Attention-deficit hyperactivity disorder (ADHD) is defined as a pattern of behaviors in which a child shows, usually before the age of 7, developmentally inappropriate levels of inattention, impulsivity, or hyperactivity. It is the most common mental health problem of childhood, affecting 3% to 5% of the population, and is considerably more common in boys than in girls. The behavior of children with ADHD often results in serious disturbances in their relationships with parents, teachers, peers, and siblings, as well as academic problems. The symptoms and criteria for a diagnosis of ADHD from the Diagnostic and Statistical Manual of The American Psychiatric Association are described below. A child must show symptoms that cause problems and are present to a greater degree than other same age children.

**Symptoms of Inattention:**
- fails to give close attention to details or makes careless mistakes
- has difficulty sustaining attention in tasks or play activities
- does not seem to listen when spoken to directly
- does not follow through on instructions and fails to finish tasks (not due to oppositional behavior or failure to understand instructions)
- has difficulties organizing tasks and activities
- avoids or dislikes tasks that require sustained mental effort (such as schoolwork or homework)
- loses things necessary for tasks or activities (e.g., toys, books)
- is easily distracted
- is forgetful in daily activities

**Symptoms of Hyperactivity:**
- fidgets with hands or feet or squirms in seat
- leaves seat in classroom or in other situations in which remaining seated is expected
- runs or climbs excessively when it is inappropriate (in adolescents, may be feelings of restlessness)
- has difficulty playing or engaging in leisure activities quietly
- is always “on the go” or acts as if “driven by a motor”
- often talks excessively

**Symptoms of Impulsivity:**
- blurts out answers before questions have been completed
- has difficulty awaiting turn
- interrupts or intrudes on others (e.g., butts into conversations or games)

**To receive a diagnosis of ADHD, a person must:**
- Have six or more symptoms of either inattention (listed above on the left) or hyperactivity/impulsivity (listed above on the right)
- Symptoms must have persisted for at least six months and must be present to a degree that creates problems and is inconsistent with developmental level
- At least some symptoms that caused impairment (that is, problems at home or school) were present before the age of seven
- Some symptoms be present in at least two different settings (e.g., home, school), and there must be clinically significant impairment in social or academic functioning at home or school

**There are three different subtypes of ADHD, these are:**
- Combined Type: 6 symptoms present from each of the lists (left and right) above
- Predominantly Inattentive: 6 symptoms present that are listed above on the left
- Predominantly Hyperactive-Impulsive: 6 symptoms present that are listed above on the right

Children do not have to have all of these symptoms, nor do they have to show symptoms in all settings for a diagnosis to be made. For example, most children with ADHD can pay attention in situations in which they are very interested (e.g., a favorite television show), or in a one-to-one setting such as a testing session with a psychologist. Since all children sometimes show some of these behaviors some of the time, it is important that the behaviors be present to an extreme degree compared to other children of the same age and that they be causing significant disruption to the child, his or her family, peers, or classroom before the child is diagnosed as ADHD. Diagnosis is a complex process that cannot be based on a single visit to the doctor. Instead, information must be gathered from parents and teachers, and from observations of the child in natural settings. When information from parents and teachers conflicts, more weight is usually given to teachers because they are usually more familiar with normal behavior for an age group.

In addition to the defining characteristics listed above, children with ADHD often exhibit other problems including defiant and noncompliant behavior toward adults, verbal and physical aggression towards peers and siblings, low self esteem (particularly in adolescents), and learning disabilities. Also, family problems often accompany ADHD, including marital problems, alcohol problems (especially in fathers) and stress and depression (especially in mothers). Therefore, these parental problems need to be assessed and treated along with the children's problems.
The following additional facts about ADHD are important for parents to know:

• There is no test for ADHD. To make a diagnosis, information regarding the behaviors listed above must be gathered from parents and teachers. Standardized rating scales and interviews should be used.

• Diagnosis is not as important as a good assessment of the problems that a child is having in daily life functioning and what can be done to improve the problems.

• The cause of ADHD is unknown. Most professionals believe that the cause is based in the brain, but the exact nature of the cause is unclear. It is known that diet is not a cause of ADHD. Neither artificial substances in foods nor sugar cause ADHD, and putting a child with ADHD on a special diet will not solve his or her problem.

• Most children do not outgrow ADHD. More than two-thirds of children with ADHD continue to display serious problems in adolescence and adulthood, and often their problems worsen. ADHD adolescents are at increased risk for school failure and dropout, possible substance or alcohol abuse, and delinquency. ADHD adults often have difficulties in job performance, coping with stress, relationships with other people, substance and alcohol abuse, and criminal behavior. Parents should be wary of advice to wait and see if their child outgrows the problem; waiting rarely helps.

• Appropriate evaluation and treatment of ADHD involves the cooperation of the child’s parents, physician, school personnel, and mental health professionals such as psychologists and psychiatrists.

• Appropriate, early, intensive, and long-term treatment is needed to deal effectively with ADHD. ADHD is a chronic problem and it needs chronic treatment that changes form over time and in different settings but does not stop.

• Many treatments, although widely used, are not effective with ADHD. Traditional, one-to-one therapy, play therapy, or cognitive therapy done in a therapist’s office does not work for children with ADHD. Neither chiropractics, biofeedback (neural therapy), allergy treatments, diets or dietary supplements, perceptual or motor training, sensory integration training, nor treatments for balance help children with ADHD.

• In contrast to these approaches, comprehensive treatment, implemented in the child’s home and school environments and in settings in which the child interacts with peers, is most effective. Behavior therapy/modification, in which parents and teachers are taught how to work with their children, is the most widely recommended and effective, nonmedical, short-term treatment for ADHD. Behavior modification includes
  • establishing specific daily goals for the child,
  • establishing and consistently enforcing clear rules,
  • giving clear and appropriate commands,
  • praising children for desired behaviors and ignoring negative behaviors that can be ignored,
  • using rewards (for example, points) to encourage good behaviors,
  • using appropriate, nonphysical punishments (for example, time out) to discourage bad behaviors, and
  • using a Daily Report Card to motivate the child and facilitate communication between school and home.

It usually takes 8 to 12 clinical or inservice sessions for parents and teachers to learn these techniques. Treatment for peer difficulties involves working directly with the child, must be conducted in a natural setting such as a school or summer camp/summer treatment program, and requires intensive and long-term involvement.

• For many children with ADHD, the combination of behavior modification and medication is the most effective treatment. Behavior modification should be used at home, at school, and with peers. If these treatments are not enough, medication should then be evaluated to determine whether it adds to the effectiveness of the other treatments. One big advantage of combining medication with behavior modification is that a child’s medication dose can usually be reduced.

• Medication with a psychostimulant drug, such as methylphenidate (Ritalin, Concerta, Metadate-CD), amphetamine (Adderall, Adderall-XR, Dextedrine), or pemoline (Cylert) can be an effective short-term treatment for ADHD, especially when combined with behavior therapy. Other medications for ADHD carry considerably greater risks than these three drugs and should be used only as treatments of last resort. Medication alone is not an effective long-term treatment; that is, it does not decrease a child’s risk for the bad outcomes of adolescence and adulthood noted above. Therefore, medication should never be relied upon as the only treatment for a child with ADHD.

• If a child with ADHD is medicated, medication should be given only after other appropriate treatments have been established at home and at school. Because not all children with ADHD respond to stimulant treatment, it is important to evaluate carefully whether the medication is helping the child. A comprehensive, double-blind, school-based medication evaluation should be conducted prior to a long-term medication regimen to insure that a child is showing a good response to medication. This requires a process involving detailed questionnaires completed daily by parents and teachers. Ongoing monitoring should be conducted to be sure that medication continues to work for the child. Teachers must play a major role in this evaluation and monitoring.

• Following a 1991 ruling of the U.S. Department of Education, children with ADHD are now eligible to receive special educational services in school settings under the IDEA (Individuals with Disabilities Education Act), and Section 504 of the 1973 Rehabilitation Act. This legislation mandates that appropriate educational services be provided for all children with special needs, including children with ADHD, either in regular or special education classes.

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