

ECHO IDAHO

Behavioral Health in Primary Care

ADHD in Adults

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This talk does not aim to convince you that ADHD exists. We are starting with the premise that this is a recognized neurodevelopmental disorder.



Learning Objectives

- Review adult ADHD evaluation and differential diagnosis
- Understand treatment modalities and mechanisms
- Examine claims on functional and academic/work outcomes
- Clarify common misinterpretations of ADHD outcome studies



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Introduction

- Attention Deficit Hyperactivity Disorder is one of the most common neuropsychiatric disorders of childhood and typically persists into adulthood
- ADHD is a MISNOMER. Is better described as a disorder of diffuse attention or Interest Based Attention
- While the DSM is the definitive diagnostic criteria, clinicians recognize several typical symptoms that are not in the DSM
- There is an assumption by some that adults “grow out” of ADHD, however, a proportion may “grow into” their ADHD
- According to the 2021 International consensus on ADHD- prevalence estimates: childhood 5-9%; adolescents 5-7%; adulthood 2.5-4.4% (about ½ of cases persist into adulthood)



Case

Patient comes in asking for an ADHD evaluation

- **History of depression and poor concentration since teen years**
- **Trouble getting to sleep at night but stays asleep most of the night**
- **Since going to law school, struggled to keep up with class and 2 children**
- How do you approach this case?
- What is on your differential diagnosis?
- How do you differentiate among ddx?
- Treatment?



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Adult Outcome of ADHD: An Overview of Results From the MGH Longitudinal Family Studies of Pediatrally and Psychiatrically Referred Youth With and Without ADHD of Both Sexes

Mai Uchida^{1,2}, Thomas J. Spencer^{1,2}, Stephen V. Faraone^{3,4}, and Joseph Biederman^{1,2}

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DOI: 10.1177/1087054715604360
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SAGE

- MGH Longitudinal Study of ADHD
- Evaluated boys and girls with and without ADHD
- Findings:
 - both sexes have high levels of persistence into adulthood
 - Highly familial
 - High comorbidity with:
 - Mood, anxiety, SUDS
 - LD, Exec Fxn deficits
 - emotional dysregulation, ASD traits
 - Fxl impairment
- Stimulants decreased risks
- Neuronal basis of persistence

Continued

- ADHD in adults is associated with impairment in academic, occupational and social function
- Adult ADHD is characterized by inattention, impulsivity, and restlessness, along with executive function impairment and emotional dysregulation
- Treatment is typically the same for children and adults, although outcomes in adults are less well studied

how my brain works.



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Evaluation of Adult ADHD

- Developmental history (childhood onset)
- Functional impairment across settings
- Academic, occupational, relational history
- Psychiatric and medical review
- Collateral when available



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Adult ADHD: Core Clinical Features

- Inattention and executive dysfunction dominate
- Hyperactivity often internalized
- Emotional dysregulation and overwhelm common
- Symptoms are chronic, not episodic



ADHD symptoms look different in adults. Hyperactivity and impulsivity are less overt and inattentive symptoms are more prominent.

Executive Challenges:

- Impaired working memory
- Task shifting
- Self monitoring
- Initiation
- Self-inhibition

Attention Problems:

- Remaining focused for extended time
- Organizing
- Prioritizing
- Following through/completing
- Forgetfulness
- Time management

Impulsivity:

- Terminating relationships
- Quitting a job without alternate plan
- Driving problems, speeding tickets
- Binge eating

Hyperactivity:

- Restlessness
- Talking too much/verbosity
- Constant activity
- Choosing jobs with more movement
- interrupting

Emotional dysregulation (not specific to this disorder)

- Mood shifts
- Irritability, anger outbursts
- Low frustration tolerance

Other Challenges:

- Occupational difficulties
- Substance use problems
- Self esteem problems
- Impaired family and peer relationships

Rating Scales and Diagnostic Tools

- Rating Scales (supplement clinical interview):
 - Adult ADHD Self Report Scale (ASRS): Brief (18 items) and helpful in primary care. Good screen.
 - Conner's adult ADHD rating scale (CAARS): provides detailed assessment of symptoms and domains. Useful for pretreatment baseline and then during treatment. Can't be used alone as diagnostic tool as does not discern other causes of symptoms.
- Psychological testing can be useful in some cases, however, not required (except by some schools or organizations for accommodations)

DSM Criteria

A. Persistent pattern of inattention +/- hyperactivity / impulsivity that interferes with functioning or development, as characterized by (1) and/or (2):

1. Inattention: 6 or more sx (>5 if over 17) for greater than 6 mo to a degree that is inconsistent with developmental level and impacts social and academic/occupational activities:

- a) Fails to pay close attention; careless mistakes
- b) Hard time sustaining attention
- c) Often does not seem to listen when spoken to directly
- d) Often does not follow through or finish work (may start but gets sidetracked or loses focus)
- e) Has difficulty organizing tasks and activities
- f) Avoids or is reluctant to engage in tasks requiring sustained mental attention
- g) Often loses things
- h) Easily distracted by external stimuli (or unrelated thoughts)
- i) Often forgetful in daily activities (chores, appointments, bills, calls)

DSM Criteria

2. Hyperactivity and Impulsivity: 6 or more sx (>5 if over 17) for greater than 6 mo

- a. Fidgets, taps, squirms
- b. Often leaves seat, when expectation is to stay in it
- c. Runs or climbs when shouldn't (restless in adolescent/adult)
- d. Often unable to play quietly
- e. Is often on the go (in adults others may see as restlessness or difficult to keep up with)
- f. Often talks excessively
- g. Often blurts answers, completes others sentences, cannot wait turn in conversation
- h. Difficulty waiting one's turn
- i. Often interrupts or intrudes in conversation or activities, or even take over

B. Several Symptoms were present before age 12

C. Several Symptoms are present in at least 2 settings

D. Clear evidence that symptoms interfere with function

E. Symptoms are not better explained by other mental disorder

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Differential Diagnosis in Adults

- Mood disorders
- Anxiety disorders
- PTSD
- Substance use disorders
- Sleep disorders
- Autism spectrum disorder
- Cognitive effects of medical illness

- Key distinction: episodic vs lifelong symptoms

Mood Disorders

major depressive disorder

- Similarities: poor concentration, forgetfulness, feelings of worthlessness, poor motivation
- Sorting it out: depression is more episodic. ADHD is pervasive

bipolar disorder (manic or mixed)

- Similarities: poor concentration, disturbed sleep, disorganization, talkativeness
- Sorting it out: BPAD is episodic, assess for duration fixed trait or episodic state; does patient need sleep?



Post Traumatic Stress Disorder

- Similarities: negative thoughts about self, feeling isolated, decreased interest, irritability, risky behaviors, poor sleep, concentration
- Sorting it out: assess index trauma, intrusion, lost in thought vs anxious impairing concentration/sleep, symptom onset, mood lability and frustration tolerance, tend to hyperfocus in area of interest? Ex: Tom Sawyer story

Anxiety disorder (common comorbidity)

- Similarities: poor concentration, forgetfulness, disturbed sleep
- Sorting it out: lost in thought vs worried. Awakening due to anxious worry (specific focus) or ideas?

Substance use disorder

- Similarities: poor attention, distractibility, hyperactivity
- Sorting it out: symptoms occur primarily in the context of substance use



Why ADHD Is Often Misdiagnosed in Adults

- Symptom overlap
- Compensatory strategies masking impairment
- Gender and cultural bias
- Late presentation after environmental demands increase



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- **Treatment?**



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Treatment Overview – Multimodal Model

- Medication
 - Psychotherapy
 - Executive function supports
 - Workplace accommodations
-
- Goal: improve function, not normalize cognition



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Medication Treatment in Adults

- Stimulants: methylphenidate, amphetamines
- Non-stimulants: atomoxetine, viloxazine, bupropion
- Effect sizes among the largest in psychiatry

ADHD only	Methylphenidate / Amphetamines
ADHD plus hx SUD	Atomoxetine
ADHD plus active SUD	Treat SUD first, then ADHD
ADHD plus depression	Bupropion
ADHD plus GAD	SRI first, then stimulant
ADHD with bipolar disorder	Mood stabilizer, then stimulant
ADHD with significant executive fxn impairment	Stimulant plus CBT

ADHD Medication Guide*

Revised: September 15, 2024

Methylphenidate Formulations – Long Acting, Oral**

(Capsules and tablets in this section are shown at actual size)

Concerta®†	6-12 Yrs: 18-54mg; SD: 18mg 13-17 Yrs: 18-72mg; SD: 18mg ≥18 Yrs: 18-72mg; SD: 18mg or 36mg	G	18mg	27mg	G	36mg	G	54mg	Relexxi® (bioequivalent to corresponding Concerta dosing)	G	45mg	G	63mg	G	72mg
Focalin® XR† (dexamethylphenidate)	6-17 Yrs: 5-30mg; SD: 5mg 18 Yrs-Adult: 10-40mg; SD: 10mg (biphase – 50/50)	G	5mg	G	10mg	G	15mg	G	20mg	G	25mg	G	30mg	G	40mg
Cotempla XR-ODT®‡ (grape flavor)	6-17 Yrs: 8.6-51.8mg; SD: 17.3mg	G	8.6mg	G	17.3mg	G	25.9mg	G	34.6mg	G	51.8mg				
Aptensio® XR†	6 Yrs-Adult: 10-60mg; SD: 10mg (biphase – 40/60)	G	10mg	G	15mg	G	20mg	G	30mg	G	40mg	G	50mg	G	60mg
Quillivant XR® 25mg/5mL (5mg/mL) (banana flavor)	6 Yrs-Adult: 20-60mg; SD: 20mg	G	10mg	G	20mg	G	30mg	G	40mg	G	50mg	G	60mg	G	70mg
QuillChew ER®§ (cherry flavor)	6 Yrs-Adult: 20-60mg; SD: 20mg (biphase – 30/70)	G	10mg	G	20mg	G	30mg	G	40mg	G	50mg	G	60mg	G	70mg
Ritalin® LA†	6-12 Yrs: 10-60mg; SD: 20mg (biphase – 50/50)	G	10mg	G	20mg	G	30mg	G	40mg	G	50mg	G	60mg	G	70mg
Metadate® CD†	6-17 Yrs: 10-60mg; SD: 20mg (biphase – 30/70)	G	10mg	G	20mg	G	30mg	G	40mg	G	50mg	G	60mg	G	70mg

Methylphenidate Pro-Drug Formulations - Long Acting, Oral**

(Medications in this section are shown at actual size)

Adzenys® (dexamethylphenidate + serdexmethylphenidate)	6-12 Yrs: 26.1/5.2 – 52.3/10.4; SD: 39.2/7.8 mg; 13 Yrs – Adult: 39.2/7.8 – 52.3/10.4; SD: 39.2/7.8 mg	26.1mg SDX/ 5.2mg d-MPH	39.2mg SDX/ 7.8mg d-MPH	52.3mg SDX/ 10.4mg d-MPH
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Methylphenidate Formulations – Long Acting/Delayed Onset, Oral**

(Medications in this section are shown at actual size)

Jornay PM®‡	6 Yrs-Adults: 20-100mg (dosed in the evening); SD: 20mg	20mg	40mg	60mg	80mg	100mg
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Methylphenidate Formulations – Short Acting, Oral**

(Medications in this section are shown at actual size)

Focalin® (dexamethylphenidate)	6-17 Yrs: Daily: 5-20mg, divided BID; SD: 2.5mg BID	G	2.5mg	G	5mg	G	10mg
Ritalin®	6-12 Yrs: Daily: 10-60mg, divided BID or TID; SD: 5mg BID Adults: Daily: 10-60mg, divided BID or TID	G	5mg	G	10mg	G	20mg
Methylin Chewable® (grape flavor)	6-12 Yrs: Daily: 10-60mg, divided BID or TID; SD: 5mg BID Adults: Daily: 10-60mg, divided BID or TID	G	2.5mg	G	5mg	G	10mg
Methylin® Solution (grape flavor)	6-12 Yrs: Daily: 10-60mg, divided BID or TID; SD: 5mg BID Adults: Daily: 10-60mg, divided BID or TID	G	5mg/5mL	G	10mg/5mL		

Methylphenidate Formulations - Long Acting, Transdermal

Daytrana® (methylphenidate transdermal system)	6-17 Yrs: 10-30mg; SD: 10mg (Patches are shown at 100% actual size. The color border around each patch reflects the color of the packaging, not the patch itself.)	10mg / 9 hrs ~ 1.5" x 1.4"	20mg / 9 hrs ~ 1.5" x 2.6"	30mg / 9 hrs ~ 1.5" x 3.9"
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Administration Key:

- † Orally disintegrating tablet
- ‡ Must be swallowed whole
- § Chewable
- ¶ Can be mixed with yogurt, orange juice, or water
- ‡ Can open capsule and sprinkle medication on apple sauce
- ¶ Can open capsule and sprinkle medication into water or onto apple sauce
- ¶ Can open capsule and mix with apple sauce or yogurt

- G Indicates a generic formulation is also available; generic products are not shown
- G Indicates a generic (but NOT a branded) formulation is available

• View the latest version of the ADHD Medication Guide at www.ADHDMedicationGuide.com

• **Discontinued ADHD Medications:** The following FDA-approved proprietary formulations are no longer available (though, in some cases, branded or generic equivalents are still available): Adhansia XR; Adzenys ER (liquid); Cylert (pemoline); Dexedrine Spansules (5mg, 15mg); Dexedrine tablets; DextroStat tablets; LiguADD solution; Metadate CD capsules; Metadate ER tablet (10mg); Methylin Chewable tablets; Ritalin LA capsule (60mg); Ritalin SR tablets (20mg).

• **Important Information:** The age-specific dosing information listed for each medication reflects the FDA-approved prescribing information. "SD" refers to the FDA-recommended starting dose, which sometimes varies by age. Practitioners should refer to the full prescribing information for each medication. Please note: medications have been arranged on the ADHD Medication Guide for ease of display and visual comparison; dosing comparability cannot be assumed.

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ADHD Medication Guide*

Revised: September 15, 2024

Amphetamine Formulations – Long Acting, Oral**

(Medications in this section are shown at actual size)

Dyanavel® XR [§] (d- & l-amphetamine sulfate) (bubblegum flavor)	6 Yrs–Adults: 2.5–20mg; SD: 2.5 or 5mg		5mg		10mg		15mg		20mg	
Dyanavel® XR (d- & l-amphetamine sulfate) 2.5mg/mL (bubblegum flavor)	6 Yrs–Adults: 2.5–20mg; SD: 2.5 or 5mg	2.5mg 1mL	5mg 2mL	7.5mg 3mL	10mg 4mL	12.5mg 5mL	15mg 6mL	17.5mg 7mL	20mg 8mL	
Mydayis®† (mixed amphetamine salts)	13–17 Yrs: 12.5–25mg; SD: 12.5mg Adults: 12.5–50mg; SD: 12.5mg	12.5mg		25mg		37.5mg		50mg		
Adzenys XR-ODT®¶ (d- & l-amphetamine) (orange flavor)	6–12 Yrs: 3.1–18.8mg; SD: 6.3mg 13–17 Yrs: 3.1–12.5mg; SD: 6.3mg Adults: 12.5mg		3.1mg	6.3mg	9.4mg	12.5mg	15.7mg	18.8mg		
Adderall XR®‡ (mixed amphetamine salts)	6–17 Yrs: 5–30mg; SD: 10mg Adults: 5–30mg; SD: 20mg (biphasic – 50/50)		5mg	10mg	15mg	20mg	25mg	30mg		
Dexedrine Spansule® (d-amphetamine sulfate)	6–17 Yrs: 10–60mg; SD: 5mg 1–2x/day		5mg	10mg	15mg					

Amphetamine Formulations – Long Acting, Transdermal

Xelstrym™
(d-amphetamine)
6–17 Yrs: 4.5–18mg;
SD: 4.5mg
Adults: 9–18mg;
SD: 9mg

18mg / 9hrs
~1.7" x 1.7"

13.5mg / 9hrs
~1.5" x 1.5"

9mg / 9hrs
~1.2" x 1.2"

4.5mg / 9hrs
~0.9" x 0.9"

(The color border of the patches reflects the color of the packaging, not the patch itself.)

Amphetamine Pro-Drug Formulations – Long Acting, Oral**

(Medications in this section are shown at actual size)

Vyvanse®§ (capsules) (lisdexamfetamine)	6 Yrs–Adults: 10–70mg; SD: 30mg	10mg	20mg	30mg	40mg	50mg	60mg	70mg
Vyvanse®§ (chewables) (lisdexamfetamine) (strawberry flavor)	6 Yrs–Adults: 10–70mg; SD: 30mg	10mg	20mg	30mg	40mg	50mg	60mg	

Amphetamine Formulations – Short Acting, Oral**

(Medications in this section are shown at actual size)

Eyekeo® (d- & l-amphetamine sulfate)	3–5 Yrs: SD: 2.5mg 1x/day 6–17 Yrs: 5–40mg divided BID; SD: 5mg 1–2x/day		5mg		10mg					
Eyekeo® ODT (d- & l-amphetamine sulfate)	6–17 Yrs: 5–40mg divided BID; SD: 5mg 1–2x/day	2.5mg	5mg		10mg		15mg	20mg		
Zenzedi® (d-amphetamine sulfate)	3–5 Yrs: SD: 2.5mg 1x/day 6–16 Yrs: 5–40mg divided BID; SD: 5mg 1–2x/day	2.5mg	5mg	7.5mg	10mg		15mg	20mg	30mg	
Adderall® (mixed amphetamine salts)	3–5 Yrs: SD: 2.5mg 1x/day 6–17 Yrs: 5–40mg divided BID; SD: 5mg 1–2x/day		5mg	7.5mg	10mg	12.5mg	15mg	20mg	30mg	
ProCentra® (d-amphetamine sulfate) (bubblegum flavor)	3–5 Yrs: SD: 2.5mg 1x/day 6–17 Yrs: 5–40mg divided BID; SD: 5mg 1–2x/day		5mg/5mL							

Non-Stimulants**

(Medications in this section are shown at actual size)

Onyda™ XR (klonidine, extended release) (orange flavor)	6–17 Yrs: 0.1–0.4mg; SD: 0.1mg (dosed at bedtime)	0.1mg/1mL	0.2mg/2mL	0.3mg/3mL	0.4mg/4mL					
Kapvay®† (klonidine, extended release)	6–17 Yrs: 0.1–0.2mg BID; SD: 0.1mg qHS	0.1mg								
Intuniv®† (guanfacine, extended release)	6–12 Yrs: 1–4mg; SD: 1mg 13–17 Yrs: 1–7mg; SD: 1mg Weight-based dosing: SD: 0.05–0.08 mg/kg/day; may increase to 0.12 mg/kg/day	1mg	2mg	3mg	4mg					
Strattera®† (atomoxetine)	<70kg: 0.5mg/kg x 3days, then 1.2mg/kg (max: 40mg/kg, not to exceed 100mg) >70 kg: 40mg x 3days, then 80mg (max: 100mg)	10mg	18mg	25mg	40mg	60mg	80mg	100mg		
Qelbree®† (viloxazine)	6–11 Yrs: 100–400mg; SD: 100mg 12–17 Yrs: 200–400mg; SD: 200mg Adults: 200–600mg; SD: 200mg	100mg	200mg	300mg	400mg					



What Medication Improves

- Attention
- Task initiation
- Working memory in context
- Impulsivity
- Behavioral regulation



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What Medication Does Not Do

- Does not teach skills
- Does not remediate knowledge gaps
- Does not fix organizational systems
- Does not eliminate environmental mismatch



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Executive Function Interventions

- CBT for ADHD
- ADHD coaching
- Occupational therapy
- External structure and scaffolding

- Executive function domains → targeted interventions



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Workplace Accommodations (Adults)

- Flexible scheduling
- Reduced interruptions
- Written instructions
- Task chunking
- Deadline flexibility: BEWARE of EXTENDING DEADLINES

Functional improvement with accommodations ± medication



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Outcomes Questions: *Where Confusion and Doubt Begin*

- Common claim: “ADHD treatment doesn’t improve academic or work outcomes” or “there is no improvement in test scores”
- Reality: This depends on what outcome is measured and how
- Comes largely from:
 - Cognitive training studies
 - Short-term medication trials
 - Academic test outcomes
 - Often generalized beyond study design



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Outcomes Questions: *Where Confusion and Doubt Begin*

Why Academic & Work Outcomes Lag:

- Learning is cumulative
- Skills deficits predate treatment
- Environmental mismatch persists
- Outcome measures lack sensitivity
- Follow-up periods too short



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Key Concept – Capacity vs Output

Treatment improves capacity to engage

Output depends on:

- Instruction
- Practice
- Environment
- Time



Why Null Findings Are Common

- Short follow-up periods
- Insensitive outcome measures
- Ceiling effects
- Heterogeneous samples
- Failure to pair meds with skills training



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Misinterpretation in Clinical Practice

- “Medication only helps kids”
- “Adults should have grown out of it”
- “If grades/work didn’t improve, meds failed”
- “shouldn’t need medication if getting good grades or successful”



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Misconceptions vs Counterpoint

- M: “ADHD medication doesn’t improve learning or work performance.”
 - **C: Medication improves attention and executive access; learning and performance depend on time, skills, and environment.**
- M: “If grades or productivity don’t improve, treatment failed.”
 - **C: Treatment reduces barriers; additional interventions are required for downstream gains.**
- M: “Negative academic studies mean ADHD is overtreated.”
 - **C: Most studies measure the wrong outcomes over the wrong time frame.**
- M: “Adults should have outgrown ADHD.”
 - **C: Symptoms persist; supports often disappear.**



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A literature review and meta-analysis on the effects of ADHD medications on functional outcomes

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Stephen V Faraone ⁶, Joseph Biederman ⁷

Affiliations + expand

PMID: 32014701 DOI: 10.1016/j.jpsychires.2020.01.006

Outcome	Effect with Stimulant Treatment
Academic Outcomes (decreased absence, improved GPA, decrease drop out)	Improved outcomes
Accidents & injuries	decreased risk
Mood disorders	decreased risk
Suicidality / self-harm	decreased risk
Traumatic Brain injury	decreased risk
Criminality (convictions)	decreased risk
Substance use disorder (SUDS)	decreased risk

Reframing Treatment Success

Success =

- Reduced friction
- Increased consistency
- Improved follow-through
- Better alignment between effort and outcome



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Integrating Treatment Thoughtfully

- Medication Lowers barriers
- Therapy builds skills
- Accommodations shape environment
- Time allows learning to accrue



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Key Take-Aways

- Adult ADHD is common and impairing
- Evaluation requires developmental lens
- Medication is highly effective for symptoms
- Functional outcomes require multimodal care
- Outcome studies are often misinterpreted

Diagnosis

- Requires developmental history and functional impairment
- Symptoms are chronic, not episodic
- High overlap with mood, anxiety, and trauma



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Key Take-Aways

Treatment

- Medication is highly effective for core symptoms
- Non-pharmacologic interventions are essential
- Executive function supports and accommodations matter
- Medication improves capacity to engage
- Academic and occupational gains are indirect and delayed
- Null findings often reflect measurement limits, not inefficacy

Clinical Pearl

Treat ADHD to reduce friction and improve function — not to guarantee performance

Bottom Line

Adult ADHD treatment works best when expectations match mechanisms.
Medication opens the door; skills, structure, and time determine what happens next.

Thank you!

Questions?

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Understanding Attention Deficit/Hyperactivity Disorder in Physicians: Workplace Implications and Management Strategies

Mayna Mammoliti, MD, Christopher Richards-Bentley, MD, Adam Ly, MScOT, and Mary Nguyen, MD

Table 1. Attention-related symptoms of ADHD and possible presentations in clinical and occupational settings.

Symptom	Possible ADHD behavioural presentation by physicians and physician learners
Makes careless mistakes/lacks attention to detail	• Makes mistakes in reports, charting, orders (e.g., orders the wrong medication or dose because of distraction) • Makes inattentive mistakes during exams (knows the material but inattentively picks the wrong answer thus scoring poorly)
Has difficulty sustaining attention	• Is distracted in patient interaction/assessment, missing vital information • Appears distracted and bored in meetings, team rounds, discussions, and social settings
Does not seem to listen when spoken to directly	• Appears to be bored, dismissive, unprofessional, and disinterested
Fails to follow through on tasks and instructions	• Does not follow up on assigned tasks, organizational initiatives, team goals, goals for patient care, annual paperwork renewals, tracking of continuing medical education (CME), licence payments, and paperwork

Bonus Material:

What ADHD looks like in a physician

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Avoids/dislikes tasks requiring sustained mental effort

- Avoids or delays “boring” tasks, such as CME tracking, preparing teachings, charting, grant proposals, and late call schedules

Loses things necessary for tasks/activities

- Loses patient lists, patient charts, research lists/laptops, hospital badge/ID
- Loses own car in parking lot, wallets, important personal documents

Is easily distracted (including unrelated thoughts)

- Is distracted in meetings when presenting cases in rounds and appears to be tangential when speaking or conveying ideas or patient presentations
- Written submissions appear to be tangential and disorganized, disjointed emails and communications that are hard to follow
- Becomes stuck in research/charting because of distraction from one idea/concept to the next and delay of complete product (i.e., research paper, abstract)

Is forgetful in daily activities

- Forgets obligations, meetings, patients waiting in the examining room
- Forgets to pick up own children, pay taxes/insurance, leaves stove on or doors unlocked

Is poorly organized

- Is chronically overwhelmed, cannot prioritize tasks and patient cases or make call schedules
- Cannot prioritize multiple requests coming at once (at nursing station, parenting)
- Appears angry and unprofessional when overwhelmed by cognitive demand

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Table 2. Hyperactivity/impulsivity-related symptoms of ADHD and possible presentation in clinical and occupational settings.

Symptom	Possible ADHD behavioural presentation by physicians and physician learners
Fidgets with or taps hands or feet, squirms in seat	• Leaves seat in situations when remaining seated is expected • Body movement perceived as “annoyance” by colleagues and patients; may be distracting to people working in the same office space • Fidgeting/movement seen as a sign of “boredom,” i.e., personal choice rather than a symptom of a disorder • Often unaware or ashamed of this behaviour or has been criticized by others
Is on-the-go or acts as if driven by a motor	• Cannot sit still, on the go and moving a lot • Has difficulty engaging in quiet, leisurely activities • Forgets obligations, meetings, patients waiting in the examining room • Seen as disruptive, will not sit still in meetings, gets up to get snacks/eats loudly in gatherings • Interrupts to speed up the duration of presentations or teaching workshops
Talks excessively	• Dominates meeting by speaking excessively, causing colleagues and patients to feel shut out, changes dynamics of the group/meeting
Blurts out answers	• Talks excessively in patient encounters leading to extended appointments and running late as well as potentially oversharing and boundary crossing
Has difficulty waiting their turn	• Seen as impatient and rude by colleagues because of interrupting or forgetting what they were going to contribute
Interrupts or intrudes on others	• Seen as narcissistic or self-absorbed by others because of interrupting and inability to delay own idea

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Table 3. Other symptoms of ADHD and possible presentations in clinical and occupational settings.

Symptom	Possible ADHD behavioural presentation by physicians and physician learners
Variability of performance	• Performance varies across job requirements, leading to appearance of disinterest or not caring about certain aspects of the position • May be hyperfocused and interest-driven versus reward-driven (e.g., may spend hours on one activity but procrastinate another activity with greater reward) • May have preference for clinical, procedural, teaching aspects of the job but struggle with sustained attention-demanding, "boring" tasks like meetings and charting
Poor time management	• Is late for meetings and appointments • Forgets how long it has been since call/page while peers and patients wait • Forgets how long has been talking in meetings, social gatherings, or presentations • Overcommits to tasks and is late for meetings/operating room /clinic/appointments/exams; misses meetings/events
Emotional dysregulation	• Deficient emotional self-regulation • Seen as quick to anger and frustrated; cannot regulate degree of emotion for situation • Seen as emotional, unpredictable, hot-headed, angry, "he/she has a temper" • Colleagues may be afraid of them • Quick mood changes incongruent with situation leading to shame after an event or lack of insight in terms of impact on others and failure to repair relationships; seen as difficult interpersonally • Easily frustrated during meetings or by changes

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