

Attention Deficit Hyperactivity Disorder (AD/HD)

Attention Deficit/Hyperactivity Disorder (AD/HD) is a set of behaviours that usually show themselves in early childhood. The symptoms in children with ADHD are unlike the normally rambunctious behaviour of their peers. If not addressed, these behaviours can cause trouble for them at home, at school, and in the community. There are three groups of children with AD/HD: those classified as hyperactive-impulsive; those who are largely inattentive; and those who have a combination of both types of symptoms.

Hyperactive-impulsive children always seem to be “on the go.” They have difficulty sitting still and paying attention and tend to fidget and squirm to a degree beyond what is normal for their age. They seem to be unable to play quietly by themselves, and may intrude on or interrupt others’ conversations. Their impulsiveness also puts them at risk for physical injuries. Inattentive children tend to daydream, are easily distracted, have short attention spans, seem not to listen when spoken to, have memory problems, and fail to finish projects. Their school work is usually characterized by carelessness, inattention to detail, and disorganization. Based on a number of studies, the likely rate at any one time of school aged children having a diagnosis of AD/HD is 5%, with more boys than girls suffering from the condition.[1]

Cause

Twin studies have shown that there is a genetic basis for ADHD. True susceptibility genes have yet to be identified, although [candidate genes](#) have been proposed. ADHD does tend to run in families: about 25% of the parents of children with ADHD also have the condition or another condition such as depression, substance abuse, conduct disorder in childhood or [adult onset antisocial personality disorder](#). Some families also have a history of [bipolar disorder](#). [2]

About 80% of children with ADHD have symptoms that persist through high school. Of those, 50% have symptoms into adulthood.

If untreated, children with ADHD of the hyperactive-impulsive type are at high risk for school failure. Their lack of social skills can lead to difficulty making and maintaining friendships and as a result they can experience sadness and feelings of rejection. Their impulsivity and lack of judgment may bring them into conflict with the law.

Among children and adolescents with ADHD, there are high rates of co-existing psychiatric disorders such as conduct disorder, anxiety disorder, or depressive disorders, and oppositional defiant disorder. They also have higher rates of alcohol, nicotine, and other drug abuse. [3]

Treatment

There have been more than 150 published [randomized controlled trials](#) that have shown the effectiveness of medications in the treatment of core AD/HD symptoms. The drugs include [methylphenidate](#), [mixed amphetamine salts](#), [dexedrine](#) and [atomoxetine](#). No one drug was found to be more effective than another.

Individual cognitive behavioural therapy for the child, family therapy, and parent training are effective in managing the social and family problems associated with AD/HD. Combining medication and behavioural

therapy appears to improve overall functioning and in some cases reduces the amount of medication needed.[4]

Sources

1. Waddell C, McEwan K, Shepherd C, Offord DR, Hua JM. (2005). A Public Health Strategy to Improve the Mental Health of Canadian Children. *Canadian Journal of Psychiatry*; 50:226-233.
- 2 Faraone SV. 2000. Genetics of Childhood Disorders: XIX. ADHD, Part 4: Is ADHD Genetically Heterogeneous? *Journal of the American Academy of Child and Adolescent Psychiatry*; 39(11): 1201-1205.
- 3 U.S. Department of Health and Human Services. (1999). *Mental Health: A Report to the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services.
4. Brown, RT, Amler RW, Freeman WS, Perrin JM, Stein MT, Feldman, HM, Pierce K Wolraich, ML and the Committee on Quality Improvement, Subcommittee on Attention-Deficit/Hyperactivity Disorder. 2005. *Treatment of Attention-Deficit/ Hyperactivity Disorder: Overview of the Evidence*. *Pediatrics*; 115(6): e749-e757.

Research

In this section, you will learn what works and what doesn't work in the treatment of Attention Deficit/Hyperactivity Disorder in children and adolescents, according to the very best research available.

Click on the links below to read our "plain language" summaries of the latest research studies on the topic.

Resources

The following books and resources were developed by the Family Resource Centre at McMaster Children's Hospital based on recommendations from parents and the experiences of staff.

The selection of a book or resource is not an endorsement of all the information or suggestions contained in that resource.

Many of the resources are general in nature, and may not apply to your situation. Your health care professional is the best source of information about your child's health and concerns.

ATTENTION PROBLEMS (ADD and ADHD)

Books



[Download and print](#)

Printed Material

- <http://www.cps.ca/english/statements/PP/pp02-03.pdf>
- <http://www.cps.ca/english/statements/PP/pp02-02.pdf>

Videos

- ADHD: What Do We Know? and ADHD: What Can We Do? by Russell Barkley, Guilford Press, c1993 ISBN: 0898629713 and 0898629721

Websites

- <http://www.chaddcanada.org>
 - <http://www.chadd.org/>
 - <http://www.nimh.nih.gov/publicat/adhd.cfm>
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RESOURCES FOR CHILDREN

Books



[Download and print](#)

Websites

- <http://www.add.org/content/kids1.htm>
- http://kidshealth.org/kid/health_problems/learning_problem/adhdkid.html
- <http://www.kidsource.com/NICHCY/ADD1.html>