

LIVING IN OVERDRIVE

Understanding Attention Deficit Hyperactivity Disorder

By Barbara Lockman

Brandon Hughes is like most 13-year-olds. He talks on the phone with friends, plays computer games, and listens to music. His favorite is rap music because it makes him want to get up and dance. The Salisbury teen likes his Playstation best of all, and he would spend hours at it except for one thing: Brandon has attention deficit hyperactivity disorder (ADHD). He can only concentrate on a single activity for a few minutes before he's on to the next. Brandon has been labeled ADHD so long he thinks of it not as a diagnosis but his identity. "I'm ADHD," he says. "It kinda bugs me. It makes me feel like I'm not a regular person."

Nine-year-old Sam Swing of Lexington sits in the classroom with other students but his thoughts are far away. Again. He really means to listen to the teacher, but something distracts him. Adults call him a daydreamer, say he has trouble focusing. Homework that takes his friends about 30 minutes to complete can sometimes take him hours. He, too, has ADHD. One of his friends asked him once why he took medicine at school. Sam replied, "To make me smart."

As a little girl, Laura looked like an angel. A blond-haired, blue-eyed angel in a blue pinafore and white lace collar. When she was still, that is. Which wasn't very often. From the time she learned to walk, she ran. She ate spiders, took things apart to see how they worked, and loved to leap from the top of the stairs. No kids her age would play with her, and when she got to school, teachers threw up their hands in despair. One taped her mouth shut and made her stand in front of the class with her nose touching a circle on the chalkboard. Laura was called hyper, a trouble-maker. What she had was ADHD. "I loved to read," she remembers, "and I'd often fantasize about a world where I would be normal and good."

It's because of Laura that Dr. Wayne Koontz of Salisbury Pediatric Associates has spent nearly 34 years caring for - and compassionately caring about - children like Brandon and Sam and thousands

of others with attention deficit hyperactivity disorder. Laura, you see, is his daughter. Now 34, Laura Koontz has a master's degree in psychology and works as a counselor at Morgan Elementary School in east Rowan. She often speaks publicly about her experience growing up with ADHD and the resulting blow it dealt to her self-esteem.

Dr. Koontz learned a lot watching Laura grow up. And he's learned even more over the past 22 years, traveling the world to keep up with the latest scientific breakthroughs relating to the disorder. He's emerged as an expert and an outspoken advocate for proper diagnosis and treatment of ADHD. He was the first physician in Rowan County to treat ADHD and now serves as liaison between the public schools and the medical community in a program to help identify and treat students with the disorder. Dr. Koontz is a man with a mission, driven to make a difference in the lives of children for whom the normal pace of life slips into overdrive, frustrating parents, teachers, friends, and most significantly, themselves. He calls them his "ADHD kids." And Dr. Koontz knows what it's like to live in that parallel universe. He was an ADHD kid himself.

Many people have tried to describe what it's like to live with ADHD. For some it's like driving through a powerful rainstorm with broken windshield wipers. Others say it's like being inside a giant kaleidoscope where ideas, images and sounds are constantly shifting. The frustration is constant, like trying to construct a toothpick bridge in a hurricane. Brandon describes it as "trying to do something while you're asleep."

Living with an ADHD child is also a challenge for parents. "If you've never been around one," says Brandon's mother, Angel Deal, "it's really a surprise." She and her husband had to adjust to their son's constant motion, short attention span and nearly incessant talking. Especially in the evening when they'd like to relax. "He's always got to be talking, always got to be doing something," Mrs. Deal says. "It takes a lot of effort as a parent to try and keep him busy."

It's also tough trying to maintain discipline without damaging Brandon's self-esteem. "There are times I'm so mad at him because he's forgotten to do something," she says. "It's hard not to say, 'Why do you always forget everything?'" He thinks he's different from everyone else. "He's really not," says his

mom, "he's just faster than they are!"

She admits Brandon is spoiled, but only because she spends so much time countering the negative comments of others who call him dumb, forgetful, disorganized, or worse.

"It might look like I'm putting him on a pedestal," she explains, "but I'm really just giving him enough to get by."

Today it's nearly impossible to live in society without encountering ADHD in some way. It is the most common behavioral disorder in American children and the subject of thousands of studies and articles from scholarly journals to popular magazines. Yet with all this attention, ADHD remains largely misunderstood, its very existence suspect, its treatment options controversial.

What is ADHD?

To best understand ADHD, it's important to know what it is not. ADHD is not a disease or illness. It is not a learning disability, although many children with ADHD also may have learning disabilities. It is not the result of laziness, excess sugar, poor schools, bad parenting or a character flaw. "Parents really light up when you tell them this is not their fault," says Dr. Jill Aiken, who came to Salisbury Pediatric Associates 2 1/2 years ago primarily to work with ADHD.

In simplest terms, ADHD appears to be a hereditary, bio-chemical disorder in the area of the brain that controls concentration, information retrieval, and organization. It affects 3 to 5 percent of America's school-aged children, and is three times more common in boys than girls. Some experts on ADHD estimate it afflicts up to 3.5 million children in this country. On average at least one child in every classroom in the United States needs help for ADHD. And for nearly half the children diagnosed with ADHD, symptoms persist into adulthood. ADHD is a valid medical diagnosis, recognized as a disability under federal law.

It was first documented by medical scientists in 1902 and has been called a variety of names including Minimal Brain Dysfunction and Hyperkinesis. Today, Attention Deficit Hyperactivity Disorder is the medical term used to describe a specific group and degree of symptoms involving inattention,

impulsiveness, and hyperactivity. Pediatricians like Dr. Koontz and other health professionals follow guidelines set out in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM4) to determine if a child has ADHD.

"The reason we use the criteria we have now," explains Dr. Koontz, "is we want everybody to be on the same page. Everybody should make the diagnosis the same way." According to the DSM4, at least six of the specific symptom characteristics listed for inattention and hyperactivity/impulsivity must be present and have persisted for at least six months before a doctor can make a diagnosis of ADHD. Some of the symptoms also must have been present before age 7 and be inconsistent with the child's developmental level. In addition, there must be clear evidence that the symptoms are present in two or more settings - such as at school and at home -- and that they significantly impair a child's ability to function in society.

Nearly every child exhibits some of the characteristics of ADHD at one time or another. Some would argue that the pace of American society actually creates ADHD-like symptoms in many of us. It's the criteria of the DSM4 that help doctors distinguish between the natural spontaneity and personality characteristics of children and behavior that is extreme and debilitating.

DSM4 breaks down the types of ADHD as (1) predominantly inattentive, (2) predominantly hyperactive/impulsive or, (3) a combination of both. Some of the symptoms include:

Inattention

- often fails to finish what he starts
- doesn't seem to listen
- easily distracted
- has difficulty concentrating or paying attention
- does not stick with a play activity

Impulsivity

- often acts without thinking and later feels sorry
- shifts excessively from one activity to another
- has difficulty organizing work
- needs lots of supervision
- speaks out loud in class

doesn't wait to take turns in games or groups

Hyperactivity

runs about or climbs on things excessively
 can't sit still and is fidgety
 has difficulty staying seated and bothers classmates
 excessive activity during sleep
 always "on the go", as if driven

"The combined type is by far the most common," Dr. Koontz says. "It's very rare to see a child who's hyperactive but has good attention. I've only seen one in my entire practice."

The DSM4 criteria, however, are only one step in the diagnostic routine. "When I make a diagnosis of ADHD," Dr. Koontz explains, "I try not to make it by myself." He looks at written assessments from teachers and parents, spends time talking with each child, and asks for a psychometric work-up by a clinical psychologist before making a diagnosis of ADHD. "I went on the board of the Child Guidance Center in Winston-Salem and pulled a clinical psychologist here," he says, just to make sure this type of testing would be available locally. The psychologists can administer a number of tests including standard IQ, continuous performance, and specific skills measurements. Dr. Aiken follows a similar pattern.

More Than ADHD

"What we have to remember is that these children are more than ADHD," Dr. Koontz says. Many have co-existing conditions that must be identified for treatment to be effective. These conditions include learning disabilities, obstinate/defiant behavior, general anxiety disorder, depression, conduct disorder, obsessive-compulsive disorder and bipolar disorder. About 30 to 40 percent of children with ADHD also have a learning disability. Another 30 percent are obstinate/defiant, or as Dr. Koontz says, "stubborn as a mule." Up to 20 percent may have serious mood disorders like depression. It's these mood and conduct disorders that, if not treated, can lead to criminal behavior.

There are a number of local resources that can help ADHD children who also have learning disabilities, particularly in reading. These include the Sylvan Learning Center, Salisbury Tutoring

Academy, and student teachers from Catawba College who do volunteer tutoring. "The worst learning disorder relates to reading," Dr. Koontz says, "because it is the most critical thing we do in our society."

With so many diagnostic safeguards in place, Dr. Koontz bristles at the public perception that ADHD is overdiagnosed. "The problem has always been there," he says. "Years ago we were an agrarian society where kids who were hyperactive had plenty of room to run around and use their excess energy," he explains. Now such children stand out in a highly competitive, technological and urban environment where demands are greater. "We're just getting better at recognizing it," adds Dr. Aiken. Between them, Drs. Koontz and Aiken evaluate and treat hundreds of children with ADHD each year. Both physicians also point to growing scientific evidence on the causes of the disorder which may lead to even more precise diagnosis in the future.

Among the most revealing of these scientific studies are positron emission tomography (PET) scans that show a definite difference in brain functioning between individuals diagnosed with ADHD and those without it. That difference involves chemicals called neurotransmitters that carry messages between nerve cells primarily in the frontal lobe of the brain. Since brain cells do not connect or touch, neurotransmitters such as the chemical dopamine are essential in carrying messages from cell to cell. In children with ADHD, the PET scans show there is a flaw in the way the brain manages neurotransmitter production, storage or flow along communication pathways. Similar scans have also revealed decreased metabolism of glucose - the primary fuel for the brain - and color Doppler ultrasounds reveal diminished blood flow primarily in the frontal lobe of the brain. "The conjecture is that something abnormal is going on up there," Dr. Koontz says. "Things are not working in the normal way."

Dr. Koontz expects that such scans will play an important role in diagnosing ADHD in the future. "We'll be able to actually look at the scan and see that a person has the changes that go along with ADHD," he says with obvious excitement. "What we do today is subjective. What I like is we're heading toward making a more concrete and objective diagnosis."

The Ritalin Riddle

Once a child has been diagnosed with ADHD, doctors must determine a course of treatment. There is probably no aspect of ADHD treatment more controversial than the topic of medication, particularly the use of Ritalin and its possible side-effects. Ritalin is the brand name for methylphenidate, a stimulant drug. Stimulant medications were first given to children with ADHD symptoms in 1937 and both short and long term effects of the drugs have been researched extensively since then, making them among the most studied medications in pharmacological history. Stimulant medications, most notably Ritalin, remain the most common treatment option for symptoms of ADHD. It may seem puzzling that the most effective medication for hyperactivity is a stimulant. But studies show that medications like Ritalin stimulate or promote production of neurotransmitters in the brain, helping important messages get communicated from cell to cell -- messages like the need to concentrate, to remember, to be still.

"Medicine is the most important thing I do," declares Dr. Koontz, "because it does change ADHD the most of anything." Experts in the field are quick to make the distinction that medication is not used to control behavior, but to improve the symptoms of ADHD so that children are able to change their behavior. Ritalin and other medications for ADHD, Dr. Koontz says, help correct a chemical imbalance in the brain, giving children a fair chance to learn. "Ritalin doesn't teach you to read, it can't teach you to spell, it doesn't teach you to write," he points out. It just gives a kid a break - the opportunity to learn.

Nearly 85 percent of children treated with medication respond positively. "When you think about it," Dr. Aiken says, "that is phenomenal." The three medicines prescribed most often in their practice are all stimulants: Ritalin, Dexadrine, and Adderall. They act similarly, although children may be able to tolerate one and not the other. Ritalin, in its most familiar, short-acting tablet form, generally starts to work within 15-20 minutes and lasts between three and five hours. Dexedrine and Adderall are slightly slower releasing medications that may be effective for five to eight hours. The amount of medication a child takes per dose, and the number of doses needed per day varies with each individual.

"Ritalin has the most experience," explains Dr. Koontz. "and in my opinion, has the least side

effects. I see fewer side effects with this than I do with antibiotics." Possible short-term side effects of Ritalin include loss of appetite, trouble sleeping, headaches, stomach pain, and weight loss. "The number one side effect I see in these kids is decreased appetite," Dr. Koontz says. "However, studies over the long term show they have normal growth." For other side effects he may prescribe a pain reliever such as Tylenol or a simple antacid. Sometimes changes in the dosage amount and/or the time of day medicine is taken can make a big difference.

"I've been here some 20 years waiting for the savior to come along," Dr. Koontz says -- "the drug that replaces Ritalin that has no side effects. I don't think I'm going to see that before I get out of medicine, but good news is here."

That news is a new delivery system for Ritalin called "Concerta." Approved by the FDA in August 2000, Concerta is a slow-release tablet that needs to be taken only once a day, and is effective for 10 to 12 hours. That's important news for children with ADHD, especially teens, as well as their parents and teachers. One of the major side effects - loss of appetite -- has plummeted from 80 percent to 4 percent. Students don't "crash" when they get home from school still needing to concentrate on homework, and they don't have the stigma of having to take medicine at school.

"The teenagers love this," Dr. Koontz says. "I had a number of teens who went off medication because they refused to be seen taking it at school," he says. "Now they can go back on it because no one will know."

Teachers and school administrators also are pleased because Concerta may relieve them of a big, unwanted responsibility. "There's more Ritalin being dispensed in the schools than in a pharmacy," observes Dr. Koontz. He has been prescribing Concerta for nearly six months and says, "it's working beautifully."

Both Brandon and Sam now take Concerta. Mitzi Swing says her son's grades are up and he's able to interact with a group rather than stare into space. "Homework that used to take us four hours takes us an hour now," she says. "Concerta carries us through." Brandon says he sleeps better at night and has noticed he has better concentration for his homework.

Dr. Koontz also likes the new delivery system because it makes the drug safer and less likely to be abused in the streets. Ritalin in its quick-release form has been peddled in some areas as a way to get high. The drug in slow-release form would not have the same effect. "I'm not going to say that some drug dealer could not alter this," he explains, "but the drug, as it is, does not have the potential to be abused."

Ritalin in any form still has its share of critics who worry that it's prescribed too liberally and could lead to drug addiction. Not so, counters Dr. Koontz. He quotes findings from several professional journals: "Children who are not treated with medicine for ADHD are more likely to abuse drugs than those who are treated. Treating ADHD with medication reduces the risk by 80 percent," one says. "Among boys with ADHD, those taking Ritalin are less likely to abuse drugs, alcohol or controlled substances." "The therapeutic use of methylphenidate does not cause addiction or dependence."

For children with ADHD, taking Ritalin or other medications appears to have a protective effect, Dr. Koontz says. "It helps keep our kids in school, off the streets, and away from drugs. Things that protect you against drugs are staying in school and having goals, self-confidence," he explains. "If we don't help kids perform in school and have self-esteem," he says, "they are dead ducks."

Because of Ritalin or other medications, says Dr. Koontz, children with ADHD can change and improve behaviors.

"I had a third-grader going to bed at 11 o'clock at night because his hour of homework was taking him three hours. I put him on Ritalin and now he goes to bed at 8:30. Not only that," he continues, "he's suddenly reading better because he remembers better, so this shortens the work effort." When behavior and performance improve, Dr. Koontz says, so does a child's self-image. And ultimately, that's why he does what he does. Because Dr. Koontz remembers what it was like to feel dumb. He remembers his daughter's tears. And every day he hears the confessions of children with ADHD who struggle to achieve in school.

"One little boy told me he was dirt because he'd flunked kindergarten," he recalls. "I put him on medication and later he brought me a picture I still have on my desk." The photo shows the boy

grinning, holding an award as student of the year. "If only people could see what I see, how these kid's lives are changed."

Dr. Koontz also has stories about ADHD children who did not take medication. "I've had seven kids diagnosed as ADHD who've gone to prison on drug charges," he says, "kids who never received one dose of medication." When he talks about these children it's easy to understand what drives him, because tears are close to spilling over. "It's just so sad to see these young, innocent children become hardened criminals," he says, "and to know if you could have gotten them in an ADHD program it could have made a difference."

He's also willing to take children off medication whenever possible. "I've never seen a kid yet who wanted to take medicine," he says. When they reach a level of confidence and ability, Dr. Koontz often contracts with teenage patients, giving them a certain period off a drug to see if they can maintain their grades. They, in turn, have to contract to go back on medication if grades or behavior decline. This allows them to participate in the decision-making and reduces the struggle to keep them on therapy when needed.

Parents like Angel Deal and Mitzi Swing say they have mixed feelings about their children taking medication. They wish it could be different. "I would take Brandon off it today," Mrs. Deal says, "if it weren't for the fact that with it he feels like he now belongs." They are no different from other parents who want their children to succeed. They just know the path is rockier.

Laura Koontz, the counselor at Morgan Elementary School, made it, and she uses her experience to help others. Brandon says he'd like to be a lawyer or an FBI agent. Sam would like to be a pop singer. But he wonders if he's always going to have to take medicine to concentrate.

"I'm hoping one day he'll be able to deal with it without the medication," Mrs. Swing says. "I just want him to be a normal boy, and to believe that he can do anything he wants to do. Just like anybody else."

Barbara Lockman is a freelance writer and former public relations director for Mercy Hospital in Charlotte. Over the past 20 years her articles have appeared in numerous publications including
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Charlotte magazine. She also taught English literature in private school and has authored two books.

Sidebars:

If you would like to have your child tested for ADHD, contact Salisbury Pediatric Associates, 129 Woodson Street in Salisbury at (704) 636-5576.

You can find more information on ADHD and Ritalin at the Rowan Regional Medical Center website -- www.rowan.org. -- through its partnership with HealthGate. HealthGate provides access to health magazines, daily news updates, reference guides on medical topics and prescription medicines. Information from HealthGate is provided free by Rowan Regional as part of its effort to encourage health lifestyles and to help families gain access to information day or night.

Other Internet resources include:

National Attention Deficit Disorder Association
www.add.org

Children and Adults with Attention Deficit Hyperactivity Disorder
www.chadd.org

CHADD is one of the largest advocacy and support groups for ADHD, founded in 1987, with over 28,000 members.

May also be reached at
499 NW 70th Ave. Suite 101
Plantation, Fla. 33317
(800) 233-4050

American Academy of Child & Adolescent Psychiatry
www.aacap.org

National Institute of Mental Health
www.nimh.nih.gov

Books:

"Jumpin' Johnny, Get Back to Work! A Child's Guide of ADHD/Hyperactivity" by Michael Gordon
GSI Publications, 1991.

"Making The Grade: An Adolescent's Struggle with ADD" by Roberta Parker
Impact Publications, 1992.

"Putting on the Brakes: Young People's Guide to Understanding Attention Deficit Hyperactivity
Disorder" by Patricia Quinn and Judith Stern, Magination Press, 1991.

"A Parent's Guide to Attention Deficit Disorders" by Lisa Bain, Dell Publishing, 1991.

"Maybe You Know My Kid: A Parent's Guide to Identifying, Understanding, and Helping Your Child
with ADHD" by Mary Fowler, Birch Lane Press, 1990.

"Attention, Please!: A Comprehensive Guide for Successfully Parenting Children with Attention
Disorders and Hyperactivity" by Edna Copeland and Valerie Love, SPI Press, 1991.