James L. Holly, M.D.

ADHD - Attention Deficit Hyperactive Disorder

By: Bobbie H. Colbert, MD, FAAP

ADHD is one of the most commonly diagnosed mental disorders of children accounting for 30-40 percent of all referrals made to child guidance clinics. In addition, this disorder accounts for a significant percentage of recent referrals in adult treatment settings. It is characterized by two sets of core systems:

- Inattention
- A combination of hyperactive and impulsive behaviors.

Inattention symptoms include making careless mistakes and being disorganized. These children have difficulty:

- Listening to others,
- Following instructions or
- Completing tasks.

They also:

- Avoid tasks that require prolonged attention,
- Are forgetful and
- Can be easily distracted during activities.

Hyperactive and impulsive characteristics include restless and fidgety behavior and intruding on others. ADHD is associated with deficits in academic skills, social skills and family skills. It may be accompanied by sadness and anxiety, and by aggressiveness and low self-esteem. Untreated ADHD can have serious long-term consequences.

Although ADHD is an extremely common disorder, there are many unknown and poorly understood aspects of the disorder. Its different presentations make it difficult for experts to define the disorder. Scientific evidence strongly suggests a biological basis for the underlying causes. These causes include:

- Genetic transmission,
- Personality or temperament,
- Brain structure differences and
- Brain chemical differences.

Varied biological and environmental risk factors interact to produce ADHD. For example, someone with a genetic tendency toward a high activity level might be in a high stress family environment, which would increase the likelihood of having ADHD. On the other hand, there may be a variety of protective factors in the family, which keep appearance of the disorder below the level of impairment, such as: good economic resources, strong social skills, or a positive family environment.

Although ADHD is extremely common, the disorder is both over-diagnosed and under-diagnosed. Many children are not being diagnosed by practitioners in the community and treated appropriately, and many are diagnosed and given medication who do not qualify for the diagnosis. There also appears to be difference in prevalence of ADHD relative to gender.

Boys are 3-10 times more affected than girls. This gender difference disappears in adults. It is also clear that those with ADHD continue to have problems through adolescents. Those adolescents who do not experience continuing signs of ADHD tend to function the same as their normal peers. Those with ADHD have significant problems in school. About 25% of youth with ADHD drop out of high school.

There are no definitive tests that clearly demarcate ADHD from normal behavior. A combination of physician interview, parent-teacher observation and standardized assessment measurements are needed to diagnose ADHD. To assess impairment, physicians must explore symptoms in at least four main areas of functioning:

1. School or job performance
2. Family and home environment
3. Social relationships
4. Personal functioning, including self-image, belief in one?s abilities, and mood

Because children minimize the severity or significance of their problems, parent and teacher input is essential to diagnosis. Teacher rating scales are the most effective way to gather information. Also, teachers can identify children with ADHD through specific behaviors that they exhibit such as talking out loud without permissions, getting out of their seat without permission. Grades and report cards provide significant evidence of student performance in helping to determine the need for intervention. Homework assignments allow parents to clearly observe a child?s work habits and skills. Changes in homework completion can also indicate response to treatment. The amount of frustration, stress, and struggle related to school or homework indicates a child?s inability to stay on task, work independently and self-correct mistakes. It must be determined whether these signs reflect an attention deficit, a learning disability, or teaching material poorly suited to the child?s ability. Research indicates that inattentiveness negatively affects reading achievement as well as attitudes about reading. However, reading achievement affects

attentiveness in the classroom. Someone who is a poor reader could have a learning disability in reading and display poor attention because of frustration, or could be a poor reader because of concentration difficulties due to ADHD.

Messiness of a child?s desk at school is a reasonable indicator of organization and attention to rules. Poor peer relationships at school often reflect poor social skills due to problems obeying rules during play activities. That is, impulsivity.
Family history helps in making a diagnosis of ADHD. Family-genetic studies show a significant likelihood of several psychiatric conditions in first-degree relatives of children with ADHD. For instance, someone whose parents have both been diagnosed with ADHD will be more likely to be diagnosed with ADHD. Children with a parent having Bipolar Disorder are at higher risk for Bipolar Disorder. Children with many of these disorders may be misinterpreted as ADHD because of related symptoms.

Treatment with drugs is the oldest and most thoroughly studied treatment of ADHD. However drug therapy is far from routine involving much more than just prescribing pills. Current ADHD treatment involves the use of medications as well as psychological and social treatment. Most effective treatment will result from a combination of both these modalities.

Stimulants are the most important drugs used in treating ADHD. The most commonly used include:

- Methylphenidate (Ritalin)
- Dextroamphetamine (Dexedrine)
- Adderall
- DextroStat
- Pemoline (Cylert)
- Concerta
- Metidate

These medications are usually titrated according to their effectiveness. The stimulating effects of these drugs produce an alert focused attention. The inhibitory effects shut out unwanted stimuli or responses. The exact mechanisms of stimulants are not entirely understood. Stimulant drugs are typically administered one to three times daily. They have been used for over 40 years in the treatment of children with ADHD. Their safety record is unparalleled. However, there are several concerns that require special consideration. Side effects such as appetite suppression and insomnia may require regular monitoring. Many patients fail to take medications as prescribed, which affects successful treatment. Some factors affecting the patient or patient?s family prevent the use of stimulate medications that although rare must also be considered. These include growth suppression with large doses over a sustained period of time, liver complications with Pemoline and rebound affects. Most side affects are preventable with monitoring and careful titration of these medications.

Psychosocial treatment that focuses on parenting skills, behavior management and education is often the first line of treatment for ADHD and is often successful. Medication treatment by itself is insufficient in treating ADHD. While some treatments may remove symptoms, they may have no effect on functioning, which requires learning new skills. Areas requiring new skills for both patients and their families include social adjustment, negative behavior and thoughts, academic skill deficits and parental/family stress reduction.

Multi-modal therapy includes:

- Medical therapy
- Parent training
- Classroom management
- Behavior reinforcement
- Social Skills Therapy

This combination is believed to provide the best treatment possible and recommended by most physicians. If your child needs help, get it; if you need help, ask for it.

Remember, it is your life and it is your health.