the child may have ADHD.

What causes ADHD?

We are not sure. Studies reveal that a person's risk of developing ADHD is higher if a close relative also has/had it. Twin studies have indicated that ADHD is highly heritable. We also know that ADHD is much more common in boys than girls. The scientific community generally agrees that ADHD is biological in nature. Many reputable scientists believe ADHD is the result of chemical imbalances in the brain.

Some studies have indicated that food additives, specifically some colorings, may have an impact on ADHD behaviors. In July 2008, the European Union ruled that synthetic food colorings (called azo dyes) must be labeled not only with the relevant E number, but also with the words "*may have an adverse effect on activity and attention in children*".

Dietary Approaches for ADHD

A number of diets have been suggested for people with ADHD. Several well-conducted studies have failed to support dietary effects of sugar and food additives on behavior, except possibly in a very small percentage of children. Some studies have reported behavioral improvement with diets that restrict possible allergens in the diet. Parents may want to discuss with their doctor implementing an elimination diet of certain foods that would not be harmful and that might help.

The Feingold Diet

The most well known diet for ADHD is the Feingold diet, a salicylate- and additive-free diet, which requires close monitoring over a child's eating habits. This diet also prohibits aspirin, which contains salicylates. Some parents report great success with this diet, although it may be difficult to impose. It is certainly wise, in any case, to avoid food with artificial colors and flavors and to provide a healthy balance of fresh, natural foods.

Among the suspected additives and foods that parents and studies report as inciting behavioral changes is:

- Any artificial colorings (particularly yellow, red, or green)

- Other chemical additives -- for example, BHT or BHA
- Milk
- Chocolate
- Eggs
- Wheat
- Foods containing salicylates, including all berries, chili powder, apples and cider, cloves, grapes, oranges, peaches, peppers (bell & chili), plums, prunes, tomatoes

Feingold diet is fairly restrictive and difficult to implement. It has been abandoned as a therapy in the last 15 years.

Zinc

Zinc is important for the metabolism of certain neurotransmitters that play a role in ADHD, and deficiencies have been associated with some cases of ADHD. Long-term use of zinc, however, can cause anemia and other side effects in people without deficiencies and it has no effect on ADHD in these patients. In any case, testing for trace minerals, such as zinc, is not standard procedure when evaluating children suspected to have ADHD. A 12 week study in Turkey where 400 kids were randomized to get Zinc sulfate or placebo, showed a significant improvement in hyperactivity and impulsivity. Attention deficiency scores were not affected.

American recommended dietary allowance for kids and teenagers is 5 to 11 mg daily. Up to 50mg daily for teenagers is reasonable dose.

Sugar

Although parents often blame sugar for causing children to become impulsive or hyperactive, a number of studies strongly indicate that sugar plays no role in hyperactivity. Sucrose challenge studies conducted in hyperactive kids ages 7 to 12 showed no effects on behaviors or tasks related to attention, memory and learning.

Ginkgo Biloba and Ginseng

Ginkgo biloba is a traditional remedy for dementia and memory impairment. It may be combined with Panax ginseng, an herbal stimulant, for the treatment of ADHD symptoms. M. R. Lyon and colleagues, at Oceanside Functional Medicine Research Institute in British Columbia, tested an herbal extract product containing 200mg ginseng and 50mg Ginkgo biloba on 36 children with ADHD between the ages of 3 to 17. The kids were given four capsules on an empty stomach twice a day for four weeks. Assessments were compared at baseline, at two weeks and at the end of the study. After two weeks, 31 percent of children were less anxious and shy; after four weeks, 44 percent saw improvements in social problems and 74 percent had reduced hyperactivity and impulsiveness.

Fish Oils

Omega-3 fatty acids play a key role in normal brain development and function. The fish oils activity is due to two polyunsaturated fatty acids, DHA and EPA. These fats may be important for memory, concentration and behavior. The Omega-3 fatty acids are also thought to reduce inflammation and lower the risk of heart disease, cancer and arthritis. P. A. Gustafsson and colleagues, at Linköping University in Sweden, measured the effects of EPA, an omega-3 fat found in fish oils, on 92 ADHD children between the ages of 7 and 12. Baseline bloodwork and parent/teacher rating scales were compared to those after 15 weeks of intervention. EPA improved symptoms in two subgroups of children, those who were oppositional and those who were mildly hyperactive and impulsive. The study was published in the October 2010 issue of "Acta Paediatrica." Other rich sources of omega-3 fatty acids include walnuts, flaxseeds, chia seeds, spirulina, cold water fish and purselane. 1 – 2 grams of EPA-DHA is a recommended dose.

Medications Used in the Treatment of ADHD:

An important part of managing Attention Deficit Hyperactivity Disorder (ADHD) is the use of medication for treatment. The goal with medication is to improve functioning by reducing the core symptoms of ADHD (inattention, hyperactivity, and impulsivity). For information on these medications and other treatment strategies for ADHD, a booklet, **[Information on Treating ADHD](#)** (PDF 139KB) developed by BC Children's Hospital, can be used as a guide.

Recommended Readings:

[Taking Charge of ADHD: A Complete, Authoritative Guide for Parents](#) by Russell A. Barkley, The Guilford Press; c2000 ISBN: 1572305606

[Dr. Larry Silver's Advice to Parents on ADHD: Second Edition](#) by Larry Silver, Three Rivers Press; c1999 ISBN: 0812930525

[Hyperactivity : Why Won't My Child Pay Attention?](#) by Sam Goldstein, Michael Goldstein, John Wiley & Sons; c1992 ISBN: 04715330076

Useful Website Links:

<http://help4adhd.org/en/about>

<http://www.caddac.ca>

<http://www.vcn.bc.ca/chaddvan/home.htm>