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Child and Adolescent Clinic
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Attention Deficit Hyperactivity Disorder

Introduction

Attention Deficit Hyperactivity Disorder (ADHD) is one of the most common chronic childhood disorders. Currently, about 4% to 12% of all school-aged children in the United States may be affected. ADHD is a neurobehavioral disorder (a disorder where nerves affect behavior) that usually appears in children before age 7.

Children with ADHD may have a hard time controlling their behavior in school and social settings. They often fail to reach their full academic potential. Clinically, the child may present with varying symptoms of hyperactivity, impulsivity, and/or inattention. The child may be easily distracted, be unable to pay attention and follow directions, be overactive, and/or have poor self-control.

The *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*, characterizes the following 3 subtypes of ADHD:

- **Inattentive only (ADHD-IA)** – Formerly known as Attention Deficit Disorder [ADD], children with this form of ADHD are not overly active. Because they do not disrupt the classroom or other activities, their symptoms may not be noticed. Among girls with ADHD, this form is most common. About 30% to 40% of children with ADHD have this subtype.
- **Hyperactive/Impulsive (ADHD-H/I)** – Children with this type of ADHD show hyperactive and impulsive behavior but can pay attention. This subtype accounts for about 10% of children with ADHD.
- **Combined Inattentive/Hyperactive/Impulsive** – Children with this type of ADHD show all 3 symptoms. This is the most common type of ADHD. About 50% - 60% of children with ADHD have this subtype.

Collaboration

The diagnosis of ADHD relies on the documentation of symptoms related to the child's poor functioning in different environments. This means that the school, family, and doctor must work together to document specific symptoms and how they affect the child. Currently, there are no biological markers or computerized tests that diagnose ADHD.

Once a diagnosis of ADHD has been made with confidence, the best treatment for your child will be discussed. You and the doctor will develop a plan that includes the appropriate medication and/or behavior therapy to help your child do well. The care of most children with ADHD can be managed through observations and reports from the teacher.

The doctor will:

- Review information about your child's behavior.
- Identify other medical, psychological, or social problems that might be causing and/or making your child's symptoms worse.
- Refer your child for further tests, as needed.
- Arrange other treatment (e.g. educational, psychological) as needed.
- Provide appropriate medical treatment.
- Monitor progress.
- Support the parents in their role as advocates for their child.

Diagnosis

An effective treatment begins with an accurate, well-established diagnosis.

This American Academy of Pediatrics clinical practice guideline contains the following recommendations for diagnosis of ADHD:

1. In a child 4 to 18 years old who presents with inattention, hyperactivity, impulsivity, academic underachievement, or behavior problems, the pediatrician should initiate an evaluation for ADHD.
2. The diagnosis of ADHD requires that a child meet current *Diagnostic and Statistical Manual of Mental Disorders* criteria.
3. The assessment of ADHD requires evidence directly obtained from parents or caregivers regarding the core symptoms of ADHD in various settings, the age of onset, duration of symptoms, and degree of functional impairment.
4. The assessment of ADHD requires evidence directly obtained from the classroom teacher (or other school professional) regarding the core symptoms of ADHD, duration of symptoms, degree of functional impairment, and coexisting conditions.
5. Evaluation of the child with ADHD should include assessment for associated (coexisting) conditions.
6. Other diagnostic tests are not routinely indicated to establish the diagnosis of ADHD but may be used for the assessment of other coexisting conditions (i.e., Learning disabilities, mental retardation).

Evaluation

The above guidelines are not the only source in the evaluation of children with ADHD. Rather, it helps doctors by giving them a framework for diagnostic decision-making. It does not replace clinical judgment or establish a protocol for all children with the conditions.

A child must meet current *DSM* criteria for a diagnosis of ADHD to be appropriate. To confirm a diagnosis of ADHD, these behaviors must:

- Occur in more than one setting, such as home, school, and social situations.
- Occur to a greater degree than in other children the same age.
- Begin onset during childhood or adolescence and continue on a regular basis for more than 6 months.
- Significantly impair the child's academic and social functioning.
- Not be better accounted for by another disorder.

Many school-aged children have some of these symptoms. They might come and go, or be mild. How often the symptoms occur must be determined to make the diagnosis of ADHD. The NICHQ Vanderbilt Parent and Teacher Assessment Scales are one way to do this. These scales screen for the following coexisting conditions: oppositional-defiant disorder, conduct disorder, and anxiety and depression. If a screen is positive, a more detailed evaluation is needed. The scales will not pick up learning disabilities, suicidal behaviors, bipolar disorder, alcohol and drug use, or tics – all of which may be present in a child with ADHD.

Teacher Assessment

Teachers often are the first to notice behavior signs of possible ADHD. Children 6 to 12 years old spend many of their waking hours at school. The teacher is a powerful source of information about the child's behaviors, interactions, and academic performance. To make an accurate diagnosis, information about the child will be needed directly from the child's classroom teacher or another school professional to confirm the diagnosis and identify potential learning disabilities.

This information can be obtained using narratives from the teacher or specific rating scales. Some doctors find it helpful to do both. In addition to using an ADHD rating scale, doctors find it helpful to talk directly with the teacher. We may ask the teacher to describe:

- The child's behavior in the classroom
- The child's learning patterns
- How long the symptoms have been present
- How long the symptoms affect the child's progress at school
- Ways the teacher has adapted the classroom program to help the child
- Whether other conditions contribute to or affect the symptoms

This interview can take place over the phone or be a written narrative or a paper or computer-based questionnaire.

We also ask to see report cards and samples of the child's schoolwork, as well as any formal testing performed by the school. Parents can access and print their child's report card through the school district's online Family Access Portal, such as *Skyward*.

Treatment

A treatment plan is tailored to the needs of the child and family. It may require medical, educational, behavioral, and psychological interventions. This approach can improve the child's behavior in the home, classroom, and social settings. In most cases, successful treatment will include a combination of stimulant medication and behavior therapy.

The American Academy of Pediatrics clinical practice guideline, "Treatment of the School-Aged Child with Attention Deficit Hyperactivity Disorder," contains the following recommendations for treatment of ADHD in children aged 4 to 18 years:

1. The pediatrician should establish a treatment program that recognizes ADHD as a chronic condition.
2. The pediatrician, parents, and the child, along with the school personnel, should specify goals to guide management.
3. The pediatrician should recommend stimulant medication and/or behavioral therapy as appropriate to improve goals in children with ADHD.
4. When the plan for a child with ADHD has not met the goals, the doctor should evaluate the original diagnosis, use of all appropriate treatments, adherence to the treatment plan, and presence of coexisting conditions.
5. The pediatrician should periodically provide a systematic follow-up for the child with ADHD. Monitoring should be directed to the goals and adverse effects by obtaining specific information from parents, teachers, and the child.

The American Academy of Pediatrics guidelines recognize the variation in severity and complexity of children presenting with ADHD and specifically limits the target population to children aged 4 to 18 years with ADHD, but without major coexisting conditions.