

Recognizing Signs of ADHD

Childhood is a time of exuberance — an outpouring of energy, creativity, and learning about physical, social and emotional limits. For many children, the early school years are increasingly frustrating because they find it difficult to sit still and focus. This frustration can lead to a host of behavioral and relationship issues. Many of these children are suffering from a constellation of symptoms referred to as **Attention Deficit Hyperactivity Disorder (ADHD)**.

ADHD is the most common mental health complaint among children. The number of children, as well as adults, diagnosed with ADHD is increasing. Although many children display attention disorder behaviors as early as preschool, parents often dismiss them as signs of high energy. While most children are energetic, ADHD behaviors are extreme and often described as excessive, destructive, unsafe (due to impulsiveness and risk taking), detrimental to progress in school, and harmful to close personal relationships.

Distinguishing ADHD

The *Diagnostic and Statistical Manual of Mental Disorders-IV*, Published by the American Psychiatric Association, describes three subtypes of ADHD:

- **Inattentive**- has trouble getting focused or maintaining focus on a task or activity
- **Hyperactive impulsive**- very active and acts without thinking
- **Combined**- inattentive, impulsive and hyperactive

Facts About ADHD

- **3-5% of school-age children are diagnosed with ADHD. Many more are undiagnosed.***
- **Three times as many boys as girls suffer from ADHD.***
- **78% of pediatric prescriptions are for attention issues.***
- **Half of the children with ADHD also have a learning disability.***
- **50-80% of ADHD cases diagnosed in childhood persist into adolescence.***
- **30-50% of adolescent cases of ADHD persist into adulthood.***

* Data adapted from the St. Louis Psychologists and Counseling Information and Referral.

If left untreated, children with ADHD can develop self-destructive behaviors. They can fall behind in academics and are more likely to drop out of school. They are more prone to altercations with authority figures and law enforcement officials, and to experiment with drugs and alcohol. They also are more likely to become injured in accidents due to risk-taking.



ADHD & Neurotransmitter Levels

ADHD is among the most common neurotransmitter-related conditions. Others include anxiety disorders, compulsive behaviors, insomnia, depression and migraines.

Neurotransmitters are chemicals that relay signals between nerve cells, called “neurons.” These are present throughout the body and are required for proper brain and body functions. Serious health problems can occur if neurotransmitter levels are too high or too low.

Every neurotransmitter behaves differently. Some neurotransmitters are inhibitory and tend to calm the brain. Others are excitatory and have the opposite effect. Scientific research reveals a close link between mental acuity (the ability to focus) and appropriate levels of various neurotransmitters in the central nervous system, including dopamine, norepinephrine, PEA, epinephrine and glutamate¹. Research also links three major neurotransmitters — serotonin, GABA and glycine — with calming effects. They help control impulsiveness.

Environmental and biological factors — including stress, poor diet, neurotoxins or genetics — can cause imbalances in the levels of neurotransmitter chemicals in the brain. Imbalances can trigger or exacerbate ADHD symptoms².



Improving Treatment

Most of the drug-based methods used to treat behavioral issues include chemicals that either imitate a neurotransmitter or redistribute existing neurotransmitters. Many affect norepinephrine, and some affect other neurotransmitters like GABA, serotonin, or dopamine. It is generally believed that drugs supporting norepinephrine signaling will be beneficial when behavioral issues result from a lack of norepinephrine and that GABA supporting drugs will be effective when a person’s symptoms are caused by a lack of GABA. While the idea of matching a drug to a chemical imbalance is generally supported, the vast majority of healthcare providers prescribe psychological drugs based on a patient’s symptoms and few try to match a drug to a biochemical imbalance. This may explain why some drugs are ineffective for some patients.

Neurotransmitter function can also be supported with nutrient-based programs. Neurotransmitters are made from various components of food in a normal, healthy diet. Increasing the amounts of these dietary constituents can help maintain normal neurotransmitter levels.

While no program can guarantee success for everyone, it is worthwhile to effectively match a drug-based and/or nutrient-based program to the specific needs of the individual.

