



## Attention-Deficit Disorder (ADD)

Attention-Deficit Disorder (ADD) is characterized by attention skills that are developmentally inappropriate, impulsivity, and, in some cases, hyperactivity. ADD is a neurobiological disability that affects up to 5% of all children. Without early identification and proper treatment ADD can have serious consequences including school failure and drop out, depression, conduct disorders, failed relationships, and even substance abuse.

Until recently, it was believed that ADD symptoms disappeared in adolescence. It is now known that many symptoms continue into adulthood for 30–70% of individuals with ADD. Adults with ADD may experience difficulties at work and in relationships. They may also exhibit other emotional difficulties.

Medical science first noticed children exhibiting inattentiveness, impulsivity, and hyperactivity in 1902. Since that time, the disorder has been given numerous names, including Minimal Brain Dysfunction and The Hyperkinetic Reaction of Childhood. In 1980, the diagnosis of Attention-Deficit Disorder was formally recognized in the Diagnostic and Statistical Manual, 3<sup>rd</sup>-edition (DSM III) - the official diagnostic manual of the American Psychiatric Association (APA).

### The Disorder

ADD is a neurobiological disability that interferes with a person's ability to sustain attention or focus on a task and to delay impulsive behavior.

ADD characteristics often arise in early childhood. It is marked by behaviors that are chronic, lasting at least six months with onset before age seven. Characteristics of children with ADD can include:

- fidgeting with hands or feet
- difficulty remaining seated
- difficulty following through on instructions
- shifting from one uncompleted task to another
- difficulty playing quietly
- interrupting conversations and intruding into other children's games
- appearing to be not listening to what is being said
- doing things that are dangerous without thinking about the consequences

Students with ADD have a greater likelihood of grade retention, school drop out, academic underachievement, and social and emotional adjustment difficulties. This is probably because ADD makes children vulnerable to failure in the two most important arenas for developmental mastery – school and peer relations.

A significant percentage – perhaps as many as 50% – of children with ADD are never properly diagnosed (in Germany even more).

ADD is often inaccurately portrayed as a type of specific learning disability (SLD). It is not. Children with ADD are not unable to learn, but they do have difficulty performing in school due to poor organization, impulsivity, and inattention. However, some children with ADD also have a learning disability, further complicating identification and treatment.

**Note:** In this fact sheet, the term Attention-Deficit Disorder (ADD) is used to include the distinct categories of Attention-Deficit Hyperactivity Disorder (ADHD) and Undifferentiated Attention-Deficit Disorder (ADD).

Children with ADD do not routinely show signs of serious emotional disturbance (SED). However, if not properly diagnosed and treated, children with ADD can develop significant emotional difficulties, such as behavioral disorders, depression, and even substance abuse.

Many adults with ADD were never properly diagnosed as children. They grew up struggling with a neurobiological disability they didn't even know they had. Others were diagnosed as "hyperkinetic" or "hyperactive" and told their symptoms would disappear in adolescence. As a result, many developed other problems which masked the ADD.

Most adults with ADD are restless, easily distracted, have difficulty sustaining attention and concentrating, are impulsive and impatient, have frequent mood swings and short tempers, are disorganized and have difficulty planning ahead.

Adults with ADD often experience career difficulties. They may lose jobs due to poor job performance, attention and organizational problems, or relationship difficulties. On the other hand, adults who learn to adapt to their disability and to harness the energy and creativity that often accompanies ADD can thrive professionally.

## The Cause

In 1990, the *New England Journal of Medicine* published the results of a landmark study in which researchers at the National Institute for Mental Health used advanced brain imaging techniques to compare brain metabolism between adults with ADD and adults without ADD. The study documented that adults with ADD utilize glucose – the brain's main energy source – at a lesser rate than do adults without ADD. This reduced brain metabolism rate was most evident in the portion of the brain that is important for attention, handwriting, motor control and inhibition of responses.

These brain metabolism studies, combined with other data including family history studies and drug response studies, have convinced researchers that ADD is a neurobiological disorder and not caused by a chaotic home environment.

## Diagnosis and Treatment

Determining if a child has ADD is a multifaceted process. Many biological and psychological problems can contribute to symptoms similar to those exhibited by children with ADD. For example, anxiety, depression and certain types of learning disabilities may cause similar symptoms.

A comprehensive evaluation is necessary to establish a diagnosis, rule out other causes and determine the presence or absence of co-occurring conditions. Such an evaluation will often include intelligence testing plus the assessment of academic, social and emotional functioning and developmental abilities. Measures of attention span and impulsivity will also be used, as well as parent and teacher rating scales. A medical exam by a physician is also important.

Diagnosing ADD in an adult requires an examination of childhood, academic and behavioral history.

Treating ADD in children requires medical, psychological and educational intervention, and behavior management techniques. A multimodal treatment approach includes:

- parent training in behavior management
- an appropriate educational program
- individual and family counseling when needed
- medication when required

Psychostimulants are the most widely used medication for the management of ADD related symptoms. Between 70-80% of children with ADD respond positively to psychostimulant medications. These medications decrease impulsivity and hyperactivity, increase attention and, in some children, decrease aggression.

Behavior management is an important intervention with children who have ADD. The most important technique is positive reinforcement, in which the child is provided a rewarding response after a particular desired behavior is demonstrated.

Classroom success may require a range of interventions. Most children with ADD can be taught in the regular classroom with either minor adjustments to the classroom setting, the addition of support personnel, and/or "pull-out" programs that provide special services outside of the "classroom". The most severely affected may require self-contained classrooms.

Adults with ADD can benefit from learning to structure their environment. Psychostimulant medications can also be effective with adults who have ADD. Vocational counseling is often an important intervention. Short-term psychotherapy can help the patient identify how his or her disability might be associated with a history of sub-par performance and difficulties in personal relationships. And extended psychotherapy can help address any mood swings, stabilize relationships, and alleviate guilt and discouragement.

## Prognosis

Children with ADD are "at-risk" for school failure and emotional difficulties. However, with early identification and treatment, these children can succeed.

From 30-70% of children with ADD will continue to exhibit symptoms of ADD in adulthood.

Once properly diagnosed, adults with ADD can learn to adapt to their disability. Armed with an understanding of the disability and its implications, and with appropriate treatment, adults with ADD can succeed.

## Suggested Reading

- Barkley, R. (1990). *Attention-Deficit Hyperactivity Disorders: A Handbook for Diagnosing and Treatment*. New York: Guilford Press.
- Greenberg, G.S. & Horn, W.F. (1991). *Attention-Deficit Hyperactivity Disorder: Questions and Answers for Parents*. Champaign, IL: Research Press.
- Parker, H.C. (1988). *The Attention-Deficit Disorder Workbook for Parents, Teachers and Kids*. Plantation, FL: Impact Publications.

Need more information about Attention-Deficit Disorders or the national organization dedicated to helping children and adults with ADD succeed? write CH.A.D.D. at 499 Northwest 70<sup>th</sup> Avenue, Suite 101, Plantation, Florida 33317.  
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