

# THE MYSTERY OF ADHD MOTIVATION SOLVED

Why do adults and children with ADHD  
have strong motivation and executive function for some tasks  
and never find the cognitive spark to do others?

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**D**ESPITE THE MANY DIFFERENCES AMONG CHILDREN AND ADULTS WITH ADHD, THERE IS one similarity shared by virtually all of them. Although they have considerable chronic difficulty in getting organized and getting started on many tasks, focusing their attention, sustaining their efforts, and utilizing their short-term working memory, all of those diagnosed with ADHD tend to have at least a few specific activities or tasks for which they have no difficulty in exercising these very same functions in a normal or an extraordinary way.

The inconsistency in motivation and performance is the most puzzling aspect of ADHD. It seems like the child or adult with the disorder who can show strong motivation and focus very well for some tasks should be able to do the same for most other tasks that they recognize as important. It appears as if this is a simple problem of lacking “willpower.” If you can do it for this, why can’t you do the same for that and that, which are even more important? However, ADHD is not a matter of willpower. It is a problem with the dynamics of the chemistry of the brain.

One of my patients once told me: “I’ve got a sexual metaphor you can use to explain what it’s

like to have ADHD. It’s like having erectile dysfunction of the mind. If the task you are faced with is something that turns you on, something that is really interesting for you, you’re ‘up for it’ and you can perform. But if the task is not something that’s intrinsically interesting to you, if it doesn’t turn you on, you can’t get up for it and you can’t perform. It doesn’t matter how much you tell yourself, ‘I need to, I ought to.’ It’s just not a willpower kind of thing.”

Recent research offers considerable evidence that ADHD is not a “willpower thing,” even though, in many ways, it appears to be a lack of willpower. When individuals with ADHD are faced with a task

that is really interesting to them, not because someone told them that it ought to be interesting—but because it is interesting to them at that moment—that perception, conscious or unconscious, changes the chemistry of the brain instantly. This process is not under voluntary control.

The willpower assumption is based on two fundamental misunderstandings of how the human brain works. This assumption ignores the complex and powerful role of unconscious emotions in the brain's processes of motivation, and it does not recognize the critical importance of working memory for prioritizing tasks moment by moment.

The primary difference between Google searches and any given individual's motivations, beyond the obvious differences in the size of the information database, is the process by which relevance and prioritizing of information is determined. Google prioritizes based on the relevance of manifest content, and on the frequency of demand in similar searches by others. The primary basis on which humans prioritize information is the emotion associated with conscious and unconscious memories activated by the individual's thoughts and perceptions at any given moment.

## Your Emotional Brain

In 1996, neuroscientist Joseph LeDoux, Ph.D., published

*The Emotional Brain*, a book highlighting the central importance of emotion in the brain's cognitive functioning. He emphasized that emotions—mostly unconscious emotions—are powerful and critically important motivators of human thought and actions. This understanding of the essential role of emotion in all aspects of human motivation and behavior has not been adequately integrated into current thinking about ADHD.

Emotions, positive and negative, play a critical role in executive functions: initiating and prioritizing tasks, sustaining or shifting interest or effort, holding thoughts in active memory, and choosing to avoid a task or situation. Whereas Google responds to queries typed into the search engine, the human brain responds to the quality and intensity of emotions attached to associated memories.

Many people think of emotions as involving only conscious feelings, limited to sensations of sadness, anger, pleasure, worry, and so on, that a person is fully aware of and generally able to identify. Neuroscience has shown that conscious feelings are only a tiny part of the variegated range of emotions that operates within each person to motivate executive functions. Neuroscientist Joaquin Fuster, M.D., emphasized, "Whereas we may be fully conscious of a retrieved memory, the vast majority of memories that we retrieve remain unconscious."

## RUNNING AWAY FROM STRESSFUL SITUATIONS

It was a difficult exam, and Jim was having a lot of trouble answering most of the questions, possibly because he had not yet read even half of the chapters assigned for the test. Jim had put off doing any work on the exam for several days. He had been preoccupied with an email from his girlfriend back home. She wrote that she wanted to break up because he was now too far away, and she had gotten involved with someone else.

At 2 A.M., after struggling with the exam for several hours, Jim decided to take a nap for a couple of hours and try to finish the exam when he woke up. He set his alarm for 4 A.M. When the alarm buzzed, Jim woke up for a few moments, turned the alarm off, and went back to sleep. He did not wake up until five hours later.

When he realized he had slept through the deadline, Jim panicked. The professor

had announced that he would not accept any late exams. Recognizing that he would certainly get an F on the midterm, Jim impulsively decided he was not ready to be in college. Without discussing his decision with anyone, he packed his suitcase and left to go home, planning to stay there until the following fall, when he would try again to go to college.

In talking with me back home about this, a week later, Jim said that dropping out of college was the best thing for him at that point. He said he had been excited to go off to college, but the work seemed too hard for him, he had not yet made any real friends, and he had really been missing his girlfriend and his parents. He also claimed that getting an F on the midterm would have meant failing that course, so it made no sense for him to continue any of his

courses that semester. He could see no other way to deal with that situation. He also mentioned that, in coming home, he had hoped he could win back his girlfriend's affections. As it turned out, she was not interested in getting re-involved with him.

It was a pattern that Jim hadn't recognized. Jim had quit many activities before. He was quick to feel unsure of himself and quick to get himself out of any situation where he was afraid he might not do well. He was biased toward early escape from stress.

Only after several months of psychotherapy was Jim able to see that his "accidental" going back to sleep that morning, his failure to even discuss his situation with his college advisor, and his assumption that he faced inevitable failure were not actually the best choices for him.

## STUCK IN EMOTION

A woman told me that she dreaded Wednesday evenings. For her family, that was the night after their Wednesday morning trash pickup. She had two teenage sons, and her husband asked their boys to take on the job of dragging the trash cans down to the foot of their driveway every Tuesday evening, and then to bring the emptied cans back up the driveway each Wednesday afternoon. Many times they forgot to bring the trash cans back in.

The mother explained that any time her husband got home from work on Wednesday evening and saw the trash cans still at the base of the driveway, he would become enraged and scream at them, saying they were losers, irresponsible, ungrateful for what they had been given, unwilling to help the family by doing the simple chore of bringing the trash cans back up to the house once a week.

The mother explained that, each time her husband scolded their sons so harshly, he would later calm down and mumble an apology to the boys. She said, "I know he loves them both and would give his life for either one of them, but when he gets wound up in one of those Wednesday-night episodes, he gets so enraged that he seems to forget that those are his sons whom he loves and wants to protect. All he knows in that moment is that he is furious with both of them for not having done that chore."

Any parent can lose his or her temper with a child occasionally, but most parents, most of the time, can express their frustration to the child without such an intense verbal attack. Their working memory allows them to hold in mind their love, even while their anger is taking up a lot of space in their head.

Often, these unconscious emotions conflict and cause us to act in ways that are inconsistent with our recognized conscious intentions. An undercurrent of conflicting emotions is often involved in our failure to do tasks that we believe we want to do, or in directly or indirectly engaging in actions that we consciously believe we do not want to do.

Sometimes a person thinks of a particular task as important, honestly believing that he wants to give it immediate attention and sustained effort, yet he does not act accordingly. He may continue to procrastinate, busying himself with work on other tasks that are not as urgent, or he may actively seek out distractions by getting in touch with friends, surfing the Internet, getting high, or going to sleep. Such contradictions make sense only when we realize that the emotions that guide our motivations often are not fully conscious or conflicting. We may be influenced by emotions that we do not know we have (see "Running Away from Stressful Situations").

### Motivation Factors

The most basic factor contributing to the ability of persons with ADHD to focus very well and efficiently utilize their executive functions on some tasks, while being chronically unable to focus adequately on most other tasks, is a problem of neural transmission. For many years, it has been recognized that individuals with ADHD tend to chronically have insufficient release and reloading of the neurotransmitter dopamine at synaptic junctions of neurons in the networks that manage executive functions.

Many studies have demonstrated that treatment with stimulant medications improves the efficiency of neural communication. However, this increased release and slowed reloading is not under voluntary control. It occurs only for those tasks in which the individual with ADHD has a strong interest. The heightened interest may be because that activity has brought pleasure or other rewards

to the person in the past. Or interest may be intensified because the person fears that something he or she anticipates as being unpleasant is likely to occur very quickly if he or she does not attend to the task immediately. Whether because of anticipated pleasure or fear, the heightened interest generates increased release of dopamine instantly, and sustains it for as long as the intensified interest persists.

The second factor that influences the ability to pay attention to some tasks but not to others is the relative weakness in working memory that is characteristic of many persons with ADHD. Working memory is essential for keeping in mind relative priorities of our various interests at any given time.

Social psychological research has shown that individuals with larger working memory capacity are generally better able to deal with emotions, pleasant and unpleasant, without getting excessively caught up in them. Those with ADHD tend to have less "bandwidth" in their working memory functions, and are likely to have more difficulty than others in quickly linking together various memories relevant to doing or not doing a task. They are less likely to take

into account the bigger picture of which the present moment is a part (see "Stuck in Emotion," above). They operate more like someone watching a basketball game through a telescope, unable to take into account the rest of the action on the court, the threats and/or opportunities that are not included in the small circle of focus provided by their telescope. ▣

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