# SECRETS of the ADHD BRAIN

Why we think, act, and feel the way we do



From ADDitude's Experts

**ADDITUDE** 

Strategies and Support for ADHD & LD

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## SECRETS of the ADHD BRAIN

### Why we think, act, and feel the way we do

What you don't know about ADHD could change your life.

BY WILLIAM DODSON, M.D.

DHD IS A CONFUSING, CONTRADICTORY, INCONSISTENT, and frustrating condition. It is overwhelming to people who live with it every day. The diagnostic criteria that have been used for the last 40 years leave many people wondering whether they have the condition or not. Diagnosticians have long lists of symptoms to sort through and check off. The Diagnostic and Statistical Manual of Mental Disorders has 18 criteria, and other symptom lists cite as many as 100 traits.

Practitioners, including myself, have been trying to establish a simpler, clearer way to understand the impairments of ADHD. We have been looking for the "bright and shining line" that defines the condition, explains the source of impairments, and gives direction as to what to do about it.

My work for the last decade suggests that we have been missing something important about the fundamental nature of ADHD. I went back to the experts on the condition—the hundreds of people and their families I worked with who were diagnosed with it—to confirm my hypothesis. My goal was to look for the feature that everyone with ADHD has, and that neurotypical people don't have.

I found it. It is the ADHD nervous system, a unique and special creation that regulates attention and emotions in different ways than the nervous system in those without the condition.

"If someone told me you could be normal or you could continue to have your ADD, I would take ADD."

—David Neeleman, airline executive



### The ADHD Zone

ALMOST EVERY ONE OF MY PATIENTS AND THEIR FAMILIES WANT to drop the term Attention Deficit Hyperactivity Disorder, because it describes the opposite of what they experience every moment of their lives. It is hard to call something a disorder when it imparts many positives. ADHD is not a damaged or defective nervous system. It is a nervous system that works well using its own set of rules.

- Despite ADHD's association with learning disabilities, most people with an ADHD nervous system have significantly higher-than-average IQs. They also use that higher IQ in different ways than neurotypical people. By the time most people with the condition reach high school, they are able to tackle problems that stump everyone else, and can jump to solutions that no one else saw.
- ► The vast majority of adults with an ADHD nervous system are not overtly hyperactive. They are hyperactive internally.
- Those with the condition don't have a shortage of attention. They pay too much attention to everything. Most people with unmedicated ADHD have four or five things going on in their minds at once. The hallmark of the ADHD nervous system is not attention deficit, but inconsistent attention.
- Everyone with ADHD knows that they can "get in the zone" at least four or five times a day. When they are in the zone, they have no impairments, and the executive function deficits they may have had before entering the zone disappear. ADHDers know that they are bright and clever, but they are never sure whether their abilities will show up when they need them. The fact that symptoms and impairments come and go throughout the day is the defining trait of ADHD. It makes the condition mystifying and frustrating.
- People with ADHD primarily get in the zone by being interested in, or intrigued by, what they are doing. I call it an interest-based nervous system. Judgmental friends and family see this as being unreliable or self-serving. When friends say, "You can do the things you like," they are describing the essence of the ADHD nervous system.
- ▶ ADHD individuals also get in the zone when they are challenged or thrown into a competitive environment. Sometimes a new or novel task attracts their attention. Novelty is short-lived, though, and everything gets old after a while.





Most people with an ADHD nervous system can engage in tasks and access their abilities when the task is urgent—a do-or-die deadline, for instance. This is why procrastination is an almost universal impairment in people with ADHD. They want to get their work done, but they can't get started until the task becomes interesting, challenging, or urgent.

### **How the Rest of the World Functions**

THE 90 PERCENT OF NON-ADHD PEOPLE IN THE WORLD ARE referred to as "neurotypical." It is not that they are "normal" or better. Their neurology is accepted and endorsed by the world. For people with a neurotypical nervous system, being interested in the task, or challenged, or finding the task novel or urgent is helpful, but it is not a prerequisite for doing it.

Neurotypical people use three different factors to decide what to do, how to get started on it, and to stick with it until it is completed:

- **1.** the concept of importance (they think they *should* get it done).
- **2.** the concept of secondary importance—they are motivated by the fact that their parents, teacher, boss, or someone they respect thinks the task is important to tackle and to complete.
- **3.** the concept of rewards for doing a task and consequences/punishments for not doing it.

A person with an ADHD nervous system has *never* been able to use the idea of importance or rewards to start and do a task. They know what's important, they like rewards, and they don't like punishment. But for them, the things that motivate the rest of the world are merely nags.

The inability to use importance and rewards as motivators has a lifelong impact on ADHDers' lives:

- How can those diagnosed with the condition choose between multiple options if they can't use the concepts of importance and financial rewards to motivate them?
- How can they make major decisions if the concepts of importance and rewards are neither helpful in making a decision nor a motivation to do what they choose?

This understanding explains why none of the cognitive and behavioral therapies used to manage ADHD symptoms have a lasting benefit. Researchers view ADHD as stemming from a defective or deficit-based nervous system. I see ADHD stemming from a nervous system that works perfectly





well by its own set of rules. Unfortunately, it does not work by any of the rules or techniques taught and encouraged in a neurotypical world. That's why:

- ▶ ADDers do not fit in the standard school system, which is built on repeating what someone else thinks is important and relevant.
- ▶ ADDers do not flourish in the standard job that pays people to work on what someone else (namely, the boss) thinks is important.
- ADDers are disorganized, because just about every organizational system out there is built on two things—prioritization and time management—that ADDers do not do well.
- ▶ ADDers have a hard time choosing between alternatives, because everything has the same lack of importance. To them, all of the alternatives look the same.

People with an ADHD nervous system know that, if they get engaged with a task, they can do it. Far from being damaged goods, people with an ADHD nervous system are bright and clever. The main problem is that they were given a neurotypical owner's manual at birth. It works for everyone else, not for them.

### **Don't Turn ADHDers into Neurotypicals**

THE IMPLICATIONS OF THIS NEW UNDERSTANDING ARE VAST. The first thing to do is for coaches, doctors, and professionals to stop trying to turn ADHD people into neurotypical people. The goal should be to intervene as early as possible, before the ADHD individual has been frustrated and demoralized by struggling in a neurotypical world, where the deck is stacked against him. A therapeutic approach that has a chance of working, when nothing else has, should have two pieces:

▶ Level the neurologic playing field with medication, so that the ADHD individual has the attention span, impulse control, and ability to be calm on the inside. For most people, this requires two different medications. Stimulants improve an ADHDer's day-to-day performance, helping him get things done. They are not effective at calming the internal hyperarousal that many with ADHD have. For those symptoms, the majority of people will benefit by adding one of the alpha agonist medications (clonidine/Kapvay or guanfacine/Intuniv) to the stimulant.





Medication, though, is not enough. A person can take the right medication at the right dose, but nothing will change if he still approaches tasks with neurotypical strategies.

➤ The second piece of ADHD symptom management is to have an individual create his own ADHD owner's manual. The generic owner's manuals that have been written have been disappointing for people with the condition. Like everyone else, those with ADHD grow and mature over time. What interests and challenges someone at seven years old will not interest and challenge him at 27.

### **Write Your Own Rules**

THE ADHD OWNER'S MANUAL HAS TO BE BASED ON CURRENT successes. How do you get in the zone now? Under what circumstances do you succeed and thrive in your current life? Rather than focus on where you fall short, you need to identify how you get into the zone and function at remarkable levels.

I usually suggest that my patients carry around a notepad or a tape recorder for a month to write down or explain how they get in the zone.

- Is it because they are intrigued? If so, what, specifically, in the task or situation intrigues them?
- Is it because they feel competitive? If so, what in the "opponent" or situation brings up the competitive juices?

At the end of the month, most people have compiled 50 or 60 different techniques that they know work for them. When called on to perform and become engaged, they now understand how their nervous system works and which techniques are helpful.

I have seen these strategies work for many ADDers, because they stepped back and figured out the triggers they need to pull. This approach does not try to change people with an ADHD nervous system into neurotypical people (as if that were possible), but gives lifelong help because it builds on their strengths.

WILLIAM B. DODSON, M.D., board certified in psychiatry, specializes in treating adult ADHD in Greenwood Village, Colorado. This article is adapted from his forthcoming book, *What You Wish Your Doctor Knew About ADHD*.





## SECRETS of ADHD EMOTIONS

An explanation, finally, of why we act the way we do. BY WILLIAM DODSON, M.D.

hat I have come to understand—something that people with ADHD know from an early age—is that, if you have an ADHD nervous system, you might as well have been born on a different planet.

Most people with ADHD have always known they are different. They were told by parents, teachers, employers, spouses, and friends that they did not fit the common mold and that they had better shape up in a hurry if they wanted to make something of themselves.

As if they were immigrants, they were told to asimilate into the dominant culture and become like everyone else. Unfortunately, no one told them how to do this. No one revealed the bigger secret: It couldn't be done, no matter how hard they tried. The only outcome would be failure, made worse by the accusation that they will never succeed because they don't try hard enough or long enough.

It seems odd to call a condition a disorder when the condition comes with so many positive features. People with an ADHD-style nervous system tend to be great problem-solvers. They wade into problems that have stumped everyone else and jump to the answer. They are affable, likable people with a sense of humor. They have what Paul Wender called "relentless determination." When they get hooked on a challenge, they tackle it with one approach after another until they master the problem—and they may lose interest entirely when it is no longer a challenge.

If I could name the qualities that would assure a person's success in life, I would say being bright, being creative with that intelligence, and being well-liked. I would also choose hardworking and diligent. I would want many of the traits that ADDers possess.

The main obstacle to understanding and managing ADHD has been the unstated and incorrect assumption that ADDers could and should be

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like the rest of us. For neurotypicals and ADDers alike, here is a detailed portrait of why those with attention deficit do what they do.

### Why We Are So Sensitive

YOU CANNOT MANAGE THE IMPAIRMENTS OF ADHD UNTIL you understand how you process emotion. Researchers have ignored the emotional component of ADHD because it can't be measured. Yet emotional disruptions are the most impairing aspects of the condition at any age. For example:

- Nearly everyone with ADHD answers an emphatic yes to the question: "Have you always been more sensitive than others to rejection, teasing, criticism, or your own perception that you have failed or fallen short?" This is the definition of a condition called rejection-sensitive dysphoria. When I ask ADHDers to elaborate on it, they say: "I'm always tense. I can never relax. I can't just sit there and watch a TV program with the rest of the family. I can't turn my brain and body off to go to sleep at night. Because I'm sensitive to my perception that other people disapprove of me, I am fearful in personal interactions." They are describing the inner experience of being hyperactive or hyper-aroused. Remember that most kids after age 14 don't show much overt hyperactivity, but it's still present internally, if you ask them about it.
- ► The emotional response to the perception of failure is catastrophic for those with the condition. The term "dysphoria" means "difficult to bear," and most people with ADHD report that they "can hardly stand it." They are not wimps; disapproval hurts them much more than it hurts neurotypical people.
- If emotional pain is internalized, a person may experience depression and loss of self-esteem in the short term. If emotions are externalized, pain can be expressed as rage at the person or situation that wounded them.
- In the long term, there are two personality outcomes. The person with ADHD becomes a people pleaser, always making sure that friends, acquaintances, and family approve of him. After years of constant vigilance, the ADHD person becomes a chameleon who has lost track of what she wants for her own life. Others find that the pain of failure is so bad that they refuse to try anything unless they are assured of a quick, easy, and complete success. Taking a chance is too big an emotional risk. Their lives remain stunted and limited.

Each ADDer has his own brain library and own way of storing that material. No wonder the average ADDer cannot access the right piece of information at the moment it is needed.

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- ► For many years, rejection-sensitive dysphoria has been the hallmark of what has been called atypical depression. The reason that it was not called "typical" depression is that it is not depression at all but the ADHD nervous system's instantaneous response to the trigger of rejection.
- Until recently, all that a person with ADHD could do was to wait for his dysphoria to dissipate time. Clinical experience has found that up to half of people with rejection sensitivity can get some relief from the alpha agonists, either clonidine (Kapvay) or guanfacine (Intuniv). More investigation and research are called for, but if you think that you may have rejection-sensitive dysphoria, talk with your doctor about it.

### Why We Don't Function Well in a Linear World

THE ADHD WORLD IS CURVILINEAR. PAST, PRESENT, AND FUTURE are never separate and distinct. Everything is now. ADDers live in a permanent present and have a hard time learning from the past or looking into the future to see the inescapable consequences of their actions. "Acting without thinking" is the definition of impulsivity, and one of the reasons that ADDers have trouble learning from experience.

It also means that ADDers aren't good at ordination—planning and doing parts of a task in order. Tasks in the neurotypical world have a beginning, a middle, and an end. ADDers don't know where and how to start, since they can't find the beginning. They jump into the middle of a task and work in all directions at once. Organization becomes an unsustainable task because organizational systems work on linearity, importance, and time.

### Why We Are Overwhelmed

PEOPLE IN THE ADHD WORLD EXPERIENCE LIFE MORE INTENSEly, more passionately than neurotypicals. They have a low threshold for outside sensory experience because the day-to-day experience of their five senses and their thoughts is always on high volume. The ADHD nervous system is overwhelmed by life experiences because its intensity is so high.

The ADHD nervous system is rarely at rest. It wants to be engaged in something interesting and challenging. Attention is never "deficit." It is always excessive, constantly occupied with internal reveries and engagements. When ADDers are not in The Zone, in hyperfocus, they have four or five things rattling around in their minds, all at once and for no obvious reason, like five people talking to you simultaneously. Nothing gets sustained, undivided attention. Nothing gets done well.





Many people with ADHD can't screen out sensory input. Sometimes this is related to only one sensory realm, such as hearing. In fact, the phenomenon is called hyperacusis (amplified hearing), even when the disruption comes from another of the five senses. Here are some examples:

- > The slightest sound in the house prevents falling asleep and overwhelms the ability to disregard it.
  - > Any movement, no matter how small, is distracting.
- > Certain smells, which others barely notice, cause people with ADD to leave the room.

ADDers have their worlds constantly disrupted by experiences of which the neurotypical is unaware. This disruption enforces the perception of the ADHD person as being odd, prickly, demanding, and high-maintenance. But this is all that ADDers have ever known. It is their normal. The notion of being different, and that difference being perceived as unacceptable by others, is made a part of how they are regarded. It is a part of the ADDer's identity.

### Why We Love a Crisis

SOMETIMES, A PERSON WITH ADHD CAN HIT THE DO-OR-DIE deadline and produce lots of high-quality work in a short time. A whole semester of study is crammed into a single night of hyperfocused perfection. Some ADHDers create crises to generate the adrenaline to get them engaged and functional. The "masters of disasters" handle high-intensity crises with ease, only to fall apart when things become routine again.

Lurching from crisis to crisis, however, is a tough way to live life. Occasionally, I run across people who use anger to get the adrenaline rush they need to get engaged and be productive. They resurrect resentments or slights, from years before, to motivate themselves. The price they pay for their productivity is so high that they may be seen as having personality disorders.

### Why We Don't Always Get Things Done

PEOPLE WITH ADHD ARE BOTH MYSTIFIED AND FRUSTRATED by the intermittent ability to be super-human when interested, and challenged and unable to start and sustain projects that are boring to them. It is not that they don't want to accomplish things or are unable to do the task. They know they are bright and capable because they've proved it many times. The lifelong frustration is never to be certain that they will be able to engage when needed, when they are expected to, when others depend on them to. When ADDers see themselves as undependable, they begin to doubt their talents and feel the shame of being unreliable.





Mood and energy level also swing with variations of interest and challenge. When bored, unengaged, or trapped by a task, the person with ADHD is lethargic, quarrelsome, and filled with dissatisfaction.

### **Why Our Motors Always Run**

BY THE TIME MOST PEOPLE WITH ADHD ARE ADOLESCENTS, their physical hyperactivity has been pushed inward and hidden. But it is there and it still impairs the ability to engage in the moment, listen to other people, to relax enough to fall asleep at night, and to have periods of peace.

So when the distractibility and impulsivity are brought back to normal levels by stimulant medication, the ADDer may not be able to make use of his becalmed state. He is still driven forward as if by a motor on the inside, hidden from the rest of the world. By adolescence, most people with ADHD-style nervous systems have acquired the social skills necessary to cover up that they are not present.

But they rarely get away with it entirely. When they tune back into what has gone on while they were lost in their thoughts, the world has moved on without them. Uh-oh. They are lost and do not know what is going on, what they missed, and what is now expected of them. Their reentry into the neurotypical world is unpleasant and disorienting. To the ADDer, the external world is not as bright as the fantastic ideas they had while lost in their own thoughts.

Most of my patients do not own or wear a watch. For them, time is a meaningless abstraction. It seems important to others, but ADHDers never got the hang of it.

### **Why Organization Eludes Us**

THE ADHD MIND IS A VAST AND UNORGANIZED LIBRARY. IT contains masses of information in snippets, but not whole books. The information exists in many forms—as articles, videos, audio clips, Internet pages—and also in forms and thoughts that no one has ever had before. But there is no card catalog, and the "books" are not organized by subject or even alphabetized.

Each ADDer has his or her own brain library and own way of storing that huge amount of material. No wonder the average ADDer cannot access the right piece of information at the moment it is needed—there is no reliable mechanism for locating it. Important items (God help us, important to someone else) have no fixed place, and might as well be invisible or missing entirely. For example:

The ADHD child comes home and tells Mom that he has no homework to do. He watches TV or plays video games until his bedtime. Then he recalls that he has a major report due in the morning. Was the child consciously lying to the parent, or was he truly unaware of the important task?

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### Why We Forget Sometimes

FOR THE ADDER, INFORMATION AND MEMORIES THAT ARE OUT of sight are out of mind. Her mind is a computer in RAM, with no reliable access to information on the hard drive.

Working memory is the ability to have data available in one's mind, and to be able to manipulate that data to come up with an answer or a plan of action. The ADDer's mind is full of the minutiae of life ("Where are my keys?" "Where did I park the car?"), so there is little room left for new thoughts and memories. Something has to be discarded or forgotten to make room for new information. Often the information ADDers need is in their memory...somewhere. It is just not available on demand.

### Why We Don't See Ourselves Clearly

PEOPLE FROM THE ADHD WORLD HAVE LITTLE SELF-AWAREness. While they can often read other people well, it is hard for the average ADDer to know, from moment to moment, how they themselves are doing, the effect they are having on others, and how they feel about it all. Neurotypicals misinterpret this as being callous, narcissistic, uncaring, or socially inept. Taken together, the ADDer's vulnerability to the negative feedback of others, and the lack of ability to observe oneself in the moment, make a witch's brew.

If a person cannot see what is going on in the moment, the feedback loop by which he learns is broken. If a person does not know what is wrong or in what particular way it is wrong, she doesn't know how to fix it. If ADDers don't know what they're doing right, they don't do more of it. They don't learn from experience.

The inability of the ADHD mind to discern how things are going has many implications:

• Many people with ADHD find that the feedback they get from other people is different from what they perceive. They find out, many times (and often too late), that the other people were right all along. It isn't until something goes wrong that they are able to see and understand what was obvious to everybody else. Then, they come to believe that they can't trust their own perceptions of what is going on. They lose self-confidence. Even if they argue it, many people with ADHD are never sure that they are right about anything.

2 People with ADHD may not be able to recognize the benefits of medication, even when those benefits are obvious. If a patient sees neither the problems of ADHD nor the benefits of treatment, he finds no reason to continue treatment.





3 ADDers often see themselves as misunderstood, unappreciated, and attacked for no reason. Alienation is a common theme. Many think that only another person with ADHD could possibly "get" them.

### Why We're Time Challenged

BECAUSE ADDERS DON'T HAVE A RELIABLE SENSE OF TIME, everything happens right now or not at all. Along with the concept of ordination (what must be done first; what must come second) there must also be the concept of time. The thing at the top of the list must be done first, and there must be time left to do the entire task.

I made the observation that 85 percent of my ADHD patients do not wear or own a watch. More than half of those who wore a watch did not use it, but wore it as jewelry or to not hurt the feelings of the person who gave it to them. For ADDers, time is a meaningless abstraction. It seems important to other people, but ADDers have never gotten the hang of it.

WILLIAM DODSON, M.D., board-certified in psychiatry, specializes in treating adult ADHD in Greenwood Village, Colorado. This article is adapted from his forthcoming book, *What You Wish Your Doctor Knew About ADHD*.





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