

Attention Deficit Hyperactivity Disorder By Bart Main, MD 10-13-10

Attention Deficit Hyperactivity Disorder (usually called ADHD) is a common problem in school age children. It has been recognized for at least 50 years. Our ability to diagnose and treat ADHD has improved over time.

We know that ADHD is usually hereditary but also can be caused by head injury, fetal exposure to toxins like alcohol or cigarette smoke, or other early toxic exposures like lead poisoning or infections like encephalitis. ADHD is a disorder that is present from a very early age. Sometimes, ADHD isn't recognized when kids are young because the kid is so bright that he or she doesn't need to pay much attention to understand what is going on. Other times, the parents may be so good at organizing the child that the child has no need to be organized him or her self. At these times, even though the child has ADHD, it doesn't seem to show up until school becomes more challenging.

ADHD has four core features:

We call it Attention Deficit Disorder because the child has difficulty focusing attention. The child with ADHD has no deficit in attention, in fact, seems to pay attention to everything. I think of this part of the problem of ADHD as distractibility. The child with ADHD is, like everyone, more easily distracted when he or she is doing boring things than when he or she is doing more interesting things. Video games are typically so interesting that the child with ADHD is drawn into them and cannot be distracted by ordinary life. In order to have a sense of whether your child is more distractible than he or she should be, you have to compare him or her to other children the same age. Often the classroom teacher, who has lots of experience with kids at that age, will be your best resource to judge.

The "H" in ADHD stands for hyperactivity but not all kids with ADHD are very hyperactive. Little boys with ADHD are typically very active and easily diagnosed. But some boys and more girls are impulsive rather than hyperactive. They rush through assignments, interrupt in conversation, or say and do things that they wouldn't have if they had stopped to think first.

Kids with ADHD have a lot of trouble completing things. They get bored or frustrated when things aren't moving fast enough for them. It seems that they lack persistence. It is important in sorting this out that we judge whether the things that the child is trying to do are things that he or she is capable of. No one persists long in doing things that aren't possible. Completion of chores and homework are good measures of persistence for most kids.

Lastly, kids with ADHD have trouble organizing themselves. This may mean trouble in finding stuff or putting it away in the right place. Often parents of kids with ADHD find lost things in the child's desk or backpack or locker. But organization also involves timing. People with ADHD are often late in getting to places or in meeting deadlines. It is very common for people who are bright and have ADHD to say that they procrastinate and get large projects done by staying up all night the night before something is due.

There are lots of checklists and rating scales designed to sort children with ADHD from children who don't have ADHD. The truth is that we don't have very good measures to make this distinction. Even computerized tests haven't proven to be really reliable. If you are wondering whether a child has ADHD, ask whether the child is having trouble getting along in life because of the four core symptoms listed above. "Getting along in life" means that you must compare the child's functioning to other kids the same age or grade. "Because of the four core symptoms" means that we don't want to call the problem ADHD unless the child has all of these symptoms and we don't want to call it ADHD if it seems more likely related to something else. For example, kids who are not able to hear will have trouble focusing in class and get restless when the teacher is presenting a lesson - and that isn't ADHD.

Often parents or teachers make the diagnosis of ADHD in a child. But it is up to a medical professional to actually decide the diagnosis because there are other medical conditions that can mimic ADHD. For example, Absence Seizures can look like ADHD. If one of these other conditions is present, then the treatment of the child would be treatment of that other condition rather than ADHD. If treatment for ADHD is given to a child who doesn't have ADHD, the treatment is missing the point and not treating the real problem and may actually cause harm to the child.

The treatment of ADHD has three parts. These three are referred to as "the three legged stool" since the success of the treatment requires all three. School accommodations for the short attention span and difficulties in organization that kids with ADHD have are critical. Psychotherapy is critical to support and educate children with ADHD and their families. And medical treatment is essential to allow children to make use of the other treatment elements.

Medical treatment of ADHD may mean the prescription of medication or it may mean attempting to change the chemistry of a child by other means. Over the decades many attempts have been made to change kids' chemistry by changing the child's diet. None of the dietary strategies are as effective statistically as medication is, but all have worked for some people. Food additives can be eliminated from the diet. Vitamins and other nutrients can be added to the diet. For a more thorough discussion of these approaches, the www.brainplace.com website is a very good resource.

Many families are hesitant to medicate their children for ADHD for fear of making the child dependent on medication and maybe dependent on drugs or alcohol in the future. Actually, the likelihood that a child will have problems later in life is much greater if the ADHD is not effectively treated than if it is well treated. Untreated ADHD leads to school failure, drug abuse, depression, or jail about 85% of the time. When we treat ADHD successfully, those rates drop to about 30%. If ADHD is treated effectively and kids are able to stay successful in school, they are much more employable as adults.

My purpose in writing this is to talk about the prescribed medicines available to treat ADHD. There are four commonly used and a few others used sometimes to treat parts of the problem.

Methylphenidate is the chemical name for Ritalin, Methylin, Metadate, Concerta, Focalin and Daytrana. These preparations all have their uses even though they are the same medicine inside. They have different lengths of action.

Dextro-amphetamine is the chemical name for Dexedrine, Adderall and Vyvanse. Again, these preparations were invented to have different durations of action.

-- Methylphenidate and dextro-amphetamine are stimulants. That means that they work like caffeine. They take effect almost right away after they are taken and they wear off by the end of the day, some sooner than others. They don't accumulate in the body over time. They can be used just on days that they are needed.

Atomoxetine is the chemical name for Strattera. Strattera was originally developed in the late '80s as an antidepressant. It didn't prove to be very effective as an antidepressant although it is somewhat helpful for anxiety and depression. It was marketed instead for ADHD and is very effective.

Bupropion is the chemical name for Wellbutrin and Zyban. It is an antidepressant that is also used to help people stop smoking and is a good treatment for ADHD.

-- The good and the bad of atomoxetine and bupropion is that they do not take effect the first day. They accumulate in the body over a few weeks in order to become effective. Once they start working, as long as a person keeps taking them each day, they work 24 hours a day. This is a huge advantage over the stimulants for kids (or adults) who need to concentrate very early in the morning or late at night when the stimulants wouldn't be working.

-- Guanfacine is the chemical name for Tenex and Intuniv which are used to help settle the impulsivity of children with ADHD. They lower blood pressure in adults (although not so much in children) and are a little sedating. They are gaining in popularity recently especially for kids who have explosive tempers.

Each med has its own side effects and peculiarities. We can talk much more about them. Every child responds uniquely to medicines so there may be some trial and error before the best medicine is found for a child. Please know that the parent or guardian of a child must be present in the sessions in which medical decisions are made for a child. You are the customer and your provider is your servant. It is the job of the provider to inform you but treatment decisions are up to you. You must ask the questions that you have so that you and your child can feel comfortable with your treatment plan.

It is the providers' responsibility to make sure that all the treatment providers are aware of each other and coordinating their efforts. It is sometimes hard for providers to collaborate with providers outside of their own clinic such as primary clinics and schools. Let your providers know who they should talk to in order to give you the best service. The three legged stool of ADHD treatment will not stand if we don't coordinate our efforts well.

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