



# NetNews

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## Attention-deficit/Hyperactivity Disorder (ADHD)

### What is ADHD?

Attention-deficit/Hyperactivity Disorder (ADHD) is a neurobiological disorder that is characterized by developmentally inappropriate levels of inattention, impulsivity, and hyperactivity. Between 3% and 7% of school-aged children are affected by ADHD.<sup>1,2</sup> **ADHD is a lifespan condition that affects children, adolescents and adults of all ages.** It affects both males and females, and people of all races and cultural backgrounds.

### History of ADHD

In 1902, the medical field began documenting children exhibiting symptoms of inattentiveness, impulsivity and hyperactivity.<sup>3</sup> Since this time, the disorder has been given numerous labels which include: minimal brain dysfunction, hyperkinetic reaction of childhood, and attention-deficit disorder with or without hyperactivity. With the most recent version of the Diagnostic and Statistical Manual (DSM-IV) classification system, the disorder was renamed Attention-deficit/Hyperactivity Disorder or ADHD.

While some individuals, including many professionals and the media, still refer to the condition as “ADD” (Attention Deficit Disorder), this term is no longer in widespread use.

### Onset of ADHD

Typically symptoms of ADHD first appear in early childhood. Many symptoms persist into adulthood and can pose life-long challenges in areas such as relationships, work, and home. Current DSM-IV diagnostic criteria state that the onset of symptoms must first occur before the age of seven. However, many leading researchers within the field of ADHD have argued that the criterion should expand the age range to include onset at anytime during childhood.<sup>4</sup>

### What Causes ADHD?

Current research has found strong evidence that the primary cause of ADHD is genetic, due to the combined effect of several different genes.<sup>5</sup> This means that ADHD runs in families. If a parent has ADHD, his or her child has more than a 50% chance of also being diagnosed with ADHD. Although environmental factors and prenatal and post-natal injuries can play a role in the cause of ADHD, twin studies have shown that 80% of problems with inattention, hyperactivity and impulsivity are the results of genetic factors.<sup>6</sup>

Current research does not support the idea that ADHD is caused by excessive sugar intake, food additives, excessive viewing of television, or poor parenting skills.



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## ADHD Subtypes

Within ADHD there are three primary subtypes: ADHD predominantly inattentive type, ADHD predominantly hyperactive-impulsive type, and ADHD combined type. A diagnosis of one type or another depends on the specific symptoms (i.e., the “diagnostic criteria”) that person exhibits. For a diagnosis of ADHD, six or more of the symptoms must be present. In addition, the symptoms must not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder and are not better accounted for by another mental disorder.

### *ADHD inattentive type*

- Often fails to give close attention to details or makes careless mistakes
- Often has difficulty sustaining attention in tasks
- Often does not seem to listen when spoken to directly
- Often does not follow through on instructions and fails to finish tasks
- Often has difficulty organizing work and activities
- Often avoids or dislikes tasks that require sustained mental effort
- Often loses things necessary for tasks or activities
- Is often easily distracted by extraneous stimuli
- Is often forgetful in daily activities

### *ADHD hyperactive-impulsive type*

- Often fidgets with hands or feet or squirms in seat
- Often leaves seat in situations in which remaining seated is expected
- Often runs about or is otherwise physically active in situations where inappropriate (in adolescents and adults, may be limited to subjective feelings of restlessness)
- Often has difficulty playing or engaging in leisure activities quietly
- Is often “on the go” or often acts as if “driven by a motor”
- Often talks excessively

- Often blurts out answers before questions have been completed
- Often has difficulty awaiting turn
- Often interrupts or intrudes on others

### *ADHD combined type*

Individual meets both sets of inattentive and hyperactive / impulsive criteria.

In addition to the symptoms listed above, the presence of significant impairment in two or more major life settings must occur in order to diagnose ADHD.

## Adults and ADHD

In the past, it was widely believed that children outgrew ADHD by the time they reached adolescence since hyperactivity often diminishes during the teen years. However, it is now known that ADHD is a lifespan disorder and symptoms often persist from childhood through adolescence and into adulthood. Research suggests that among those children clinically diagnosed with the disorder in childhood, up to 65 percent may continue to meet diagnostic criteria in adulthood. Adults who have retained some, but not all, of the symptoms of childhood ADHD may be diagnosed as having ADHD in partial remission. Whether or not they continue to meet the full diagnostic criteria for ADHD in adulthood, at least 50-70 percent may continue to manifest some symptoms that cause some level of impairment in their adult life.<sup>7</sup> Current research has found that roughly 2 to 4 percent of adults have ADHD.

Research on adult ADHD is still in an early stage of development. The current criteria for ADHD emphasize a childhood presentation, and there is a growing body of evidence that suggests that the diagnostic features of ADHD take a different form in adults.<sup>8</sup> One example of this is within the area of hyperactivity. Although hyperactivity can be a common feature among children with ADHD, it is likely to be less overt in adults. The “on the go” behavior seen in children with ADHD is replaced in adults with restlessness, difficulty relaxing, and a feeling of chronically being on edge.

Recently a new set of diagnostic symptoms for adults was proposed by Drs. Barkley and Murphy at the CHADD 18<sup>th</sup> Annual Conference in Chicago. In order to develop this new set of diagnostic symptoms, Dr. Barkley and Kevin Murphy, Ph.D., conducted a comprehensive study of the symptoms of ADHD in adults in order to identify the potential most predictive symptoms for diagnosis. In order to be diagnosed with ADHD, an adult would need to have six out of nine of the following proposed symptoms: <sup>9</sup>

1. Often easily distracted by extraneous stimuli
2. Often makes decisions impulsively
3. Often has difficulty stopping activities or behavior when he or she should do so
4. Often starts a project or task without reading or listening to directions carefully
5. Often shows poor follow-through on promises or commitments he or she makes to others
6. Often has trouble doing things in their proper order or sequence
7. Often more likely to drive a motor vehicle much faster than others
8. Often has difficulty sustaining attention in tasks or leisure activities
9. Often has difficulty organizing tasks and activities

## Strategies for Teaching ADHD Adults

Some of the difficulties adults with ADHD may have in a learning environment include procrastination, poor organization and time management resulting in academic underachievement, poor self-esteem, and difficulty keeping current with assignments and reading. Distractibility and difficulty focusing can lead to problems with reading comprehension, note-taking, and completing assignments and tests in a timely fashion. The following strategies can be used to help address some of the impediments listed above.

### *Problem solving:*

- Teach learners explicit steps for problem solving.
- When faced with a problem, help learners brainstorm potential solutions to the problem and discuss the pros and cons of each solution.

### *Poor sense of time, poor organization skills:*

- Be predictable: Structure and consistency is important for adults with ADHD. Coach them on how to prioritize tasks for themselves.
- Help learners determine the amount of time an activity will take by having them keep a time log. Prior to starting this, have the learners predict the time that will be required for the activity.
- Set alarms on PDAs, watches or phones that will signal learners when it is time to move on to the next task.
- Teach learners how to use a daily planner. Planner must work for the learners and require minimal effort and upkeep.
- Identify all of the materials learners will need during a session, rather than having them identify the needed materials as they are working on an assignment. Coach them to have a plan for what to do if they get stuck so they don't waste time.
- Tell learners at the beginning of a lesson how much time they will have to complete it.
- Provide advance warning that a lesson is about to end. Announce 5-10 minutes before the end of a lesson how much time remains.

### *Poor comprehension, lack of self-monitoring:*

- Prepare learners for their lesson by giving them an outline of the material that will be covered during the session. Point out or discuss key concepts or vocabulary prior to reading so learners can focus on relevant details.
- Review previous information learned on a topic before covering new information. Help learners link the old information with the new information. At end of lesson, require learners to sum up new content that was covered.
- When reading, encourage learners to make short notes in the margins that summarize the main idea of a paragraph. If the reading passage is difficult, have learners summarize the main idea of every 2-3 sentences.

- Use cooperative learning strategies. Examples of this include:
  1. Peer coaching: Learners take turns being the instructor and leading their peers in using comprehension strategies.
  2. Reciprocal questioning: As learners progress through a reading passage, they take turns discussing what they are reading and how it relates to previous information they have read. Reciprocal questioning is a technique that allows learners to check their comprehension by asking each other questions.
  3. Think-Pair-Share: In this strategy teacher asks learners to think about a topic, pairs learners to discuss the topic, and then has pairs share ideas with the group.
- Highlight key words in the instructions or worksheets to help learners focus on key instructions. When reading, show learners how to identify and highlight a key sentence, or have them write the key sentence on a separate sheet of paper. In math, show learners how to underline the important facts or operations needed to solve a problem.

***Difficulty getting started on activities, persisting, managing frustration and diminished motivation:***

- Help learners break large projects into smaller tasks. Once tasks have been identified, help learners attach due dates to each step and check in with them to monitor progress.
- Set mini-goals throughout a project and have learners earn rewards along the way to increase motivation.
- Rotate between subjects that the learners find interesting and boring.
- Limit time spent on each task.
- Place learning in a meaningful or authentic context. For example, use real life situations to illustrate a concept.

**Resources:**

CHADD: Children and Adults with ADHD. <http://www.chadd.org>  
 Attention Deficit Disorder Association. <http://www.add.org>  
 Attention Deficit Disorder Resources. <http://www.addresources.org>  
 Nadeau, K.G. (1997). *ADD in the Workplace*. Bristol, PA: Brunner/Mazel, Inc.  
 Kohlberg, J. (2002). *ADD-Friendly Ways to Organize Your Life*. Routledge Press.

**For further consultation on ADHD, call Becky Lawyer, ADHD Specialist, at 952-922-8374. LDA also offers Diagnostic Assessments for ABE metro learners that will “rule in” ADHD. If you have questions about this new assessment, or have students who might benefit from it, call Mike Anderson, Assessment Specialist, at 952-922-8374.**

**References:**

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- <sup>6</sup> Pliszka, S.R. (2003). *Neuroscience for the mental health clinician*. New York: Guilford Press.
- <sup>7</sup> R. A. Barkley & K. R. Murphy (2006). *Attention deficit hyperactivity disorder: A clinical workbook* (3rd ed.). New York: Guilford Publications.
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- <sup>9</sup> Barkley, R.A., Murphy, K.R. & Fischer, M. (2007). *AD/HD in Adults: Original Research, Integration and Clinical Implications*. New York: Guilford Publications.