

Attention-Deficit/Hyperactivity Disorder (ADHD)

What is attention-deficit/hyperactivity disorder (ADHD)?

- Attention-deficit/hyperactivity disorder (ADHD) is a behavior disorder characterized by attention problems or by hyperactivity, impulsivity, and distractibility (or by both). Sometimes, children are just distractible or inattentive, without the hyperactivity. This pattern is especially common in girls.
- Attention-deficit/hyperactivity disorder is usually diagnosed in childhood. The symptoms of ADHD, when present, are almost always apparent in some form by the age of 7 years. The inattentive type of ADHD may not be evident until a child is expected to meet some of the higher expectations of third or fourth grade.

How common is it?

- Estimations suggest that between 3% and 9% of all children have ADHD.
- It is more common in boys than in girls, with the ratio estimated at approximately 4:1.

What are some common characteristics of children who have ADHD or of ADHD as children present with it?

- Many typically developing children, especially preschoolers, can normally or naturally appear very energetic, inattentive, and impulsive.
- In children with ADHD, the symptoms of inattention, impulsivity, and hyperactivity are more pronounced than in the average child. These symptoms interfere with learning, school or preschool adjustment, and the child's relationship with family and friends. These symptoms may persist through adolescence and into adulthood.
- It is important to recognize that children with ADHD may be acutely aware of social and academic behaviors and performance expectations that they are not meeting and may wish to do what is expected but cannot.
- Attention-deficit/hyperactivity disorder fundamentally results from deficiency of neurotransmitters in the central nervous system. It is a biochemical deficiency, just as diabetes results from a deficiency of insulin.
- Attention-deficit/hyperactivity disorder is not a matter of "bad attitude" or not trying hard enough; children with untreated ADHD have no more control over their behaviors than children with untreated diabetes have over their blood glucose levels.

- The most common symptoms of ADHD include
 - Inattention
 - Short attention span for age
 - Difficulty listening to others
 - Difficulty attending to details
 - Easily distracted
 - Poor organizational or study skills for age
 - Forgetful
 - Impulsivity
 - Often interrupts others
 - Has difficulty waiting for his or her turn in school or social games
 - Acts before thinking; often takes risks
 - Tends to blurt out answers, instead of waiting to be called on
 - Hyperactivity
 - Is always in motion, as if "driven by a motor," with behavior that differs substantially from that of typically developing children
 - Has difficulty remaining in his or her seat when it is expected
 - Fidgets with hands, or squirms, when seated or while standing and waiting
 - Talks excessively
 - Has difficulty engaging in quiet activities
 - Is unable to stay on task; shifts from one task to another without bringing any to completion
- Attention-deficit/hyperactivity disorder is the most commonly diagnosed behavior disorder of childhood.
 - The diagnosis can be made by the pediatrician/primary care provider (PCP) in the medical home, a developmental-behavioral pediatrician, a child psychiatrist, a neurologist, a child psychologist, or a qualified mental health professional.
 - A detailed history of the child's behavior from parents/guardians and teachers, a physical examination, and observations of the child's behavior contribute to the diagnosis of ADHD.
 - Psychological or educational testing may help define co-occurring behavioral or learning disabilities.

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Who might be on the treatment team?

- The treatment team for a child with ADHD includes the pediatrician/PCP in the medical home, the parents/guardians, the teachers, the mental health professionals, the educational specialists, and other professionals who are involved with the child.
- Treatment should include education for children and their families, as well as behavior and medication management if indicated.
- Pediatricians/PCPs should also establish a long-term plan for systematic follow-up support (a medical home) for the child, as with any child who has a chronic condition.

What are some elements of a Care Plan for children with ADHD?

The following behavior management skills can be included in a Care Plan:

- Praise appropriate behaviors.
- Ignore undesired behaviors that are not dangerous or intolerable.
- Praise and ignore in combination with each other.
- Implement point systems for behavior rewards and consequences.
- Assign appropriate seating in a classroom to decrease distraction.
- Establish daily report cards or communication logs to travel between home and school.

What adaptations may be needed?

Medications

- Medications are used to improve the symptoms of inattention, distractibility, impulsivity, and hyperactivity.
- Stimulant medications are the most frequently used medications for ADHD. There are short-acting (4-hour), intermediate-acting (6- to 8-hour), and long-acting (12-hour) stimulant medications.
- Many long-acting pills cannot be crushed and need to be opened and sprinkled onto a teaspoon of applesauce or yogurt. The beads need to be swallowed whole. A liquid form of short-acting medication has been available for a while. A liquid form of long-acting medication was recently made available, and now there are long-acting chewable formulations as well.

- Newer medications include non-stimulant medications, which may cause fatigue in some children. Children on these medications often require increases in fluids during hot weather to prevent fatigue.
- Some children require a medication dose during school or child care.
- All staff who will be administering medication should have medication administration training (see Chapter 6).
- These medications may have side effects such as decreased appetite, trouble sleeping or napping, headache, fatigue, and stomachache.

Physical Environment and Other Considerations

- Children with ADHD may be eligible for accommodations in school or child care through Section 504 of the Rehabilitation Act of 1973. This eligibility may allow a child preferential seating in the classroom, the ability to take a test in a quiet room, or another structure or support that will facilitate succeeding in school or child care.
- If ADHD symptoms significantly interfere with learning, an Individualized Education Program can be requested as per the Individuals with Disabilities Education Act.
- Develop strategies for accommodating children with ADHD. Suggestions include
 - Provide children with a consistent routine for the day and a structure to the environment. Let them know when the routine is changing or something unusual is going to happen, such as a class trip or a special visitor.
 - Give the child clear boundaries and expectations. These instructions and guidelines are best given right before the activity or situation. As much as possible, give clear instructions and explanations for tasks throughout the day. If a task is complex or lengthy, break it down into steps.
 - Devise an appropriate reward system for good behaviors or completing a certain number of positive behaviors, such as a merit-point or gold-star program with a specific reward (eg, a favorite activity). The strongest reward is often telling the child “Good job!” right at the time that the positive behavior occurs. Be sure children with ADHD get recess and time for physical activity. Do not take away outdoor time for undesired behaviors.
 - Avoid using food and especially candy for rewards.
 - Use a timer for activities to build and reinforce structure.
 - Communicate regularly with the child’s parents/guardians so that behaviors can be addressed before they become disruptive.

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- Children with ADHD need role models for behavior more than other children. The adults in their lives are very important in this regard. Keep in mind that ADHD is heritable, and parents and other family members may very well themselves have ADHD, which may not have been recognized when these adults were children. These adults were therefore likely subjected to undeserved punishment, failure, and stigmatization.

What should be considered an emergency?

- Attention-deficit/hyperactivity disorder does not have any specific emergencies associated with it.
- Emergencies may occur if an overdose of medication is given. Call parents/guardians if a known overdose of medication is given at school or child care or if a child's behavior changes suddenly and erratically.
- Emergency medical services (911) should be called if a child on medication becomes either overly drowsy or lethargic.

What are some resources?

- American Academy of Pediatrics: <https://shop.aap.org>, 1-866-843-2271
 - *ADHD: What Every Parent Needs to Know*, 2nd Edition (book)
 - *Caring for Children With ADHD: A Resource Toolkit for Clinicians* (toolkit)
- Children and Adults with Attention-Deficit/Hyperactivity Disorder: www.chadd.org, 1-800-233-4050
- Learning Disabilities Association of America: www.lidaamerica.org, 412/341-1515

