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By Linda Bren

ADHD: Not Just for Kids Anymore

It seemed that the harder he tried, the worse things got for Robert Jergen. As a child, he was always being scolded by his parents and teachers. As an adult, his bosses reprimanded him for missed deadlines and his attitude problem. He got fired from jobs, drank heavily, and lost his fiancé.

But Jergen wasn't a slouch, a drunk, or intentionally obnoxious. He had a condition called attention-deficit hyperactivity disorder (ADHD).

"I wanted to be a good kid, but I frequently did things without thinking or without even realizing that I did them," says Jergen. Problems with concentration continued to plague him as an adult. In college, Jergen would stay up all night trying to finish his schoolwork. "I could not focus my attention on the page long enough to read a paragraph. My thoughts raced round and round in my head. It's like my mind was a pinball machine with five or six balls smashing into each other."

ADHD is the most commonly diagnosed mental health disorder in children, according to the American Psychiatric Association. It's often diagnosed once a child hits preschool and is disruptive in class--unable to sit still, talking incessantly, and having emotional outbursts. While some children see their symptoms fade as they get older, others carry them into adolescence and adulthood.

Although there is no cure for ADHD, medications and behavioral therapy can help treat the symptoms. The Food and Drug Administration has approved two drugs for adults with ADHD, and more have been approved for use in children. But the decision to take medication should be considered carefully and discussed with a health professional, says Paul Andreason, M.D., a drug reviewer in the FDA's Division of Neuropharmacological Drug Products. Some drugs used to treat ADHD can be dangerous for adults with certain medical conditions. They also have the potential for addiction and abuse. Adults taking medications should be closely monitored by a physician. Children, too, who take drugs for ADHD need regular medical checkups.

Three Types of ADHD

Everyone has trouble sitting still sometimes, or managing time, or completing a task. But the behavior of people with ADHD goes beyond occasional fidgeting, disorganization, and procrastination. For them,

performing tasks can be so hard that it interferes with their ability to function at work, at home, at school, and socially.

A diagnostic manual compiled by the American Psychiatric Association identifies three types of ADHD: inattentive, hyperactive-impulsive, and combined.

A person with inattentive ADHD, previously known as attention-deficit disorder (ADD), has trouble focusing on activities, organizing and finishing tasks, and following instructions.

Children with hyperactive-impulsive ADHD are in constant motion, dashing around touching everything in sight, and jumping on and off furniture. They often blurt out inappropriate comments, don't wait their turn, show excessively intense emotions, or hit others when upset. Hyperactive and impulsive adults feel restless, are constantly "on the go," and try to do multiple tasks at once. They are often perceived as not thinking before they act or speak.

Individuals with the combined form of ADHD show symptoms of both inattention and hyperactivity-impulsivity.

Who Has It?

The National Institute of Mental Health (NIMH) estimates that between 3 percent and 5 percent of children in the United States have ADHD. This means that in a classroom of 25 to 30 children, it is likely that at least one will have ADHD. Three times as many boys are diagnosed with ADHD, but "girls are getting diagnosed more and more," says Nora Galil, M.D., a psychiatrist in private practice in Washington, D.C. The symptoms may be easier to spot in boys, she says, who may be seen slipping from their chairs and tossing things across the room. "You can often identify it in a short period of time because they are so disruptive. Girls may be the ones who daydream and are not disruptive, so it's not picked up nearly as much."

The number of adults with ADHD is unknown, and medical experts continue to debate whether children can expect to outgrow the symptoms of ADHD by the time they reach adulthood.

Some studies have shown a significant decline in ADHD symptoms as a person ages. Others estimate that between 30 percent and 70 percent of children with ADHD will continue to have symptoms into adulthood.

"In adults, it's a much more elaborate disorder than in children," says Russell Barkley, Ph.D., a psychiatry professor at the Medical University of South Carolina. "It's more than paying attention and controlling impulses. The problem is developing self-regulation." This self-control affects an adult's ability not just to do tasks, but to determine when they need to be done, says Barkley. "You don't expect 4- or 5-year-olds to have a sense of time and organization, but adults need goal-directed behavior--they need help in planning for the future and remembering things that have to get done."

The Consequences of ADHD

Whether in a child or an adult, ADHD can have serious consequences. Some studies show that children with ADHD have more emergency room visits than their non-ADHD peers. Adolescents with ADHD are more likely to engage in risky behavior, leading to substance abuse, sexually transmitted diseases, and teen pregnancy.

Adolescents and young adults are more likely to drop out of school and less likely to enter and graduate from college, according to some studies. And adults with ADHD are more likely to suffer from depression and anxiety, be fired from jobs, and get divorced than non-ADHD adults.

Teens and adults with ADHD have 2 to 3 times more auto accidents and twice the number of severe accidents resulting in vehicle damage and bodily injury as those without ADHD, according to studies done by Barkley and others. "They have coordination deficits, less skill in maneuvering vehicles in traffic, slower reaction time, and inattention," says Barkley.

People with ADHD often have "a huge issue of self-esteem," says Galil. "They may have been underachievers and told 'you're so smart, why can't you do this? You're not trying hard enough.'"

Jergen says he always tried very hard, but he couldn't focus his mind on the task at hand. He likens it to having a song or jingle in your head for days at a time, but "add three or four or five more thoughts to the mix and amplify them. Spin them round and round and round in your head and make them go faster and faster and faster until they become like an all-consuming obsession. Everything centers on those thoughts. You can't focus on anything else. You can't escape them."

Not a Discipline Problem

ADHD was once looked upon as a discipline and behavioral problem resulting from bad parenting. Some suggested it was caused by high sugar intake, food additives, excessive TV viewing, and family problems. But none of these explanations is supported by scientific evidence.

Most scientists agree that it's a biologically based disorder of the nervous system. Brain imaging research using a technique called magnetic resonance imaging (MRI) has shown that differences exist between the brains of children with and without ADHD, but the exact mechanism of brain function causing the symptoms of ADHD is unknown. Scientists caution that MRIs used in studies are research tools and cannot be used to diagnose ADHD in a specific person.

Recently published research suggests that ADHD tends to run in families. In these studies, children with ADHD have, on average, at least one close relative with ADHD. Over the years, other theories have suggested that exposure to lead in the environment, premature birth, birth trauma, and brain injury may lead to the development of ADHD. Some studies have shown a possible correlation between the use of cigarettes and alcohol during pregnancy and the risk for giving birth to a child with ADHD. For this and many other health reasons, the NIMH recommends that women who are pregnant refrain from both cigarette and alcohol use.

Diagnosing ADHD

There is no single test to determine if a person has ADHD. A specialist makes the diagnosis by comparing a person's pattern of behavior against a set of criteria established by the American Psychiatric Association.

"Sometimes teachers may identify a child as potentially having ADHD," says Galil. "Parents will not always know because they organize and structure and manage so much of the child's life, it masks what's going on."

Although teachers and parents may recognize some symptoms, it's important to get a diagnosis from a health professional, ideally one with training in ADHD and mental disorders, says the NIMH. This may be a psychiatrist, psychologist, behavioral neurologist, or a developmental or behavioral pediatrician. More than one health professional may be consulted to diagnose and treat ADHD, since medical and psychological tests, medication, and counseling may be involved.

"Many health professionals believe that ADHD is over-diagnosed," says Andreason, and doctors need to consider the complete history of patients before diagnosing them.

"It's a hard diagnosis to tease out, and we need to spend some time asking questions about all areas of their life," adds Edmund Higgins, M.D., clinical assistant professor of family medicine and psychiatry at the Medical University of South Carolina and a psychiatrist in private practice.

Some adults may discover they have ADHD only after their children are diagnosed with the disorder. That's how Toni Wood found out she had it.

Wood, of Chesapeake, Va., was a hyperactive child, always getting into trouble at school and always in the principal's office, she says. "If I was quiet, I was sick." Throughout her school years, she had a hard time processing information and asked a lot of questions in class. "It really frustrated me, and everybody was looking at me and rolling their eyes. I knew I wasn't stupid, but I was always behind."

Wood persevered, graduating from high school, serving in the U.S. Coast Guard, and going to college. Civilian life was daunting for her after the structured military environment where "they told you what to wear and what to do," says Wood. She graduated from college, but continued to have difficulty with daily activities--paying bills and completing tasks, especially in the evening when she was most fidgety and inattentive. "I thought I was going crazy," she says.

At age 38, Wood found out that she wasn't crazy. After both her sons were diagnosed with ADHD, Wood's doctor diagnosed her with the condition, too. She felt a weight being lifted off her shoulders, she says. "I'm not using ADHD as an excuse; it's an explanation. Now I understand why."

Treatments for ADHD

A number of FDA-approved medications are available to help treat the symptoms of ADHD. Some people have better results from one drug, some from another. "But treatments need to involve a behavior modification program," says Andreason. "Medicine is only an adjunct to behavior modification."

Children with ADHD may require emotional counseling and behavioral management involving parents, teachers, and health professionals. Adults with ADHD may benefit from counseling, vocational guidance, and professional coaching done by specialists who help individuals develop coping skills and methods for organization and time management.

Jergen has developed his own coping strategies, and daily exercise is an important one. "When my mind is in a fog, I get on the treadmill and break a sweat, the fog parts, and I can concentrate," he says. He's also set up his office environment with special lighting and soft music to help him relax and concentrate.

People with ADHD may be hyperactive, but, surprisingly, they are often prescribed a stimulant to help treat the symptoms. Stimulants can improve alertness and attention without making the hyperactivity worse.

FDA-approved stimulants for children ages 6 and older include products containing various forms of methylphenidate, amphetamine, and methamphetamine.

In August 2004, the extended-release form of the stimulant Adderall (Adderall XR), previously approved to treat children with ADHD, was also approved to treat adults with ADHD. An extended-release form of a drug works in the body over a longer time than an immediate-release form, allowing the medication to be taken less frequently.

Adderall or other stimulants should not be taken by people with certain conditions, including hyperthyroidism, glaucoma, moderate-to-severe hypertension, other heart-related conditions, or a history of drug abuse. Some common side effects of stimulants are insomnia, decreased appetite, and increased anxiety or irritability. Children who take stimulants may grow and gain weight more slowly, and growth should be monitored by their pediatricians.

Because stimulant medicines have a high potential for abuse, the U.S. Drug Enforcement Administration has placed stringent controls on them. For example, the DEA requires special licenses to manufacture, distribute, and prescribe these controlled substances, and prescription refills aren't allowed.

One other drug, Strattera (atomoxetine), is FDA-approved for use in adults with ADHD as well as in adolescents and children ages 6 and older. Strattera is not classified as a stimulant and does not seem to have a potential for abuse. It is not classified as a controlled substance, so it can be prescribed with refills. Strattera increases the levels of the neurotransmitter norepinephrine in the brain, whereas the stimulants work primarily on the neurotransmitter dopamine. Strattera may take three or four weeks for its full effectiveness to kick in; stimulants can have a nearly immediate effect in some patients.

Strattera causes an increase in heart rate and blood pressure and should be used with caution in people with hypertension or heart-related conditions. In clinical studies, the most common side effects of Strattera in adults were dry mouth, headache, insomnia, nausea, decreased appetite, and constipation. In children and adolescents, common side effects were stomachache, headache, and decreased appetite. Like stimulants, Strattera may slow weight gain and growth in children, and these measures should be monitored by a pediatrician.

Treatment Decisions

Galil, who treats both children and adults with ADHD, says she doesn't use medications as frequently in adults. Parents bring children to her because they're not doing well at school or their behavior is disruptive, she says, but adults who haven't been diagnosed as children often "have found ways to cope without medication for years." Sometimes, she'll prescribe a stimulant as needed for specific tasks, such as for an events planner who was "marvelous at events with a headset on and 4,000 people around her, putting out a fire a minute," but didn't do well sitting back at the home office doing paperwork. So she'd take medication on a day that she needed to spend time on paperwork.

"With children, it's different," says Galil. "They often benefit from medication seven days a week. Adults, by and large, don't want to be on medication all the time." But with diagnosis and treatment, "some who never finished college or graduate school now have the tools to go back and finish."

Wood is one of these. Since she's been on medication, she went back to college and earned a second degree. "I saw such a difference," she says. "College was so much easier" and so were routine household tasks, like paying bills. Wood is now an ADHD coach, helping other people cope with the disorder. Once he was diagnosed with ADHD at age 24, Jergen said it took about two years of trying different medications and dosages to find out what worked best for him. Like Wood, he found that tasks became easier for him. He got his doctorate in special education, published five books in two years, and became an associate professor at the University of Wisconsin-Oshkosh. "I have a lot of energy and I don't sleep a lot," says Jergen, who recounts his experiences with ADHD in his book, *The Little Monster: Growing Up With ADHD*. Jergen urges parents of children with ADHD to help them use the energy to be productive instead of making them slow down.

After 10 years of taking various stimulants, antidepressants, and mood stabilizers, Jergen went off medications in 2002 because of their sexual side effects and the development of a vocal tic that caused him to make involuntary noises. He continues teaching and writing, recently got married, and says, "My life is just fantastic."

"I'm still hyperactive, impulsive, and inattentive," adds Jergen. "If I were an air traffic controller, planes would be crashing." But Jergen, known as a dynamic speaker, says he's in his element in front of a class.

Drug Risks and Precautions

Public health officials are concerned that stimulants may be inappropriately prescribed for some adults with ADHD. "Stimulants do work, but we know that they increase blood pressure and pulse rate," says Andreason, which could lead to strokes and heart attacks. "These drugs are very strongly labeled for their risk to the cardiovascular system," he adds.

"Patients with hypertension shouldn't be getting stimulants," says Kate Gelperin, M.D., a medical officer in the FDA's Office of Drug Safety. "If your blood pressure is on the high side, these drugs are not for you." About one-third of U.S. adults have high blood pressure, according to a study published in the October 2004 issue of *Hypertension*, a journal of the American Heart Association.

Raymond Woosley, M.D., Ph.D., a clinical pharmacologist and vice president for health sciences at the University of Arizona, says, "There are a lot of people who don't know they have hypertension or heart disease. In many people, the first symptom of heart disease is sudden death." Woosley advises adults with ADHD who are prescribed stimulants to "make sure their doctor is fully informed of their total medical condition and get a complete medical workup to make sure they're not at risk."

Even those without hypertension who take stimulants may be at risk, says Gelperin. "It's not known whether adults who take stimulants over long periods of time may have an increased risk of sudden death, stroke, or heart attack," she says, "although we do know that people who take an overdose of stimulants experience these adverse effects."

Woosley also recommends that parents get their children checked by a qualified pediatrician before giving them stimulants for ADHD. Parents should not insist on a stimulant for their child based on the positive experience of a friend's child who is taking the stimulant or because a teacher suggests it, he says. A child should be examined by a doctor and diagnosed with ADHD before being placed on a stimulant. "A stimulant given to a child with ADHD can help to normalize them," he says, "but if given to someone who doesn't have the right diagnosis, it can make them worse." Once prescribed a stimulant, a child's blood pressure and heart rate should be monitored closely until the dosage is stabilized, and then yearly, says Woosley, since the way the body responds to medication is highly variable and may change over time.

Research has shown that people with ADHD who take stimulants in the form and dosage prescribed do not appear to be at as great a risk for addiction as previously feared. However, when stimulants are abused, the consequences can be extremely dangerous--even deadly. According to the National Institute on Drug Abuse, taking high doses of a stimulant can cause an irregular heartbeat, dangerously high body temperatures, and heart failure or lethal seizures.

"The FDA has received many reports over the years describing serious adverse effects, including death, associated with stimulant abuse or overdose," says Gelperin.

"Some people will like the effects of the stimulants--either performance enhancement or the euphoria--and will want to be diagnosed as having ADHD," says Higgins. "Where I get concerned is when college students or even professionals come to me and say, 'I have trouble with attention.' Everyone has trouble with attention at some point--particularly with boring tasks." We need to separate patients with some symptoms of ADHD from those who have a genuine disorder, he says.

Higgins is also troubled by parents who take their child's stimulant or someone else's and claim they feel better. "Stimulants are basically 'speed,'" he says, "and most people will be more productive with them. That doesn't mean they have a disorder."

Higgins says that, in his practice, he reserves stimulants for people who have severe impairment, for whom Strattera doesn't work, and who are not at risk for substance abuse.

For More Information

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(800) 233-4050

How is ADHD Diagnosed?

According to the American Psychiatric Association, a person is diagnosed with ADHD if

- they often have either six inattention symptoms or six hyperactivity and impulsiveness symptoms
- symptoms continue for at least six months and are more frequent and severe than normal
- symptoms cause significant damage to social, academic, or work functioning
- some damage to functioning occurs in at least two settings, such as home, work, or school
- some damaging symptoms occurred before age 7
- the symptoms are not due to another disorder.

Inattention Symptoms

- does not pay close attention to details or makes careless mistakes
- has trouble keeping attention on activities
- does not seem to listen when spoken to directly
- does not follow through on instructions and fails to finish tasks
- has difficulty organizing tasks and activities
- avoids, dislikes, or is reluctant to do tasks requiring sustained mental effort
- loses things necessary to do tasks or activities
- is easily distracted
- is forgetful in daily activities.

Hyperactivity or impulsiveness symptoms

- fidgets with hands or feet or squirms in seat
- leaves seat at times when remaining seated is expected
- feels restless, or, in a child, inappropriately runs about or climbs excessively
- has difficulty taking part in leisure activities or playing quietly
- is "on the go" or acts as if "driven by a motor"
- talks excessively
- blurts out answers before questions have been completed
- has difficulty awaiting turn
- interrupts conversations or intrudes on others' activities.

Source: APA

What's It Like Having ADHD?

"... It's like being super-charged all the time. You get one idea and you have to act on it, and then, what do you know, but you've got another idea before you've finished up with the first one, and so you go for that one, but of course a third idea intercepts the second, and you just have to follow that one, and pretty soon people are calling you disorganized and impulsive and all sorts of impolite words that miss the point completely. Because you're trying really hard. It's just that you have all these invisible vectors pulling you this way and that, which makes it really hard to stay on task."

Edward M. Hallowell, M.D., (c) 1992, used by permission. Hallowell is a psychiatrist in Sudbury, Mass., who has ADHD.