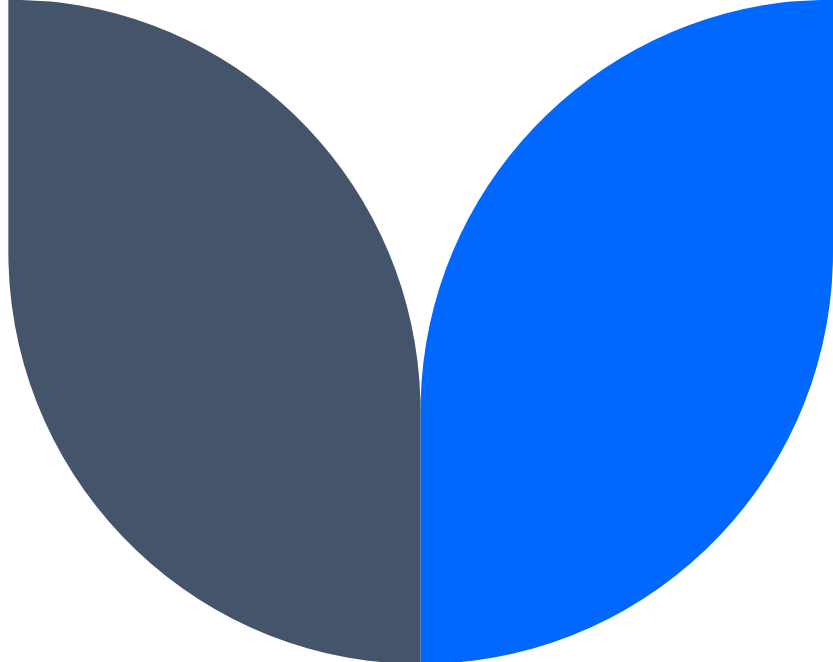
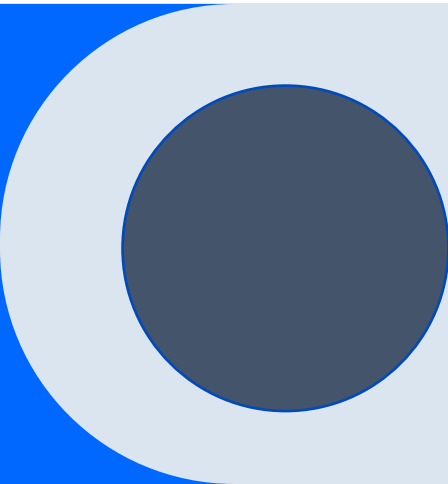




Adult ADHD: Myths and Facts

Lisa J. Nippoldt-Baca, PsyD, LP, ABPP
Board Certified in Clinical Neuropsychology
Subspecialty Board Certification in Pediatric Neuropsychology
MN Licensed Psychologist
Midwest Minds Assessment and Therapy, PLLC





Disclosures

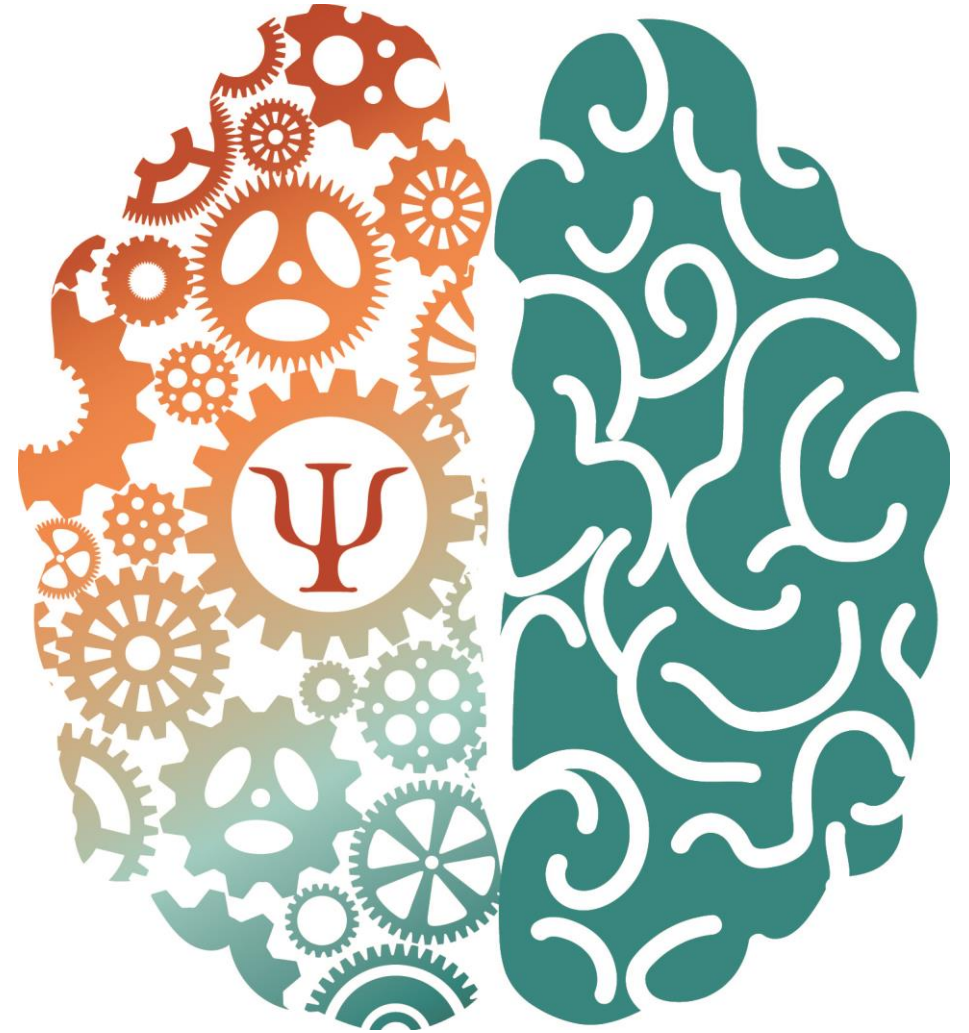
- Private practice in neuropsychology
- Team neuropsychologist/alternate for the MN Vikings, Wild, United, and MN PWHL team



Agenda

1. What is ADHD
2. Physiology of ADHD
3. Diagnosis
4. Treatment

What is ADHD?



DSM-V-TR Criteria

1. Six or more symptoms of inattention and/or hyperactivity for children up to age 16 years
2. Five or more for adolescents ages 17 years and older and adults
3. Symptoms of inattention have been present for at least 6 months
4. Significantly interfere with functioning in multiple areas
5. Inappropriate for developmental level



DSM-V-TR Criteria, Inattention

1. Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or with other activities.
2. Often has trouble sustaining attention on tasks or play activities.
3. Often does not seem to listen when spoken to directly.
4. Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (e.g., loses focus, side-tracked).
5. Often has trouble organizing tasks and activities.
6. Often avoids, dislikes, or is reluctant to do tasks that require mental effort over a long period of time (such as schoolwork or homework).
7. Often loses things necessary for tasks and activities (e.g. school materials, pencils, books, tools, wallets, keys, paperwork, eyeglasses, mobile telephones).
8. Is often easily distracted.
9. Is often forgetful in daily activities.



DSM-V-TR Criteria, Hyperactivity/Impulsivity

1. Often fidgets with or taps hands or feet, or squirms in seat.
2. Often leaves seat in situations when remaining seated is expected.
3. Often runs about or climbs in situations where it is not appropriate (adolescents or adults may be limited to feeling restless).
4. Often unable to play or take part in leisure activities quietly.
5. Is often “on the go” acting as if “driven by a motor”.
6. Often talks excessively.
7. Often blurts out an answer before a question has been completed.
8. Often has trouble waiting their turn.
9. Often interrupts or intrudes on others (e.g., butts into conversations or games)



DSM-V-TR Criteria, Continued

In addition, the following conditions **MUST** be met:

- Several inattentive or hyperactive-impulsive symptoms were present before age 12 years.
- Several symptoms are present in two or more settings, (such as at home, school or work; with friends or relatives; in other activities).
- There is clear evidence that the symptoms interfere with, or reduce the quality of, social, school, or work functioning.
- The symptoms are not better explained by another mental disorder (such as a mood disorder, anxiety disorder, dissociative disorder, or a personality disorder). The symptoms do not happen only during the course of schizophrenia or another psychotic disorder, or substance intoxication/withdrawal.



Types of ADHD

- *Combined Presentation*: if enough symptoms of both criteria inattention and hyperactivity-impulsivity were present for the past 6 months
- *Predominantly Inattentive Presentation*: if enough symptoms of inattention, but not hyperactivity-impulsivity, were present for the past six months
- *Predominantly Hyperactive-Impulsive Presentation*: if enough symptoms of hyperactivity-impulsivity, but not inattention, were present for the past six months.
- *Other Specified or Unspecified*: but why?

MYTH: Dr. Amen's 7 types of ADHD



Categorical vs. Dimensional Diagnoses

Categorical – DSM-V-TR

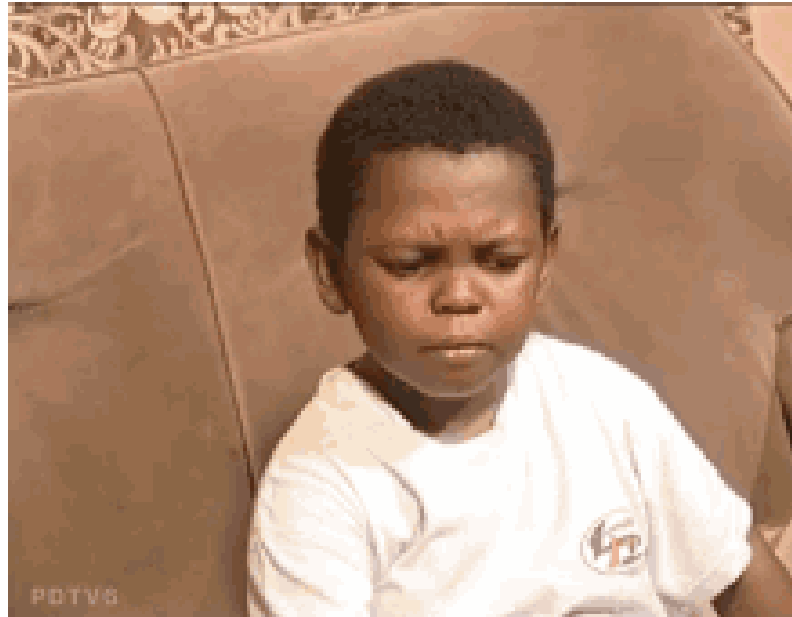
1. Hard lines that define diagnoses
2. # of symptoms. Is it there? Yes/No

Dimensional

1. Considers the variability in severity and presentation of symptoms
2. ADHD is a biologically dimensional diagnosis, diagnosed categorically



Presentation in Childhood



Presentation, Childhood

School performance

- Lower grades than expected given suspected intellect
- Getting in trouble for excessive movement/impulse control
- Disrupting the class
- Missing work/Assignments
- Omitted items/pages of work
- Messy locker/desk/backpack

Home

- Can't follow through with chores/homework
- Disorganization
- Breaking things (bones included)
- Conflict with or between family because of

symptoms

Sports

- Misses calls/plays
- Builds sandcastles/chases butterflies
- Injuries from lack of awareness of surroundings

Social

- Can't make/keep friends
- Can't sustain play
- Misses nonverbal cues (eye rolls)
- Frequent fights/conflict



Presentation in Adulthood



Presentation, Adulthood

Work

- Underperformance, missing work, conflict with coworkers
- Frequent change in jobs

Relationships

- Frequent change in partners/adultery/domestic abuse or conflict
- Fights because missed appointments, anniversaries, obligations

Home

- Messy, disorganized, losing keys, credit cards, wallet, you name it
- Can't finish a movie or book, leave garage door open, forget chores

Self-Esteem, Free Time/Hobbies



Prevalence (Center for Disease Control, 2020)

Morbidity for Children ages 3-17 (2016–2019)

- Percent ever diagnosed with ADHD: 9.8%
- Percent of boys ever diagnosed with ADHD: 13%
- Percent of girls ever diagnosed with ADHD: 6%

By Race(children ages 3-17):

- 12 percent Black, non-Hispanic
- 10 percent White, non-Hispanic
- 10 percent Hispanic/Latino
- 6.6 percent Other

Prevalence in Adulthood, NIH

4-5% of US adults have ADHD, some stats say as high as 8%

- Males 5.4%
- Females 3.2%

EVERY adult with ADHD had it as a child (maybe undiagnosed)

Up to 1/3 of children diagnosed with ADHD will ***no longer meet criteria*** in adulthood (CDC, 2019)

Most will carry inattentive symptoms into adulthood, but outgrow hyperactive symptoms

Cultural Considerations

- Bidirectional: In some studies, those of the global majority were diagnosed less frequently than the Caucasians
 - Cultural stigma (religious or cultural norms)
 - Lack of access to healthcare
 - Family pressure
- In other cases, **children** of ethnicity were overdiagnosed with ADHD likely because of culture, language, and racial bias. Negative behaviors were more likely to be noticed and ratings on ADHD scales were elevated
- Black and Hispanic individuals in the US are less likely to be prescribed medication for symptoms
- Transgender people have 3 to 7 times higher rates than their cisgender counterparts (Becerra-Culqui, et al. 2018)



Cultural Considerations, Continued

What needs to happen?

- More services available in individual's preferred language
- More clinicians that can effectively work with different cultures, ideally more clinicians from the global majority
- More universal screening for symptoms at well visits or at in school
- More community services to provide education about and support for mental health in diverse communities

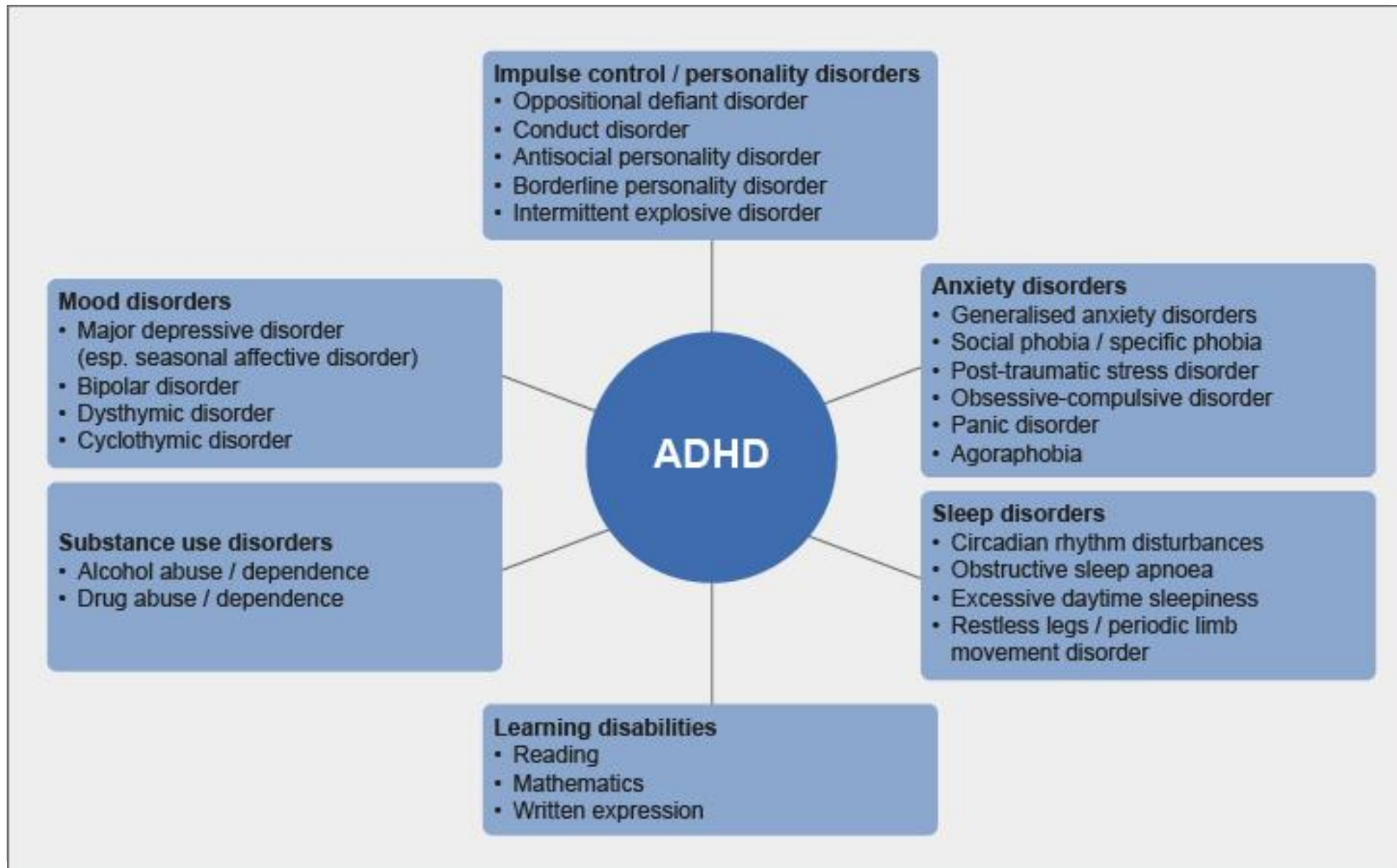


Let's Talk About Sex, Baby

Assigned female about birth – Stats range from 2:1 to 16:1 male to female diagnosis



Comorbidities (ADHD Institute, 2019)



Comorbidities, Continued

Coexisting Condition	Adults with ADHD	Adults without ADHD
Any mood disorder	38.3%	11.1%
Major depressive disorder	18.6%	7.8%
Dysthymia (mild, chronic depression)	12.3%	1.9%
Bipolar disorder	19.4%	3.1%
Any anxiety disorder	47.1%	19.5%
Generalized anxiety disorder	8.0%	2.6%
PTSD	11.9%	3.3%
Panic disorder	8.9%	3.1%
Agoraphobia	4.0%	0.7%
Specific phobia	22.7%	9.5%
Social phobia	29.3%	7.8%
Obsessive-compulsive disorder (OCD)	2.7%	1.3%
Any substance abuse disorder	15.2%	5.6%
Alcohol abuse	5.9%	2.4%
Alcohol dependence	5.8%	2.0%
Drug abuse	2.4%	1.4%
Drug dependence	4.4%	0.6%
Intermittent explosive disorder	19.6%	6.1%

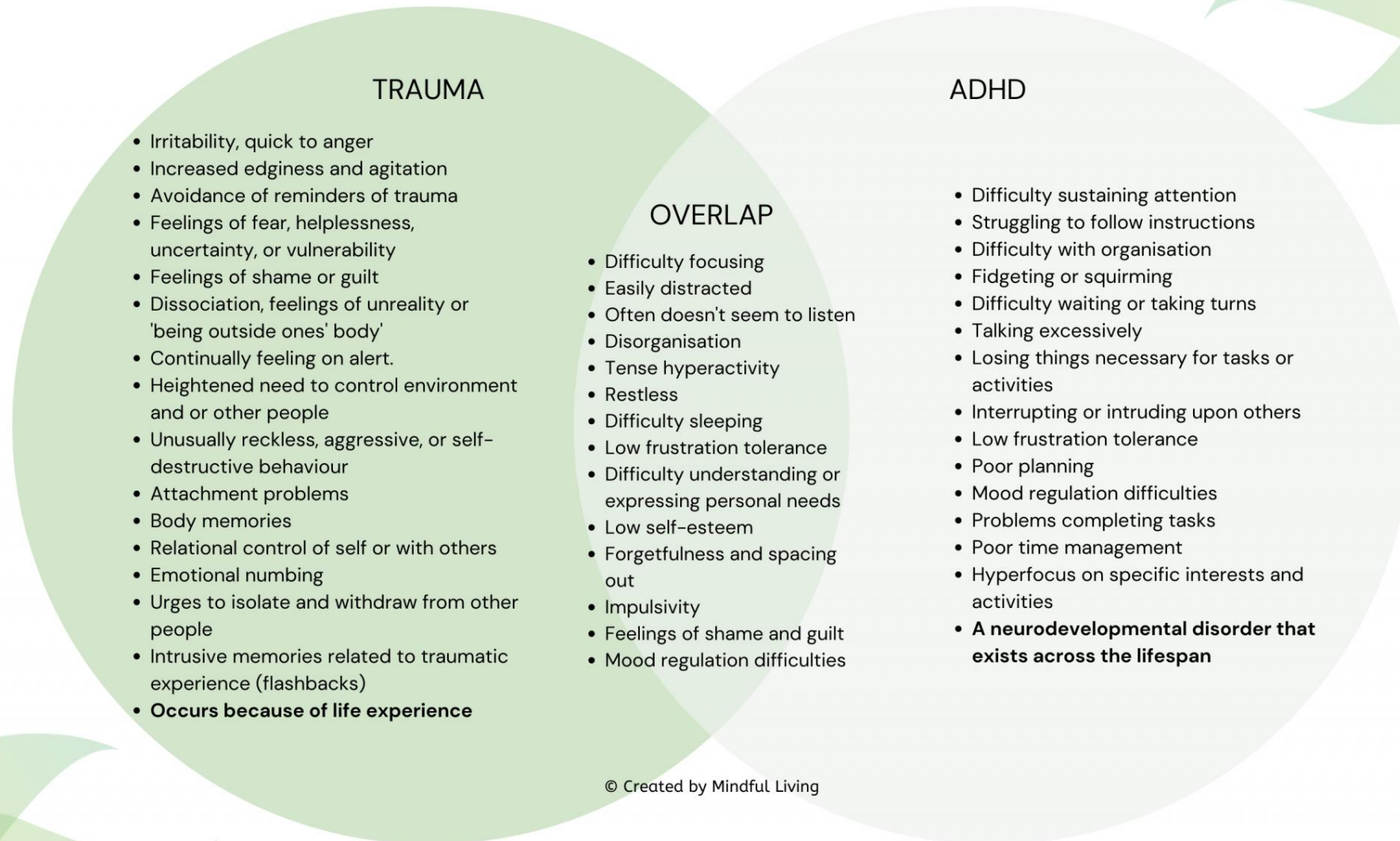
MYTH: There is such a thing as adult-onset ADHD

FACT: There is such a thing as going undiagnosed into adulthood

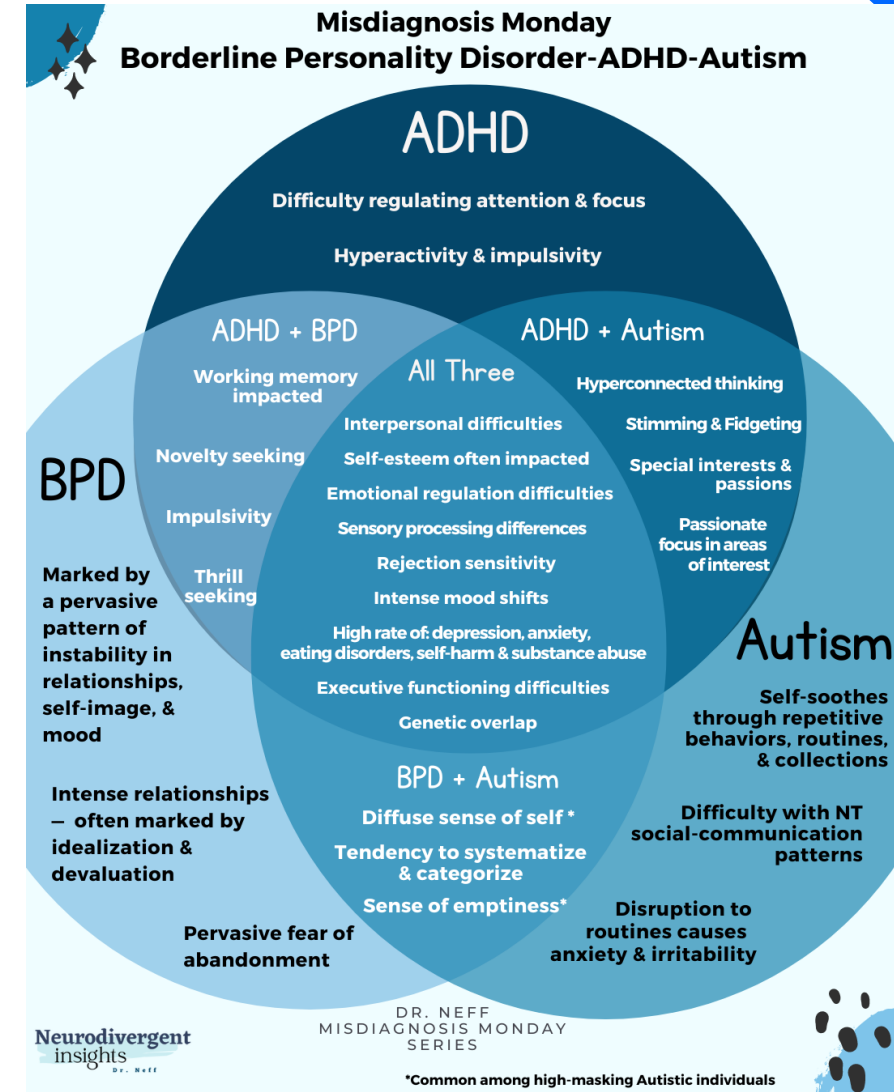
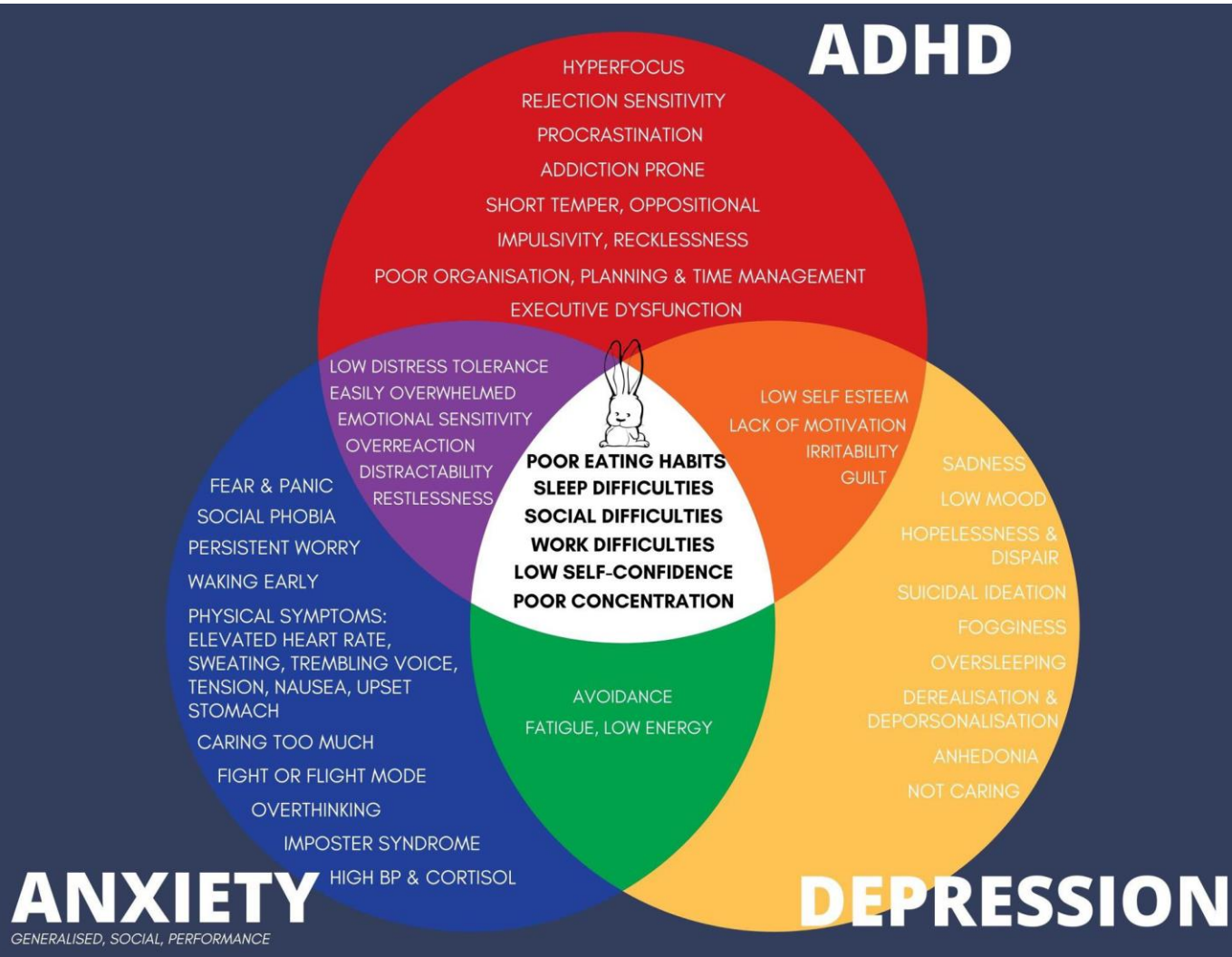
- Symptoms **MUST** be present before age 12
- Several other events/disorders can cause inattention: PTSD/complex trauma, pregnancy, normal aging, life stressors (divorce, bereavement, etc.), substance abuse/dependence
- The distinction is important because the treatment is different depending on etiology. Stay tuned.



Overlap in Symptoms



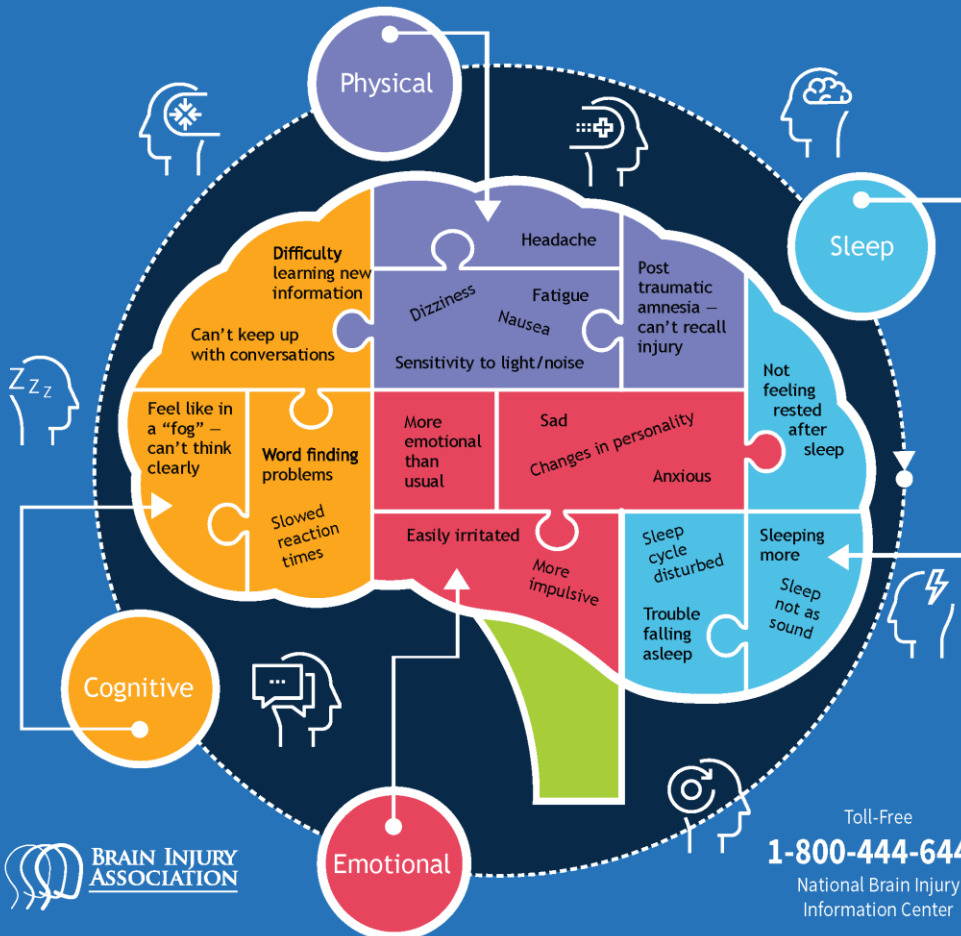
Overlap in Symptoms



Overlap in Symptoms

Concussion Signs

Concussion can present in a number of ways. This infographic describes common issues people experience after a concussion.



www.biausa.org

Toll-Free
1-800-444-6443
National Brain Injury
Information Center

How Poor Sleep Impacts Cognitive Function



Short-Term

Effects of sleep deprivation can appear in the form of:

-  Difficulty concentrating
-  Decline in mood
-  Impaired memory
-  Visible signs of fatigue

Vs.

Long-Term

Sleep deprivation or fragmented sleep over long periods of time can result in:

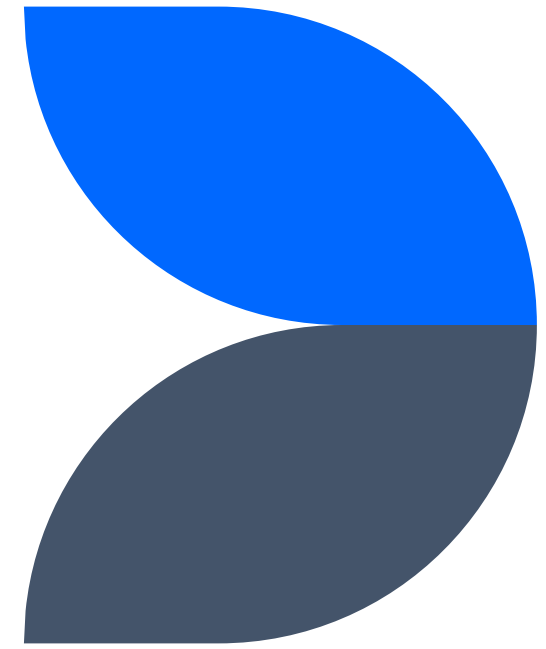
-  Poor work performance
-  Cognitive decline
-  Heightened risk of dementia



Overlap in Symptoms

The difference between:	Normal Aging	Dementia
Definition	Gradual transformation that effects the brain's ability to recall where, when, and how information was picked up, ideas, concepts, and numbers.	Worsening effects on brain's ability to unconsciously remember actions and motor skills, hold information temporarily, thinking, reasoning, judging, and decision-making.
Planning and decision making	Finds it hard to multitask, but is able to focus on a single task.	Struggles with staying focused on a single task.
Memory and learning	Takes longer to learn new tasks.	Is unable to learn new tasks.
Orientation	Forgets what day it is, but remembers it later.	Loses track of the date, season, or time of year.
Mood and behavior	Becomes irritable with routine changes, but can eventually cope.	Gets easily upset at home, work, or with friends in places that usually feel comfortable or familiar.
Language	Loses train of thought or gets confused in a conversation with many distractions.	Is unable to follow what someone is saying; even without distractions.

The Neurobiology of ADHD



Etiology

Williams et al.

Aetiological factors associated with ADHD.

Genetics	People who have a parent or sibling with ADHD are more likely to have ADHD themselves, and twins are more likely to both have ADHD.
Birth factors	Born very early or very low birth weight.
Factors for the expectant mother include:	Smoking
	Drug use or alcohol use
	Use of certain drugs, such as corticosteroids and antidepressants
	Mental problems
	High blood pressure
	Hyperthyroidism
	Exposure to certain environmental toxins, such as lead.
TOXINS	Exposure to toxins such as lead increases the risk of ADHD.

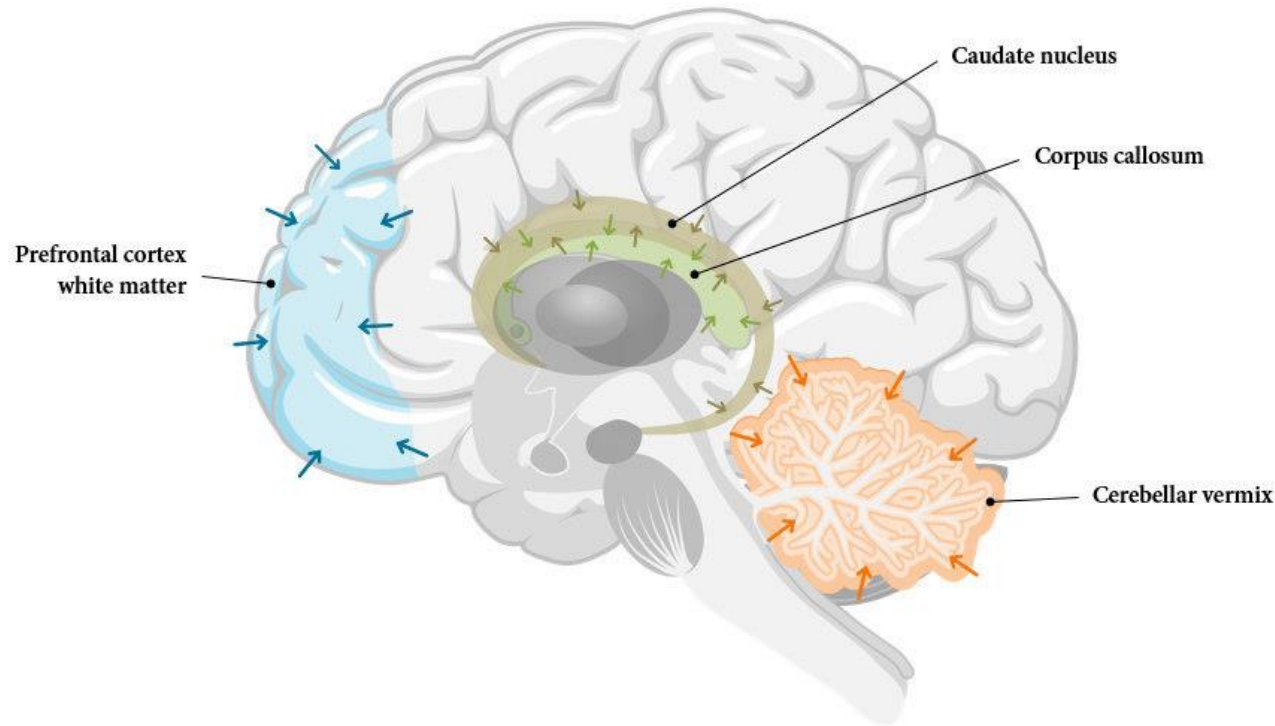
Trauma and ADHD

- Trauma doesn't necessarily CAUSE ADHD
- Symptoms mimic each other
 - Hyperactivity/prolonged state of arousal
 - Zoning out inattention/flashbacks, reexperiencing
- Prolonged trauma in childhood can rewire the brain
- Genetic factors of abusers - Heritability is 80%, studies range from 60-90%
- Adult-onset trauma does not cause ADHD but might exacerbate pre-existing symptoms that went unnoticed or diagnosed.



Neurobiology of ADHD

Overall size reduction with changes in the below areas:



Reduction in caudate nucleus, prefrontal cortex white matter, corpus callosum and cerebellar vermis

Neurobiology, Continued

- Caudate nucleus and globus pallidus smaller in those with ADHD (basal ganglia high in dopamine receptors)
- Reward pathway is reduced (ventral striatum), which leads to hyperactivity and impulsivity
- fMRI and DTI show frontostriatal circuit dysfunction (ventral and dorsal anterior cingulate cortex, putamen, nucleus accumbens, and caudate nucleus) Control affective and cognitive factors of executive control
- The circuit extends to the cerebellum and amygdala causing activation problems in those areas



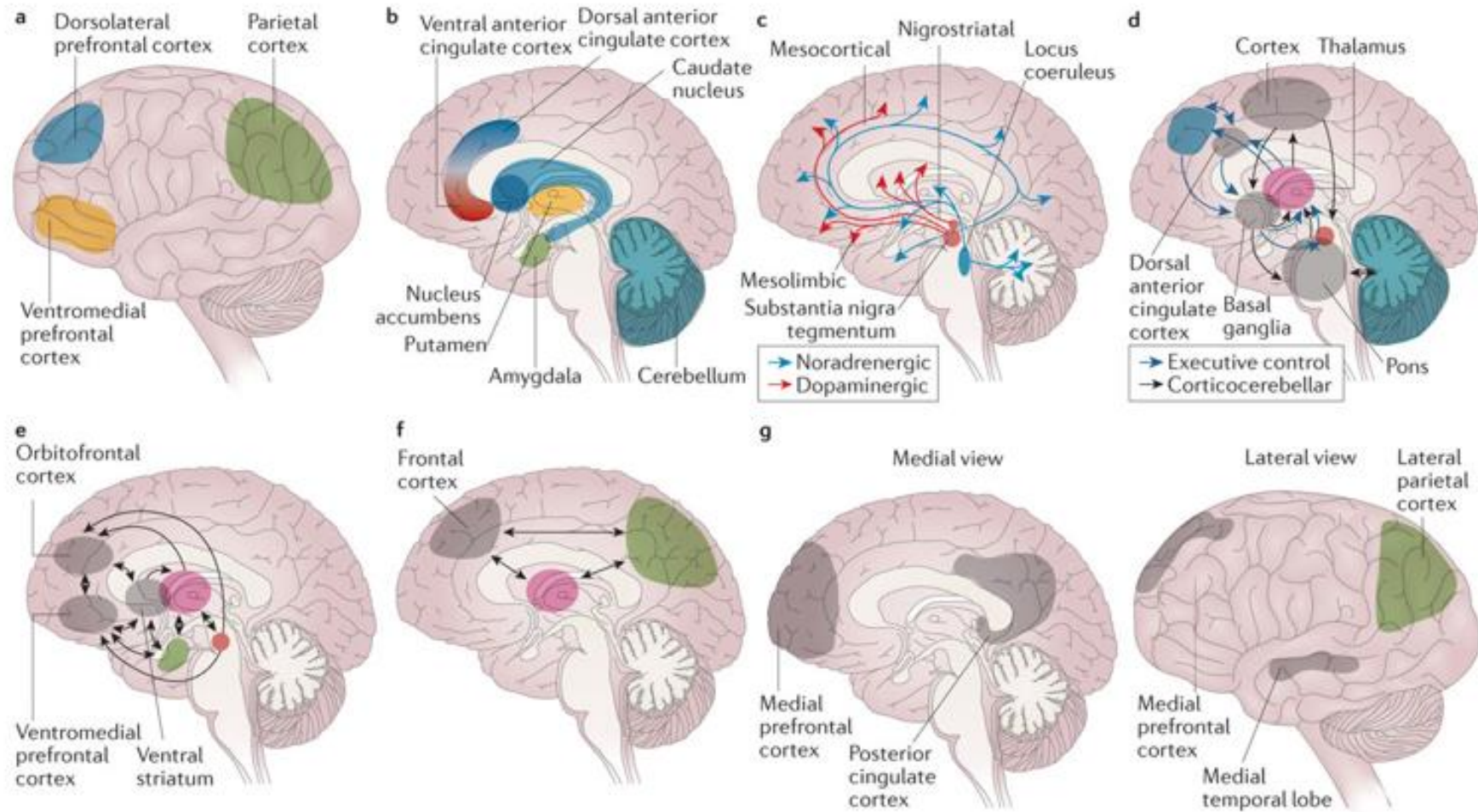
Neurotransmitters and ADHD

- Dopamine, dopamine, dopamine – Helps with focus and rewards, helps regulate emotions and feelings of pleasure
- Serotonin – Moods “feel-good” neurotransmitter, sleep, sex
- Norepinephrine – Arousal, attention, response to stimuli, contributes to hyperactivity and distractibility
- Noradrenalin stimulates the prefrontal cortex, while dopamine quiets out noise.
- Balance of the two provides optimum functioning



Neurobiology of ADHD, Continued

Brain mechanisms in attention-deficit/hyperactivity disorder



Nature Reviews | Disease Primers

In English?

- Attention is our blinders
- Brain looking for rewards
- Can't filter out extraneous stimuli
- Overactivation causes hyperactivity
- Need for reward causes inattention, off task behavior, impulsivity





Assessment of ADHD



Myth: You **MUST** do testing to diagnose ADHD

Fact: Not technically, but I mean....

Russell Barkley, MD – Godfather of ADHD says assessment is unnecessary. An interview and collateral information will do



Why do we test?

- Remember those comorbidities?
- Remember those differentials?
- Determine strengths and weaknesses
- Determine impact and severity level
- Determine efficacy of medication

How is ADHD Diagnosed, You Ask?

- Rating forms completed by self and observer, ideally accompanied by a diagnostic/clinical interview (structured or unstructured)
- Vanderbilt Assessment Scale (Commonly used by pediatricians)
- Conners' Rating Scales
- Adult rating scales: Self report/observer measures
- DIVA 5.0 – Structured interview



Vanderbilt Assessment Scale

NICHQ Vanderbilt Assessment Scale – TEACHER Informant*

Teacher's Name: _____ Class Time: _____ Class Name/Period: _____

Today's Date: _____ Child's Name: _____ Grade Level: _____

Directions: Each rating should be considered in the context of what is appropriate for the age of the child you are rating and should reflect that child's behavior since the beginning of the school year. Please indicate the number of weeks or months you have been able to evaluate the behaviors: _____.

Is this evaluation based on a time when the child ☐ was on medication ☐ was not on medication ☐ not sure?

Symptoms	Never	Occasionally	Often	Very Often
1. Fails to give attention to details or makes careless mistakes in schoolwork	0	1	2	3
2. Has difficulty sustaining attention to tasks or activities	0	1	2	3
3. Does not seem to listen when spoken to directly	0	1	2	3
4. Does not follow through on instructions and fails to finish schoolwork (not due to oppositional behavior or failure to understand)	0	1	2	3
5. Has difficulty organizing tasks and activities	0	1	2	3
6. Avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort	0	1	2	3
7. Loses things necessary for tasks or activities (school assignments, pencils, or books)	0	1	2	3
8. Is easily distracted by extraneous stimuli	0	1	2	3
9. Is forgetful in daily activities	0	1	2	3
10. Fidgets with hands or feet or squirms in seat	0	1	2	3
11. Leaves seat in classroom or in other situations in which remaining seated is expected	0	1	2	3
12. Runs about or climbs excessively in situations in which remaining seated is expected	0	1	2	3
13. Has difficulty playing or engaging in leisure activities quietly	0	1	2	3
14. Is "on the go" or often acts as if "driven by a motor"	0	1	2	3
15. Talks excessively	0	1	2	3
16. Blurts out answers before questions have been completed	0	1	2	3
17. Has difficulty waiting in line	0	1	2	3
18. Interrupts or intrudes on others (e.g. butts into conversations/games)	0	1	2	3
19. Loses temper	0	1	2	3
20. Actively defies or refuses to comply with adult's requests or rules	0	1	2	3
21. Is angry or resentful	0	1	2	3
22. Is spiteful and vindictive	0	1	2	3
23. Bullies, threatens, or intimidates others	0	1	2	3
24. Initiates physical fights	0	1	2	3
25. Lies to obtain goods for favors or to avoid obligations (e.g. "cons" others)	0	1	2	3
26. Is physically cruel to people	0	1	2	3
27. Has stolen items of nontrivial value	0	1	2	3
28. Deliberately destroys others' property	0	1	2	3
29. Is fearful, anxious, or worried	0	1	2	3
30. Is self-conscious or easily embarrassed	0	1	2	3
31. Is afraid to try new things for fear of making mistakes	0	1	2	3
32. Feels worthless or inferior	0	1	2	3
33. Blames self for problems; feels guilty	0	1	2	3
34. Feels lonely, unwanted, or unloved; complains that "no one loves him or her"	0	1	2	3
35. Is sad, unhappy, or depressed	0	1	2	3

NICHQ Vanderbilt Teacher 3/2006/12

D4 NICHQ Vanderbilt Assessment Scale—TEACHER Informant, continued

Teacher's Name: _____ Class Time: _____ Class Name/Period: _____

Today's Date: _____ Child's Name: _____ Grade Level: _____

Symptoms (continued)	Never	Occasionally	Often	Very Often
32. Feels worthless or inferior	0	1	2	3
33. Blames self for problems; feels guilty	0	1	2	3
34. Feels lonely, unwanted, or unloved; complains that "no one loves him or her"	0	1	2	3
35. Is sad, unhappy, or depressed	0	1	2	3

Performance	Excellent	Above Average	Average	Somewhat of a Problem	Problematic
Academic Performance					
36. Reading	1	2	3	4	5
37. Mathematics	1	2	3	4	5
38. Written expression	1	2	3	4	5

Classroom Behavioral Performance	Excellent	Above Average	Average	Somewhat of a Problem	Problematic
39. Relationship with peers	1	2	3	4	5
40. Following directions	1	2	3	4	5
41. Disrupting class	1	2	3	4	5
42. Assignment completion	1	2	3	4	5
43. Organizational skills	1	2	3	4	5

Comments:

Please return this form to: _____

Mailing address: _____

Fax number: _____

For Office Use Only

Total number of questions scored 2 or 3 in questions 1–9: _____

Total number of questions scored 2 or 3 in questions 10–18: _____

Total Symptom Score for questions 1–18: _____

Total number of questions scored 2 or 3 in questions 19–28: _____

Total number of questions scored 2 or 3 in questions 29–35: _____

Total number of questions scored 4 or 5 in questions 36–43: _____

Average Performance Score: _____

American Academy
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™

11-20/rev0303

NICHQ

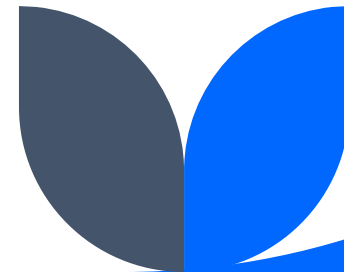
National Initiative for Children's Healthcare Quality

McNeil

Consumer & Specialty Pharmaceuticals

Assessing ADHD

- Already noted: Comprehensive Interview
- **Performance/Symptom
Validity Tests**
 - IQ, brief
 - Memory – visual and auditory memory tests
 - Attention – visual and auditory
 - Executive Functioning – inhibition, planning, organization, Rating Forms



Examples of Tests

Do you want to play a game?



PASAT

- 1
- 5 (6)
- 3 (8)
- 4 (7)

Technology and VR in Assessment



Continuous Performance Tests

1. Sustained attention tests
2. Visual and auditory domains
3. Vigilance
4. Inhibition
5. Attention

Remember Those Comorbidities?

- Academic Testing – Wechsler Individual Achievement Test, Woodcock Johnson, Kaufman Test of Achievement
- Language – Expressive Vocabulary Test, Peabody Picture Vocabulary Test, Clinical Evaluation of Language Fundamentals, etc.
- Visuospatial – Judgment of Line Orientation, NEPSY-II (Arrows, Geometric Designs), Design Copying Tests (VMI, Rey)
- Sensorimotor – Grooved Pegboard, Finger Tapping, tests of hand positioning and alternating movements
- Social/Personality/Mood ratings and tests



Treatment of ADHD



Quackery, Myths, and Snake Oil?

Feingold Diet – No artificial dyes, flavoring, preservatives

Gluten/Dairy/Sugar Free Diets

Essential Oils

Supplements

Neurofeedback: Based on finding that those with ADHD have more theta (slow) and fewer beta (fast) waves than others

- Clinician watches the brain waves and alerts the patient when waves are at optimum levels in hopes of the patient being able to generalize the condition



More Quackery and Snake Oil?

Chiropractic Care – No research with controls/comparisons known

- Imbalanced muscle tone = imbalanced brain activity
- Exposure to light and sound frequencies and adjustments mitigate this

Applied Kinesiology/neural organization: bones of the skull become misaligned causing pressure on different parts of the brain

- Adjustment puts skull pieces back in place (do skull bones move?)

Vision therapy

Hyperbaric Chamber

FACT: Just because it's FDA approved DOES NOT mean it works



But Wait, There's More!

Brain Training Programs: Programs or games that address working memory, processing speed, divided attention, and inhibition

- When programs do their own research, works great
- IF they allow others in, findings do not generalize outside of the treatment environment (hello, ecological validity?!)



Maybe not Quackery and Snake Oil?

- Artificial Food Dye, especially red
- Omega-3 supplements
 - Studies have shown SLIGHT improvement over placebo and evidence that there is a deficit in Omega-3 fatty acids in kids with ADHD
- Vayarin is FDA approved supplement to increase Omega-3 fatty acids in children
- Cannabinoids/THC – Cause cognitive slowing
- Transcranial Magnetic Stimulation



Stimulants, Facts

Medication, It's science.

Stimulants – Fast acting

Methylphenidate: Concerta, Metadate, Focalin, Ritalin

Blocks reuptake of dopamine and norepinephrine and promotes dopamine release to leave more chemical in the synapse

Amphetamines: Adderall, Vyvanse

Increase the release of dopamine and norepinephrine into the synapse,

*Stimulants are contraindicated in children with heart conditions, tics, Bipolar, Anorexia, hypertension

Side Effects: Sleeplessness, loss of appetite, irritability, risk of abuse

Myth: Stimulant use causes substance dependence

Fact: A meta-analysis by Humphreys, et al. showed no difference in those treated with stimulants and those who weren't

More recent data showed those who go unmedicated might have a higher likelihood of developing substance dependence.

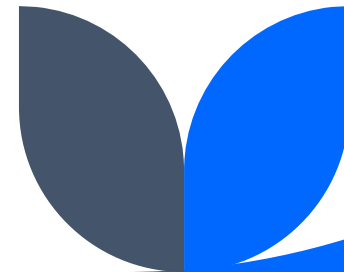
- Self-medication through alcohol, caffeine, tobacco, or other substances.



Nonstimulants

Nonstimulants – Long lasting, can't miss a dose

- ADHD Nonstimulants:
 - Strattera (norepinephrine reuptake inhibitor)
 - Clonidine – Lowers blood pressure and supports norepinephrine release, used with stimulants at times
 - Guanfacine/Intuniv (Time released, helps with irritability, aggression, and hyperarousal, often used with stimulant to nullify side effects)
 - Qelbree – Affects norepinephrine and serotonin, first used for depression and addiction
- Other Nonstimulants: Antidepressants (bupropion, Effexor, MAOIs, tricyclics); Anti-viral medications (amantadine, stimulates dopamine production); Wakefulness promoting meds (Provigil)



Behavioral/Environmental Interventions

Individual therapy, executive function training

- A cognitive behavioral approach has been found helpful for adults
- Behavioral interventions to form new patterns

Rituals and routines

- Designated workspaces and organization systems
- Whiteboards, alerts, calendars, lists



Reward Systems – Not just for the kids!

Extrinsic rewards: Tangibles, goods, food items, a clean house, positive praise/recognition from those around you

Intrinsic rewards: Increased self-esteem, reduced anxiety/depression, feelings of accomplishment



Interventions, continued

Make spaces work for you. If planning, organizing, and focusing on tasks are challenging:

- Create an organized workspace.
- Use tools like calendars, alerts on your phone, reminders, and lists.
- Break tasks into smaller, manageable steps.
- Set deadlines and avoid multitasking.
- Listen to upbeat music while working

Other useful approaches:

- Consider study/workgroups or working alongside others (in person or virtually) for complex projects.
- Working from communal office spaces or libraries can heighten social pressures to avoid distractions



Timers

- Use timers. If you're avoiding a monotonous task (i.e., unloading the dishwasher, folding laundry, cleaning your bedroom, etc.) , time how long it takes to do it. You'll likely find it takes far less time than expected, making it easier to get started.
- If you have a big task, set a timer and promise yourself to only work for 15 minutes. Once the 15 minute is up, decide if you want to keep at it or take a break. If you feel the need to take a break, do so, then repeat.



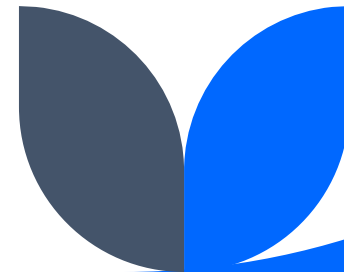
Pomodoro Technique, Francesco Cirillo

1. Make a to-do list and choose the most time-sensitive task
2. Set the timer for 25 minutes
3. Focus on the task until the timer rings
4. Take a short break, usually 5–10 minutes
5. Repeat steps 3–6 until you've completed the task
6. After completing four pomodoros, take a longer break, usually 15–30 minutes
7. Return to step 2



More Behavioral Interventions

1. Lose things? Designate a spot in your space for it. Keep a bowl near the door where you keep your keys and personal items. Make it a routine to put your items in the space every time you come home.
2. Keep your phone in the same space all the time. Put chargers in each room and put your phone on or near it when you aren't using it.
3. Forgetful? Use your phone to set alarms for appointments, birthdays, special events, etc. You can set alerts for hours to weeks in advance.
4. If you have a big project, break it up and write out the steps. Use a whiteboard or make a note in your phone and cross off each step as it's completed.



Apps and Technology

- RescueTime: Helps track time spent on tasks and identify productivity patterns.
- Provides insights into digital habits and distractions.
- Asana: Excellent for task management, project collaboration, and setting reminders.
- Helps organize work, personal projects, and daily routines.
- Todoist: Ideal for creating to-do lists, setting deadlines, and managing tasks.
- Supports collaboration and syncs across devices.
- OFFTIME: Helps reduce digital distractions by blocking specific apps or notifications.
- Encourages focused work periods.
- Headspace: Offers guided meditation and mindfulness exercises to improve focus and emotional regulation.
- Focus@Will: Provides music scientifically designed to enhance concentration and productivity.
- Pomodor: Implements the Pomodoro Technique for time management and breaks. (This popular time management method asks you to alternate focused work sessions with frequent short breaks to promote sustained concentration and stave off mental fatigue.)
- Trello: Visualizes tasks using boards, lists, and cards.
- Collaborate with others and stay organized.
- Evernote: Great for note-taking, organizing ideas, and capturing information.
- Clean Email: Manages email overload by organizing and decluttering your inbox.
- Mint: Helps manage finances, budgets, and expenses.



Podcasts and Books

- *How to ADHD* by Jessica McCabe. She also has a YouTube channel and website with great resources
- *Extra Focus – The Quick Start Guide to ADHD* by Jesse Anderson @adhdjesse
- *Hacking Your ADHD* – Hosted by William Curb. Podcast that provides practical tips and tricks for thriving with ADHD
- *ADHD ReWired* – Eric Tivers, available on YouTube or podcast
- *More Attention, Less Deficit: Success Strategies for Adults with ADHD* by Ari Tuckman
- *The Anti-Planner* by Dani Donovan, who also has a great online presence with resources
- *ADD and Loving It?! (video)* by Rick Green and Patrick McKenna
- *Your Life Can Be Better, Using Strategies for Adult ADD/ADHD* by Douglas A. Puryear



Citations

Coker TR, Elliott MN, Toomey SL, Schwebel DC, Cuccaro P, Tortolero Emery S, Davies SL, Visser SN, Schuster MA. Racial and Ethnic Disparities in ADHD Diagnosis and Treatment. *Pediatrics*. 2016 Sep;138(3):e20160407. doi: 10.1542/peds.2016-0407. Epub 2016 Aug 23. PMID: 27553219; PMCID: PMC5684883.

Cowley B, Holmström É, Juurmaa K, et al. Computer enabled neuroplasticity treatment: a clinical trial of a novel design for neurofeedback therapy in adult ADHD. *Front Hum Neurosci* 2016; 10: 205–217.

da Silva BS, Grevet EH, Silva LCF, Ramos JKN, Rovaris DL, Bau CHD. An overview on neurobiology and therapeutics of attention-deficit/hyperactivity disorder. *Discov Ment Health*. 2023 Jan 5;3(1):2. doi: 10.1007/s44192-022-00030-1. PMID: 37861876; PMCID: PMC10501041.

Humphreys KL, Eng T, Lee SS. Stimulant medication and substance use outcomes: a meta-analysis. *JAMA Psychiatry*. 2013 Jul;70(7):740–9. doi: 10.1001/jamapsychiatry.2013.1273. PMID: 23754458; PMCID: PMC6688478.

Malhi, P., Bharti, B. Traumatic Stress or ADHD? Making a Case for Trauma Informed Care in Pediatric Practice. *Indian J Pediatr* **88**, 287 (2021). <https://doi.org/10.1007/s12098-020-03545-z>

Song P, Zha M, Yang Q, Zhang Y, Li X, Rudan I. The prevalence of adult attention-deficit hyperactivity disorder: A global systematic review and meta-analysis. *J Glob Health*. 2021 Feb 11;11:04009. doi: 10.7189/jogh.11.04009. PMID: 33692893; PMCID: PMC7916320.

Williams OC, Prasad S, McCrary A, Jordan E, Sachdeva V, Deva S, Kumar H, Mehta J, Neupane P, Gupta A. Adult attention deficit hyperactivity disorder: a comprehensive review. *Ann Med Surg (Lond)*. 2023 Apr 12;85(5):1802–1810. doi: 10.1097/MS9.0000000000000631. PMID:

Stern A, Malik E, Pollak Y, et al. The efficacy of computerized cognitive training in adults with ADHD. *J Atten Disord* 2014; 20: 991–1003. 37228994; PMCID: PMC10205222.

Young, Z., Moghaddam, N., & Tickle, A. (2020). The Efficacy of Cognitive Behavioral Therapy for Adults With ADHD: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Journal of Attention Disorders*, 24(6), 875–888. <https://doi.org/10.1177/1087054716664413>

