

Understanding ADHD

Created by Counseling & Psychological Services staff
at Cornell Health

Table of contents:

DSM 5 TR Diagnosis	2
A Better Diagnosis & Other Helpful ADHD Info:	3
Basics of treating ADHD	3
Core Features of ADHD	4
Sensory Dysregulation	4
Emotional Dysregulation	4
Time Fluidity	5
Motivation	5
Attention & Focus	6
Working Memory	6
Organization, Planning, & Prioritization	7
Mental Flexibility & Impulsivity	7
ADHD Misconceptions & Microaggressions	8
Our Most Helpful Tips & Tricks:	9
Commonly Recommended Tools	10
Works Cited	10

DSM 5 TR Diagnosis

From the Diagnostic and Statistical Manual of Mental Health Disorders, 5th Edition (2022):

TABLE 1

DSM-5-TR diagnostic criteria for attention-deficit/hyperactivity disorder^a

A. A persistent pattern of inattention and/or hyperactivity and impulsivity that interferes with functioning or development.	
Inattention: ≥ 6 of the symptoms (at right) have persisted ≥ 6 months to a degree inconsistent with the patient's developmental level and negatively impact social, academic, or occupational activities. Note: Symptoms are not solely a manifestation of oppositional behavior, defiance, hostility, or failure to understand tasks or instructions. For ages 17 years and older, ≥ 5 symptoms are required.	The patient often ... a. Fails to give close attention to details or makes careless mistakes in schoolwork, at work, or during other activities. b. Has difficulty sustaining attention in tasks or play activities. c. Does not seem to listen when spoken to directly. d. Does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace. e. Has difficulty organizing tasks and activities. f. Avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort. g. Loses things necessary for tasks or activities. h. Is easily distracted by extraneous stimuli (for older adolescents and adults, may include unrelated thoughts). i. Is forgetful in daily activities.
Hyperactivity and impulsivity: ≥ 6 of the symptoms (at right) have persisted ≥ 6 months to a degree inconsistent with the patient's developmental level and negatively impact social, academic, or occupational activities. Note: The symptoms are not solely a manifestation of oppositional behavior, defiance, hostility, or a failure to understand tasks or instructions. For ages 17 years and older, ≥ 5 symptoms are required.	The patient often ... a. Fidgets with or taps hands or feet or squirms in seat. b. Leaves seat in situations when remaining seated is expected. c. Runs about or climbs in situations where it is inappropriate (in adolescents or adults, may be limited to feeling restless). d. Is unable to play or engage in leisure activities quietly. e. Is "on the go," acting as if "driven by a motor." f. Talks excessively. g. Blurts out an answer before a question has been completed. h. Has difficulty waiting his or her turn. i. Interrupts or intrudes on others.
B. Several inattentive or hyperactive-impulsive symptoms were present when the child was < 12 years old.	
C. Several inattentive or hyperactive-impulsive symptoms are present in ≥ 2 settings (eg, at home, school, or work; with friends or relatives; in other activities).	
D. There is clear evidence that the symptoms interfere with or reduce the quality of social, academic, or occupational functioning.	
E. The symptoms do not occur exclusively during the course of schizophrenia or another psychotic disorder and are not better explained by another mental disorder.	

Specifications: Combined presentation, predominantly inattentive presentation, predominantly hyperactive-impulsive presentations; in partial remission. Current severity should be specified as mild, moderate, or severe.

^a Adapted from: American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders-5th Edition-Text Revision*. 2022.⁴

A Better Diagnosis & Other Helpful ADHD Info:

ADHD is often experienced as more pervasive and encompassing than the DSM diagnosis describes it to be. It is a disorder of regulation.

Core Difficulties/Differences in ADHD include:

- Sensory dysregulation
- Emotional dysregulation
- Time fluidity
- Motivation
- Attention & focus*
- Working memory difficulties*
- Organization, planning, & prioritization*
- Mental flexibility & impulsivity

Note that attention & focus is only one part of the 8 core difficulties.

*These core features are part of “Executive Dysfunction”

Estimates of ADHD prevalence are often sighted at 5% worldwide in children, 3-4% worldwide in adults, and 2-8% in college students. We often see lower rates in populations of color, though that is likely a reflection of poor diagnosis. ADHD also has about 80% heritability, meaning that if you experience ADHD it’s likely that someone else in your family does as well.

About 80% of ADHDers have at least one co-occurring mental health diagnosis. Common co-occurring difficulties include:

- Anxiety disorders (20-50%)
- Autism (21%)
- Depression (18.6-53.3%)
- Substance use disorders (15-40%)
- Some sleep differences

Basics of treating ADHD

The most effective treatments for ADHD are multimodal, meaning they include a bit of each of the following:

- Medication
- Psychoeducation
- Skill development
- Accountability assistance

A note on ADHD medications:

- Both stimulant and nonstimulant medications are considered to be highly effective
- They don’t treat all domains of ADHD difference
- Often, they can worsen sensory regulation and emotional regulation differences
- Depending on the type of medication, many describe a ‘drop’ when the medication wears off

Core Features of ADHD

Sensory Dysregulation

ADHDers often struggle with interoception, or identifying the internal signals of their bodies. Hyperfocus may make sensory experiences more intense, as ADHDers are often out of touch with their body during hyperfocus sessions.

Common ways ADHDers experience this includes:

- Forgetting to eat or endlessly snacking
- Bad awareness of their body in space (for example, walking into things frequently)
- Alexithymia (difficulty identifying your own emotions)
- Hyper- or Hypo- awareness of sensations on the body (seams, heat, etc.)

Hyperactivity may be an example of sensory dysregulation or an attempt at regulation. The internal experience of being “driven by a motor” may be an example of hyperactivity as a dysregulation. Fidgeting and constant movement may be an example of introducing a level of stimulation in order to bring the body’s stimulation level to equilibrium.

Tools & treatments:

- Avoidance of sensations that cause discomfort
- Work on identifying emotions in therapy, times we’ve felt them, how they feel physically or we would describe them as feeling (many Neurodivergent individuals will describe emotions through a statement or experience rather than a one- or two-word description)
- Use of fidgets or something to do mindlessly while engaging in other tasks
- Interventions using the Vasoagal system may also be useful
- Physical activity can be useful but may have negative associations due to a history of lack of body awareness

Emotional Dysregulation

Research has shown that emotional dysregulation is a core feature of ADHD experiences. This is generally experienced as difficulty controlling and reacting to emotions. It may also include difficulty identifying emotions in the moment.

ADHDers may experience:

- Low frustration tolerance
- Increased irritation
- Over perception of negatives
- Heightened intensity of emotions
- Rapid cycling of highs and lows
- Rejection sensitivity dysphoria

Emotional dysregulation in ADHD has been seen across age groups. ADHDers’ experiences of time and difficulty with impulse control may be an additional factor in emotional dysregulation.

Tools & treatments:

- Working on calming skills to increase frustration tolerance
- Reframing negative thoughts and beliefs

- Normalizing the intensity of emotions and the rapid cycling that ADHDers can experience
- Processing and identifying emotions with friends or a therapist

Time Fluidity

ADHDers' sense of time is not experienced as concrete and existing outside of themselves, instead it is experienced as fluid and depending on what they're doing or their emotions. Some consider time fluidity as a part of sensory dysregulation.

Things that impact this fluidity are:

- Hyperfocus
- Emotional weight attached to tasks can make them feel like they take longer or shorter
- Difficulty estimating time it takes to complete tasks
 - and not considering prep & clean-up time
- "Time blindness" or difficulty being aware of time

ADHDers also struggle with conceptualizing the past, present, and future. ADHDers often live in the "Now" and often forget to consider the past or future. This can make ADHDers very adaptable. Once a thing has passed, it often feels like it no longer exists. ADHDers' "time horizons" can be much shorter than Neurotypicals. Most Neurotypicals can plan about 6 months in the future; ADHDers can usually plan about a month ahead.

Tools & treatments:

- Time fluidity is frequently 'fixed' with medication treatment
- Timers, watches, other externalized ways of being aware of time
- Work through the emotional weight of tasks with a therapist
- Practice estimating the time it takes to do a task then recording how long it actually takes for estimating that task again in the future
- As a general rule estimate between 1.5 and 2x as long as you think it will take

Motivation

For ADHDers, motivation is the most important, and sometimes only, driver for action. This means that ADHDers can care deeply about something, know they need to do it in order to reach their goals, and that if they don't do it they'll cause more difficulty for themselves – yet still not be able to do it. Tasks that are lengthy or difficult often decrease motivation for ADHDers, making it harder to complete.

Common ways ADHDers manage this includes:

- Habitually procrastinate
- Force yourself to work only to struggle to get anything done
- Feeling that doing things when unmotivated is "torture"
- Getting extensions and still being unable to work on or complete the task

Tools & treatments:

- Goal is to make the task urgent, new, or interesting
- Create artificial urgency with timers, check-ins with professors/friends/therapists
- Gamify the task
- Create rewards for finishing tasks
 - Keep time fluidity in mind, long term tasks may need multiple rewards
- Change the setting where you do the task

Attention & Focus

ADHDers often notice difficulty in sustaining attention during tasks. This is more pronounced when doing tasks that are difficult, lengthy, or tasks that you dislike. ADHDers also often struggle to filter out stimulation during activities, leading to distraction (not finishing the activity) or irritation (when trying to force yourself to continue). Alternatively, ADHDers often also notice periods of hyperfocus or complete absorption in a task.

Hyperfocus:

- Is not always pleasant, often ADHDers forget to eat, drink, and go to the bathroom during the duration of a hyperfocus period
- May feel like getting “stuck” on a task or idea
- ADHDers often have little to no control over when this happens or the subject of the hyper fixation

Interventions/Treatment:

- Set the scene before attempting to focus;
 - do you need more or less stimuli – headphones for music, or earplugs to block out noise
 - Set up website blockers or phone blockers if needed
 - Keep a post-it note or piece of paper for writing down the thoughts that come up that could distract you, remind yourself you’ll look at them after you get this task done
 - Understand and forgive yourself if you get distracted, then attempt to get back on track
- Setting timers (Pomodoro, etc) can be a good way to help break out of Hyperfocus, and remind us that we don’t have to do the thing forever
 - Adjusting the time of the Pomodoro can also be helpful
 - 5-minute rule – try the thing for 5 minutes, if you can’t continue after that, you know you got some work done
- You may need to have recovery time after a hyperfocus session, things like calming strategies and physically taking care of yourself is needed but may be hard
- Forgiveness is key for attention, this often feels like the biggest deficit for ADHDers, the biggest way we’re not “normal.” Forgiving ourselves for not being able to work “like everyone else” often needs to be processed and accepted.

Working Memory

Working memory, sometimes called short-term memory, is where information is temporarily stored in order for it to be manipulated or used to complete tasks and guide behavior. For example, remembering where you sat down the spatula while you’re cooking would be stored in your working memory.

Difficulty with working/short-term memory is one of the better-known deficits in ADHD.

Common experiences many describe include:

- Forgetting where you put frequently used items, particularly if the item isn’t in its “usual place”
- Realizing you left a location without everything you need
 - (i.e. leaving without your keys or phone)
- Being ‘out of sight, out of mind’ – including with friendships
- Forgetting tasks that need to be done, or events you’ve agreed to attend
- Buying or owning multiples of certain items
- Needing to repeatedly check your schedule or tasks that need to be done

Tools & treatments:

- Systems are key for remembering where things are – everything should have a place or routine to help remember where things go
- Talk with friends & communicate your needs
 - Ex. they may need to be the one to reach out to you
- A calendar with events can be helpful (Google calendar is a good one because you can set multiple reminders ahead of any event)
- Having a written or text record of the tasks you need to do, or of tasks others are asking of you that you can go back to and check when needed

Organization, Planning, & Prioritization

Dr. Barkley says “ADHD is not a disorder of knowing, it’s a disorder of doing.” It’s not that we don’t know organizational systems, or that we don’t know something is important, it’s that for some reason we can’t follow through on the actions needed to do the task.

Consider the difficulties we’ve already discussed regarding time fluidity, directing attention and focus, and reduced short term-memory. What may we expect the impact to be on Organization, Planning and Prioritizing?

- Difficulty estimating the length of tasks, estimating emotionally in particular
- Difficulty identifying subtasks in longer projects
- Difficulty mapping when tasks need to be done onto a long-term schedule
- Difficulty identifying which tasks need to be done first or where to start on larger projects
- Difficulty identifying which tasks or assignments are more important
- Difficulty remembering where things are or when they were last worked on
- Chronic procrastination or putting things off until the last minute

Tools & treatments:

- Time tasks that you do routinely (dishes, cleaning, etc) to develop knowledge of how long it really takes
- Practice chunking big tasks & creating mini due dates for completing them
- Know what ‘done’ looks like for subtasks & big projects
- Use a priority matrix to help identify what to start first
- Externalize due dates when possible – troubleshoot the best way to do so
- Keep or make a homework folder so all work that needs to be done is in the same place (it helps reduce the chances of getting distracted on the way to start the next thing)

Mental Flexibility & Impulsivity

Impulsivity in ADHD has been linked to reduced response inhibition, in other words, a lack of ability to stop an automatic response to stimuli. ADHDers are thought to struggle with this in part due to reduced mental or cognitive flexibility, or reduced ability to change our thought processes to cope with new situations.

ADHDers may be quicker to act, and less likely to attempt other coping methods, when emotionally triggered or when experiencing an impulsive thought. ADHDers may also be less likely to think through the potential consequences of actions or identify difficulties that may occur.

Some common experiences include:

- Impulsive spending habits, or impulsive budgeting (which is often quickly forgotten)
- Binge eating or drinking
- Frequent fights, verbally or physically

- On-again, off-again relationships
- Increased risk-taking behaviors
- Distracted driving & road rage
- Careless mistakes
- Saying odd things without thinking about them
- Quick intense feelings of irritation and frustration that may feel disproportionate to the trigger of the behavior

Tools & treatments:

- Waiting out the urge
- Unlinking all cards from online shopping/autofill
- Instituting a mandatory wait time for shopping/spending, responding to arguments/disagreements, and/or eating specific amounts
- Harm reduction around risk taking behaviors

ADHD Misconceptions & Microaggressions

Many people say and believe things about ADHD that aren't based in fact and are often based on harmful stereotypes. We'd like to challenge these ideas. Here's some of the more common stereotypes:

ADHD doesn't exist	Multiple studies have been conducted looking at the structures of the ADHD brain, showing it as different from the neurotypical brain. Additionally, we've been able to identify the genetic markers for ADHD separate from those who are neurotypical.
You grow out of ADHD, it's just a disorder of childhood	ADHD symptoms and impairment continue into adulthood, particularly for those associated with inattentive symptoms. Impulsive symptoms tend to decrease, but not disappear with age. Hyperactive symptoms tend to become more internalized, thus easier to hide.
ADHD only impacts students' academics, ADHDers just need more time	This one is tricky, because often ADHDers do need more time. But ADHDers don't <i>just</i> need more time. Historically, additional time on exams was the only academic accommodation ADHDers were provided. This can be helpful because ADHDers do tend to need more time to complete tasks because of the impact of becoming distracted, however there is no evidence that ADHDers take longer to process information. As discussed above, ADHD is more complicated than just becoming distracted while working. Often ADHDers identify that they're able to cope with the impact of their ADHD on their academics, but that what's more difficult is the impact on their social and home lives.
ADHD is overdiagnosed	This is likely a response to increased rates of diagnosis in more recent years. Rates of women and people of color being diagnosed are increasing, but have been historically underdiagnosed.
ADHD students just want stimulant medication	Most ADHDers actually stop taking stimulant medication within the first year they're prescribed it because they (1) forget why they need it, and (2) because of the stigma of taking stimulant medication. Even more ADHDers say they're not interested in medication treatment.

	Untreated ADHDers are at higher risk of developing issues with substances and are at higher rates/risk of smoking cigarettes and cannabis. However, they are not more likely to misuse stimulant medication compared to their peers. Additionally, ADHDers who are treated with ADHD medication are less likely to develop substance use issues.
Cornell students are too smart to have ADHD	ADHD has been proven in many many studies not to be correlated in any way with intelligence. It is often correlated with lower grades and longer time to complete college; however, this has been shown to have to deal with the deficits in executive function we discussed above rather than with intelligence itself.
"You don't look like someone with ADHD"	There is no <i>look</i> to ADHD. People of all kinds experience ADHD. Often people say this when you 'seem put together' or seem like you aren't struggling. What they often fail to see is the amount of work ADHDers put into being able to present that way
"You're just lazy, forgetful, irresponsible" "You just don't care" "You need to try harder" "Why can't you just..."	These statements occur often out of frustration with the difficulties associated with ADHD. What they fail to hear or realize is that ADHDers are frustrated too. ADHDers want to be able to perform and function like everyone else, but as discussed above, with ADHD there is often no way to force ourselves to function. This can be confusing for neurotypicals who are able to do so.

Our Most Helpful Tips & Tricks:

1. Externalize everything;
 - a. Nothing should depend on your memory (or lack thereof)
2. Accountability measures
 - a. Regular check-ins with friends, family members, advisors, or professors without the pressure to perform perfectly
3. Communicating expectations
 - a. Hearing things verbally only is a sure way to forget that information. Receiving it also in writing allows you to have something to go back to and check. Ask for as much of your communication to happen in both formats for that reason.
 - b. When being asked to complete an assignment or task make sure that you know the following information, and if you don't, ask for it:
 - i. When is it due?
 - ii. How important is it? Should it be prioritized above other tasks/assignments?
 - iii. What does "done" or "finished" look like? Is there a rubric? Should you turn it in even if it's not finished?
4. Adjust stimulation based on your needs in the moment
5. Troubleshoot what will and won't work
 - a. Make adjustments as needed
 - b. Understand that ADHDers are incredibly adaptable, meaning that tools and strategies that work now won't work forever. Trying new things, or retrying old things, is a must.
6. Let go of ideas of "normal"
 - a. If it works for you, it works
7. Use all the tools at your disposal
 - a. Including Student Disability Services & work accommodations
 - b. Asking for help is part of being human.

Commonly Recommended Tools

- A health tracker (particularly if taking medication)
- A text-to-speech reader
- A speech-to-text writer
- Phone & website blockers
- Pomodoro timers
- A calendar that's easy to use (i.e. Google or Outlook)
- An app for minding money
- Noise canceling headphones or earbuds

Works Cited

- ADHD, Substance Use Disorders, and Psychostimulant Treatment - <https://journals.sagepub.com/doi/10.1177/1087054707311654>
- Adult ADHD research: current status and future directions - <https://doi.org/10.1177/1087054708314590.12>
- Attention-Deficit/Hyperactivity Disorder (ADHD) and Working Memory in Adults: A Meta-Analytic Review - <https://psycnet.apa.org/doiLanding?doi=10.1037%2Fa0032371>
- Clinical Implications of the Perception of Time in Attention Deficit Hyperactivity Disorder (ADHD): A Review - <https://pubmed.ncbi.nlm.nih.gov/31129679/>
- Comparing the Efficacy of Medications for ADHD Using Meta-analysis - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1868385/>
- Comparison of cognitive flexibility, appropriate risk-taking and reaction time in individuals with and without adult ADHD - https://www.sciencedirect.com/science/article/pii/S0165178119310376?casa_token=gfDAMY4hPX4AAA:AA:au_wVCluSGU5gxgq0ViNnyjDwdmeYhm_rMzQPNFavUYCCxfYkVC9vTRhiMPUk6APFIR7SHy1
- Diagnosis and Treatment of ADHD in the United States: Update by Gender and Race - <https://pubmed.ncbi.nlm.nih.gov/28152660/>
- Emotional lability, comorbidity and impairment in adults with attention-deficit hyperactivity disorder - <https://doi.org/10.1016/j.jad.2012.10.011.9>
- Research Forum on Psychological Treatment of Adults with ADHD - <https://journals.sagepub.com/doi/10.1177/1087054708315063>
- Research review: a new perspective on attention-deficit/hyperactivity disorder: emotion dysregulation and trait models - <https://doi.org/10.1111/j.1469-7610.2009.02105.x.11>
- Structural and functional neuroanatomy of attention-deficit hyperactivity disorder (ADHD) - <https://pubmed.ncbi.nlm.nih.gov/19393378/>
- Time Perception Deficits in Children and Adolescents with ADHD: A Meta-analysis - <https://journals.sagepub.com/doi/pdf/10.1177/1087054720978557>
- University students with attention deficit hyperactivity disorder (ADHD): A literature review - <https://pubmed.ncbi.nlm.nih.gov/30124182/>