Your mission:

- Early comprehensive screening
- You have the tools, don't neuropsych!
- Rule out BPD early on; depression, GAD, bipolarity as treatment unfolds
- Use rational pharmacotherapy, adjuvants should be rare
- Be ready to bounce between compounds based on side effects and response
- Learn to refer to key sites, texts, education

The questions clinicians want answered:

- How do I diagnose adult ADHD in the outpatient setting?
  - Highest specificity in particular
  - Malingering?
- How do I decide on which stimulant or non-stimulant to use and at what doses?
- How to deal with co-morbid substance use?
- How do I deal with the comorbidity as regards:
  - What do I treat first?
  - Contraindications to stimulant use?

ADHD: An Enormously Common and Impairing Disorder

Prevalence 18- to 44-year-olds: 4.4%
- Percentage of adults with ADHD who received treatment within the previous 12 months: 11%

High degree of psychiatric comorbidities, eg, major depression, anxiety disorders, bipolar disorder, SUD, etc

Impairment in multiple domains (home, social, school, work)

Chronic course
- ~75% persistence from childhood into adolescence
- ~50% persistence from childhood into adulthood

SUD = substance use disorder.

Froehlich TE, et al. *Arch Pediatr Adolesc Med*. 2007;161(9):857-864. Kessler RC, et al. *Am J Psychiatry*. 2006;163(4):716-723. Wilens TE, et al. *Postgrad Med*. 2010;122(5):97-109.

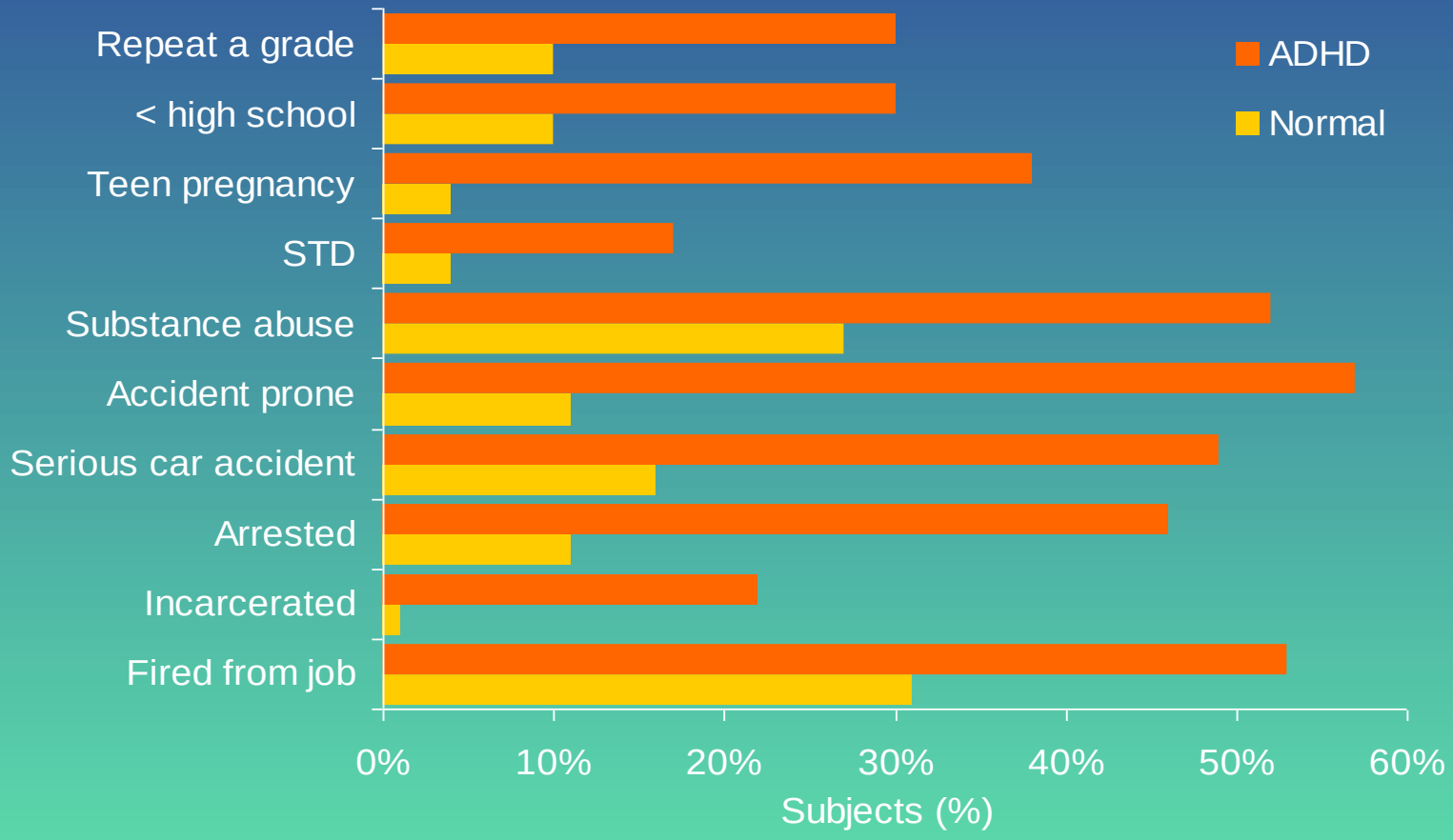
Issue of heritability vital in interview:

- **If you are ADHD, each of your parents has a 30% odds of having suffering from it**
- **If your child is ADHD, you have a 50% probability of having silently suffered from it**

Setting us straight

- ADHD is a developmental neurobehavioral disorder with biopsychosocial risk factors
  - Maternal-fetal variables such as smoking,alcoholism, obstetrical complications, low birth weight
  - Psychological variables such as abuse, deprivation, co-morbid mental health disorders
  - Genetic loci: dopamine receptor polymorphisms, dopamine reuptake protein
  - Strong neuroimaging correlates to all the above

Functional Impairment in Patients with ADHD Compared to Those Without



Barkley RA. *Attention-Deficit Hyperactivity Disorder. A Handbook for Diagnosis and Treatment*, 1998. Barkley RA, et al. *JAACAP*. 1990;29:546-557. Biederman J, et al. *Arch Gen Psychiatry*. 1996;53:437–446. Weiss et al. *J Am Acad Child Psychiatry*. 1985;24:211-220. Satterfield, Schell. *JAACAP*. 1997;36:1726-1735. Biederman J, et al. *Am J Psychiatry*. 1995;152:1652-1658.

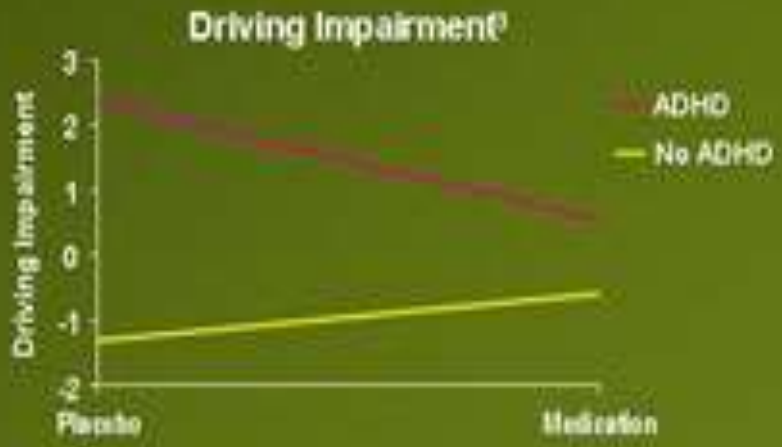
SLIDE 4

Common Comorbid Psychiatric Disturbances in Adolescents with ADHD[12-17]

Comorbidity	***Prevalence Among Adolescents with ADHD***	***Prevalence in General Adolescent Population***
Academic impairment	20–60%	5–15%
Major depressive disorder	9–32% (average 25%)	3–5%
Anxiety disorders	10–40% (average 25%)	3–10%
Conduct disorder	20–56%	Unknown
Oppositional defiant disorder	20–67% (average 35%)	2–16% (average 7–8%)
Bipolar disorder	~6–10%	3–4%

ADHD=attention-deficit/hyperactivity disorder.

Example: ADHD and Driving



1. Fried R et al. *J Clin Psychiatry*. 2006;67:567-574. 2. Barkley RA et al. *J Int Neuropsychol Soc*. 2002;8:655-672. 3. Cox DJ et al. *J Nerv Ment Dis*. 2000;188:230-234.

RESEARCH ARTICLE Open Access

A systematic review and analysis of long-term outcomes in attention deficit hyperactivity disorder: effects of treatment and non-treatment

Monica Shaw[1†], Paul Hodgkins[2*†], Hervé Caci[3], Susan Young[4], Jennifer Kahle[5], Alisa G Woods[6] and L Eugene Arnold[7]

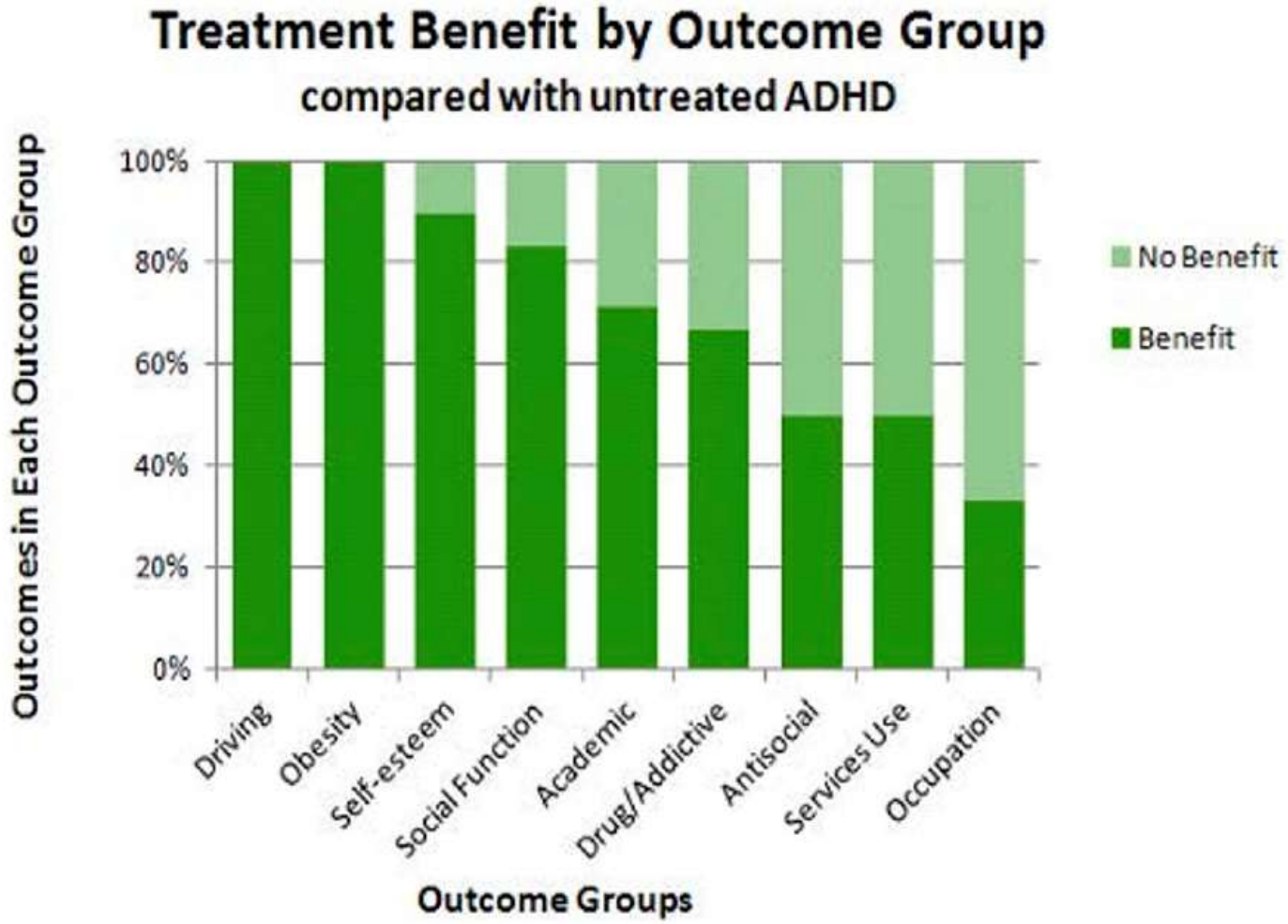
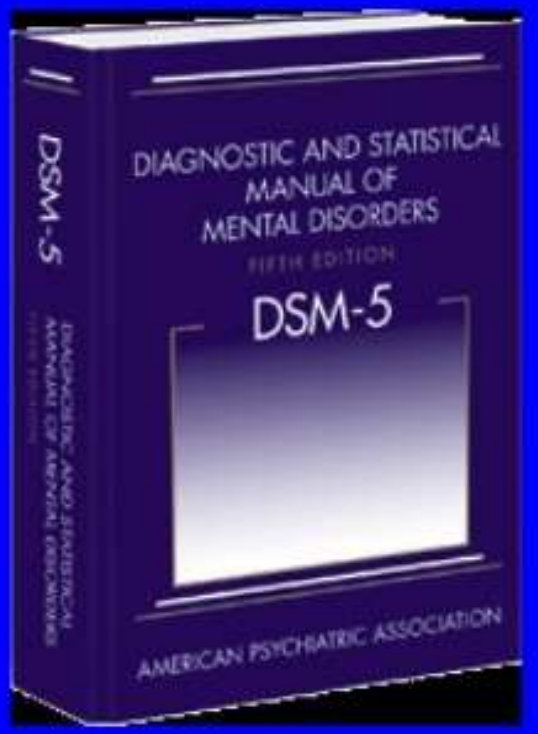


Figure 6 Benefit and no benefit with treatment by outcome group. This graph shows benefit (dark green bars) or no benefit (light green bars) by outcome group in treated participants with attention deficit hyperactivity disorder (ADHD) versus untreated ADHD. Improvement was reported most often in studies of driving and obesity outcomes (left side), with a greater proportion of outcomes reported to exhibit no benefit following treatment compared with no treatment in studies of occupation (right side). An intermediate proportion of studies of self-esteem, social function, academic, drug use/addictive behavior, antisocial behavior, and services use outcomes reported benefit with treatment.

DSM-V Revisions to ADHD

- Same criteria as DSM-IV
- Onset before age 12 (age 7 in DSM-IV)
- 5 symptom criteria in adults (6 in DSM-IV)
- Removed autism-spectrum d/o from excluders
- Elaborated ADHD criteria descriptions (more examples for adults)



Characteristics of Patients in Whom ADHD Should Be Suspected

- Life-long history of impairment, i.e., symptoms persist although they may change over time
- Have chaotic life-styles and are highly disorganized
- Have a family member with ADHD
- Have a comorbid psychiatric disorder such as a mood disorder that has not responded well to treatment
- Rely on substances such as alcohol, illicit drugs, or caffeine to function

Anyone with behavioral or emotional presentations

TABLE 3.

Differential Diagnosis of Attention-Deficit/ Hyperactivity Disorder

Psychiatric Disorders

Oppositional defiant disorder
Disruptive mood dysregulation disorder
Intermittent explosive disorder
Bipolar disorder
Autism spectrum disorder
Anxiety disorders
Intellectual developmental disorder
Substance use disorders
Personality disorders

Psychosocial Conditions

Abuse and/or neglect
Poor nutrition
Neighborhood violence
Chaotic family situation
Being bullied

Medical Disorders

Medication-induced symptoms (eg, asthma medications)
Sensory impairments (poor eyesight or hearing)
Seizure disorder
Thyroid abnormality
Heavy metal poisoning
Head trauma
Apnea or other sleep disorders

ASRS Screener v1.1

1. Inattention	Never	Rarely	Some-times	Often	Very Often
How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done?	0	1	2*	3*	4*
How often do you have difficulty getting things in order when you have to do a task that requires organization?	0	1	2*	3*	4*
When you have a task that requires a lot of thought, how often do you avoid or delay getting started?	0	1	2	3*	4*
How often do you have problems remembering appointments or obligations?	0	1	2*	3*	4*
1. HyperactivityImpulsivity					
How often do you fidget or squirm with your hands or feet when you have to sit down for a long time?	0	1	2	3*	4*
How often do you feel overly active and compelled to do things, like you were driven by a motor?	0	1	2	3*	4*

Significant items in Red (*p=0.5); Likely to have ADHD with ≥ 4 significant items

World Health Organization http://www.med.nyu.edu/psych/assets/adhdscreen18.pdf

Pearls

Is he DISTRACTED? Considerations when diagnosing ADHD in an adult

Richard C. Christensen, MD, MA

Adult attention-deficit/hyperactivity disorder (ADHD) can be challenging to assess accurately. Adult ADHD differs significantly from childhood ADHD, in that hyperactivity often is absent or greatly diminished, comorbid disorders (depression or substance use) are common, and previously compensated attention deficits in school can manifest in the patient's personal and professional life.[1]

The mnemonic **DISTRACTED** can help when recalling key components in assessing adult ADHD.[2] Because ADHD is a developmental disorder—there are signs of onset in childhood—it is important to maintain a longitudinal view when asking about patterns of behavior or thinking.

Distractibility. Is there a pattern of getting "off track" in conversations or in school or work situations because of straying thoughts or daydreams? Is there a tendency to overrespond to extraneous stimuli (eg, cell phones, computers, television) that impedes the patient's ability to converse, receive information, or follow directions?

Impulsivity. Does the patient have a history of saying things "off the cuff," interrupting others, or "walking on" someone else's words in a conversation? Is impulsivity evident in the person's substance use or spending patterns?

School history. This domain is important in diagnosing ADHD in adults because there needs to be evidence that the disorder was present from an early age. How did the patient perform in school (ie, grades, organization, completion of homework assignments)? Was there a behavioral pattern that reflected hyperactivity (could not stay seated) or emotional dysregulation (frequent outbursts)?

Task completion. Does the patient have trouble finishing assignments at work, staying focused on a project that is considered boring, or completing a home project (eg, fixing a leaky faucet) in a timely fashion?

Rating scales. Rating scales should be used to help support the diagnosis, based on the patient's history and life story. There are >12 scales that can be utilized in a clinical setting[3]; the ADHD/Hyperactivity Disorder Self-Report Scale is a brief and easy measure of core ADHD symptoms.

Accidents. Adults with ADHD often are accident-prone because of inattention, hyperactivity, or impulsivity. Does the patient have a history of unintentionally hurting himself because he "wasn't paying attention" (falls, burns), or was too impatient (traffic accidents or citations)?

Commitments. Does the patient fail to fulfill verbal obligations (by arriving late, forgetting to run errands)? Has this difficulty to commit created problems in relationships over time?

Time management. How difficult is it for the patient to stay organized while balancing work expectations, social obligations, and family needs? Is there a pattern of chaotic scheduling with regard to meals, work, or sleeping?

Employment. Has the patient changed jobs because the work becomes "too boring" or "uninteresting"? Is there a pattern of being terminated because of poor work quality based on time management or job performance?

Decisions. Adults with ADHD often make hasty, ill-informed choices or procrastinate so that they do not have to make a decision. Does the patient's decision-making reveal a pattern of being too distracted to hear the information needed, or too impatient to consider all the details?

Remember: No single component of this mnemonic alone suffices to make a diagnosis of adult ADHD. However, these considerations will help clarify what lies behind your **DISTRACTED** patient's search for self-understanding and appropriate medical care.

References

1. Barkley RA, Brown TE. Unrecognized attention-deficit/hyperactivity disorder in adults presenting with other psychiatric disorders. CNS Spectr. 2008;13(11):977-984.
2. Barkley R. Taking charge of adult ADHD. New York, NY: Guilford Press; 2010.
3. Attwell C. ADHD, rating scales, and your practice today. The Carlat Psychiatry Report. 2012;10(12):1,3,5-8.

McLean Screening Instrument for Borderline Personality Disorder

1. Have any of your closest relationships been troubled by a lot of arguments or repeated breakups?	1 = yes 0 = no
2. Have you deliberately hurt yourself physically (e.g., (punched yourself, cut yourself, burned yourself)? How about made a suicide attempt?	1 = yes 0 = no
3. Have you had at least two other problems with impulsivity (e.g., eating binges and spending sprees, drinking too much and verbal outbursts)?	1 = yes 0 = no
4. Have you been extremely moody?	1 = yes 0 = no
5. Have you felt very angry a lot of the time? How about often acted in an angry or sarcastic manner?	1 = yes 0 = no
6. Have you often been distrustful of other people?	1 = yes 0 = no
7. Have you frequently felt unreal or as if things around you were unreal?	1 = yes 0 = no
8. Have you chronically felt empty?	1 = yes 0 = no
9. Have you often felt that you had no idea of who you are or that you have no identity?	1 = yes 0 = no
10. Have you made desperate efforts to avoid feeling abandoned or being abandoned (e.g., repeatedly called someone to reassure yourself that he or she still cared, begged them not to leave you, clung to them physically)?	1 = yes 0 = no

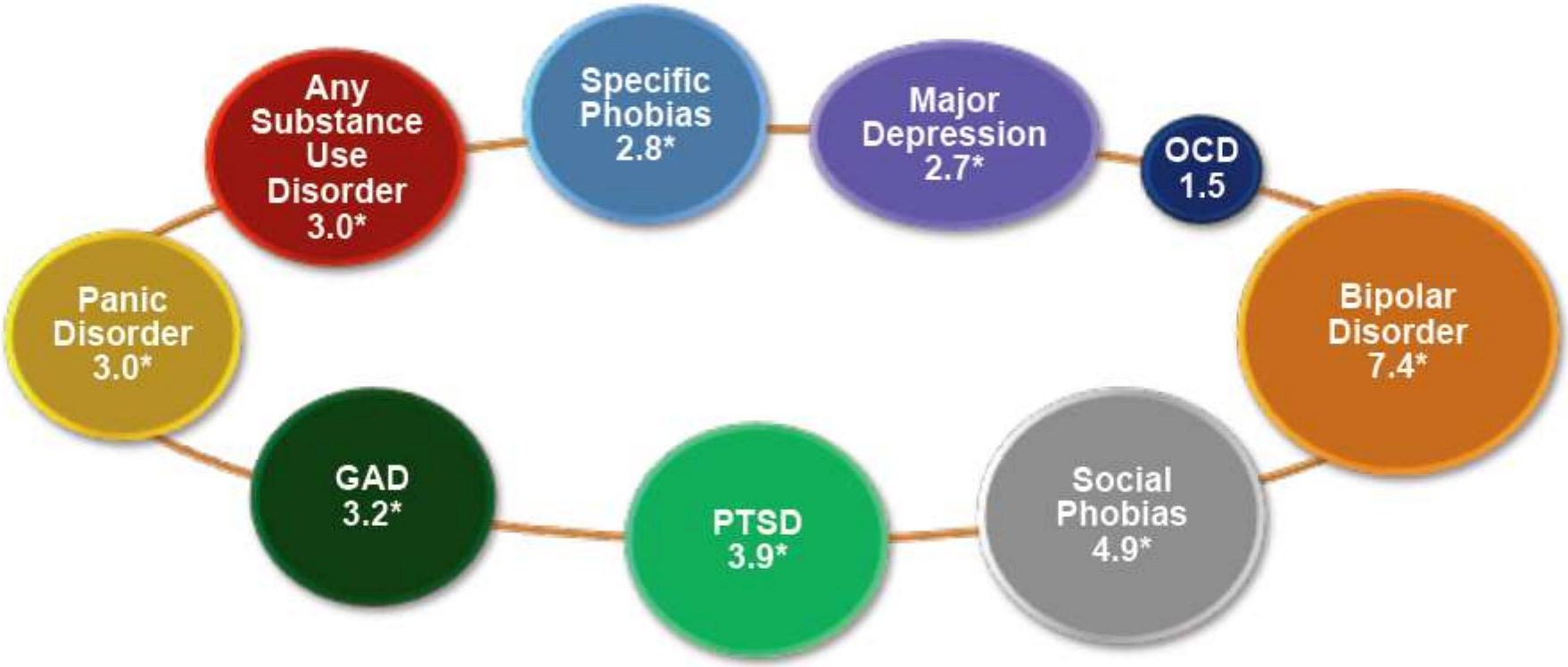
Neuropsychological testing

- Not to be routinely done
- Possible indications:
  - To rule out school or workplace difficulties that appear unrelated to attentional deficits: learning disabilities, IQ issues
  - Question of organic or congenital brain lesions or neurological trauma donating to disability
  - To rule out psychiatric diagnoses that imitate or are comorbid to the cardinal ADHD symptoms but are difficult to identify
  - Lack of treatment response
  - Malingering or factitious disorders suspected

Diagnostic considerations: Summary

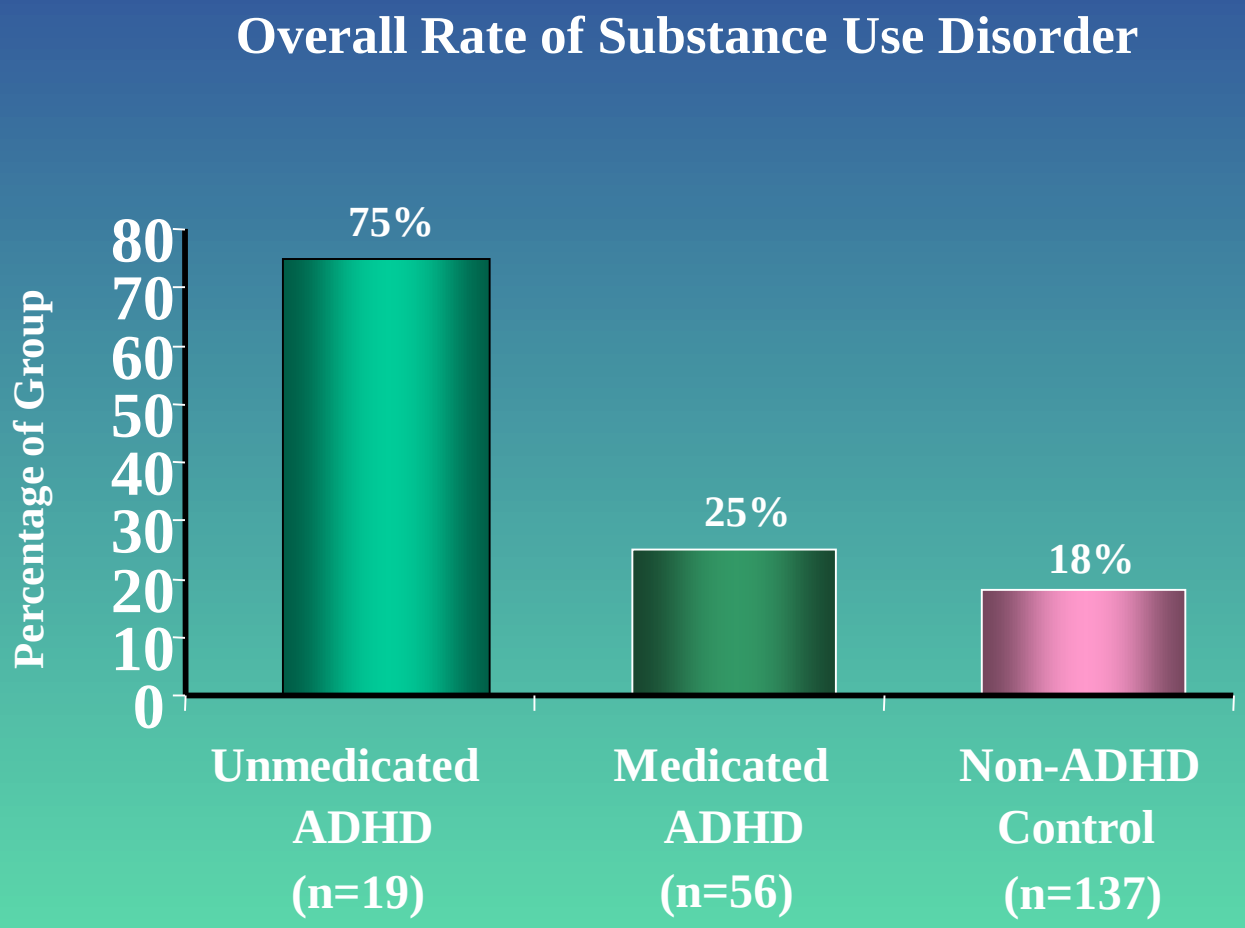
- While the ASRS cannot replace the diagnostic interview, it should be given to all higher risk clients outlined and used to follow treatment results
- The ASRS results should form a basis for further questioning, using the positive test items as a base (DISTRACTED)
- Corroboration by previous scholastic history, marks, childhood, and everyday behaviors by relatives/parents/spouse very helpful
- Comorbidity is the rule rather than the exception and mood/anxiety disorders common

Adult ADHD "Ring of Fire"
NCS-R: Psychiatric Comorbidities



Odds Ratio (95% CI). *$P < .05$.
GAD = generalized anxiety disorder; NCS-R = National Comorbidity Survey Replication; OCD = obsessive-compulsive disorder; PTSD = posttraumatic stress disorder.
Kessler RC, et al. *Am J Psychiatry.* 2006;163(4):716-723.

Prevalence of SUD: Prospective 4-Year Follow-up Study



P<.001 across groups.

Biederman J, et al. *Pediatrics.* 1999;104:e20.

Dealing with comorbidity in treatment

SUD:

- determine pattern and severity and potential risk of med interactions or medication diversion
- Detox-rehab needed to clear sud-related symptoms
- When some results achieved, use either atomexetine or long acting stimulants, depending on relapse risk.

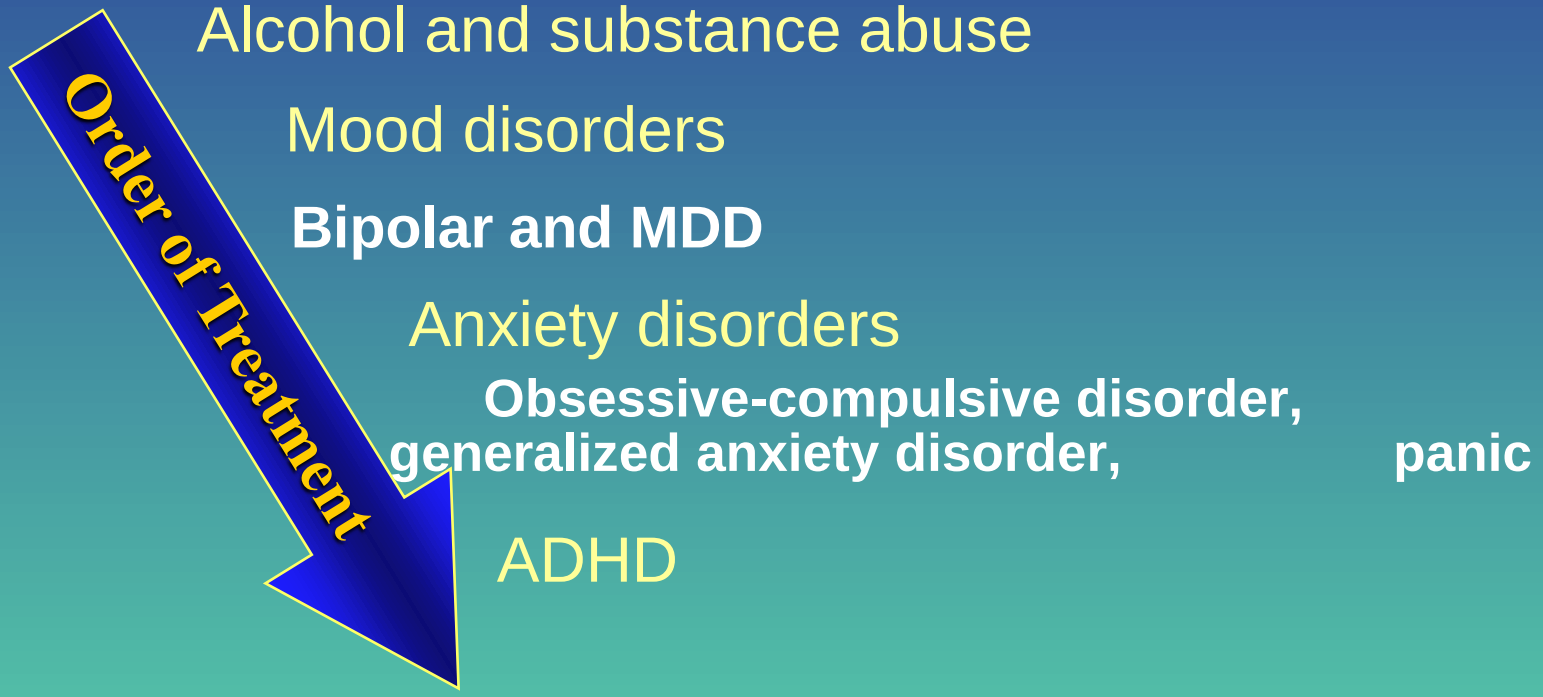
Mood disorders:

- Treat the primary affective state with antidepressants or mood stabilizers;
- If the core inattentive symptoms persist, add on extended release stimulants or atomexetine;
- Odds of manic switch appear rare with mood stabilizers in place

ADHD and Bipolarity: Controversial

- Potentially huge rates of ADHD comorbidity have been found in children with Manic-Depressive disorder, but this is hotly disputed, and is an issue in adults as well
- 22% of ADHD adults appear to suffer from bipolarity, men=women
- Treat the bipolarity first with mood stabilizers, consider all treatment options thereafter if ADHD symptoms remain and are disabling; little evidence that one treatment creates more switches into mania than any other if already stabilized.
- Distinguishing the symptoms of mania from ADHD is a concern, features that help include:
  - Discrete but prolonged dysphoric or euphoric episodes
  - Psychotic symptoms such as delusions
  - Decreased need for sleep
  - Grandiosity, hypersexuality, bizareness
  - ADHD has significant and chronic attention deficits

Case Presentation: Diagnostic Prioritization for Pharmacotherapy



Order of treatment also considers the severity of the concurrent disorders.

Goodman D. Treatment and assessment of ADHD in adults. In: Biederman J, ed. *ADHD Across the Life Span: From Research to Clinical Practice – An Evidence Based Understanding*. Hasbrouck

J Consult Clin Psychol. 2017 May 15

Meta-Analysis of Cognitive-Behavioral Treatments for Adult ADHD.

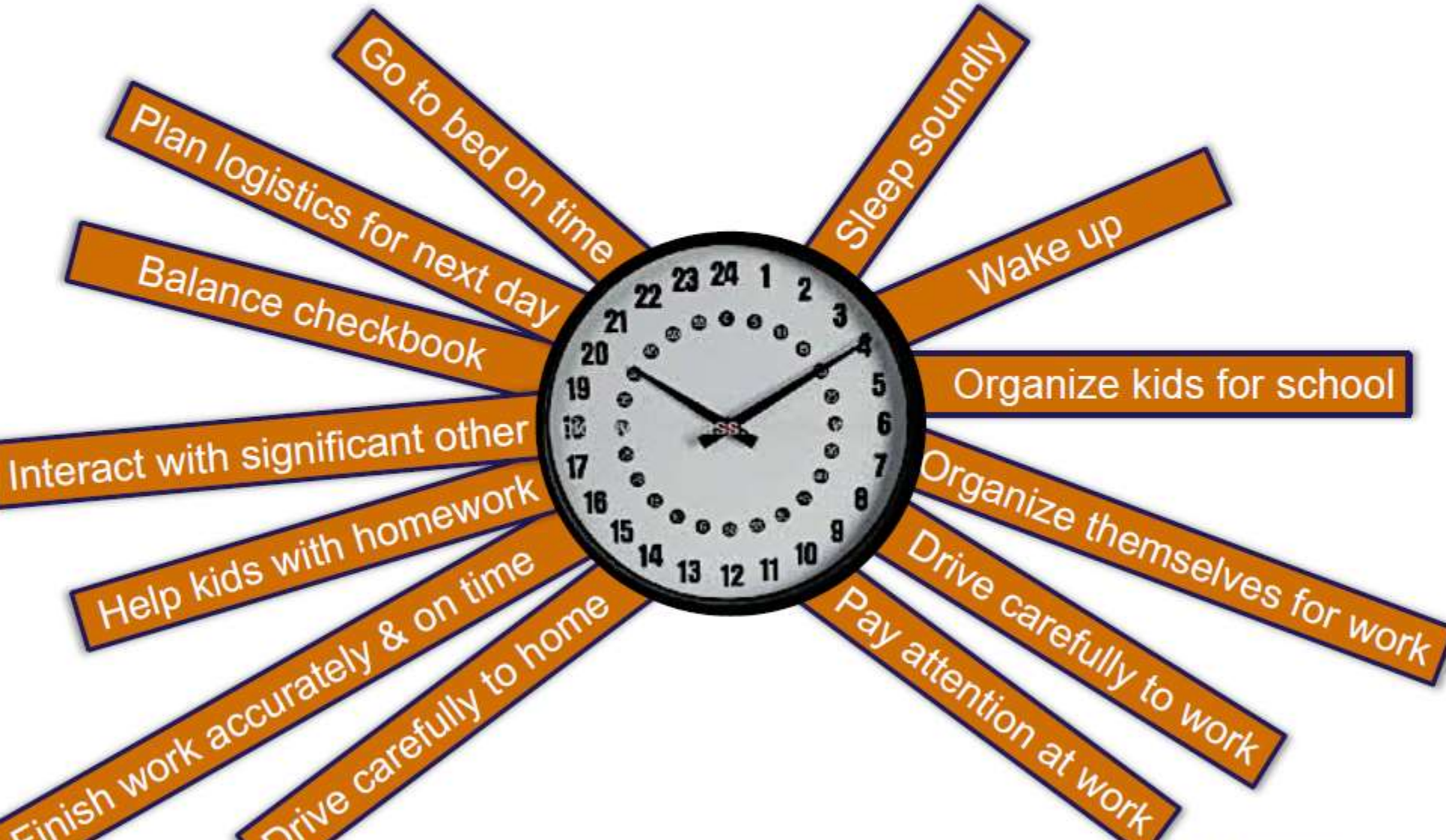
Knouse LE, Teller J, Brooks MA

Effect sizes were heterogeneous for most outcome measures. Studies with active control groups showed smaller effect sizes. Neither participant medication status nor treatment format moderated pre-to-post treatment effects, and longer treatments were not associated with better outcomes.

Important practical issues in pharmacotherapy:

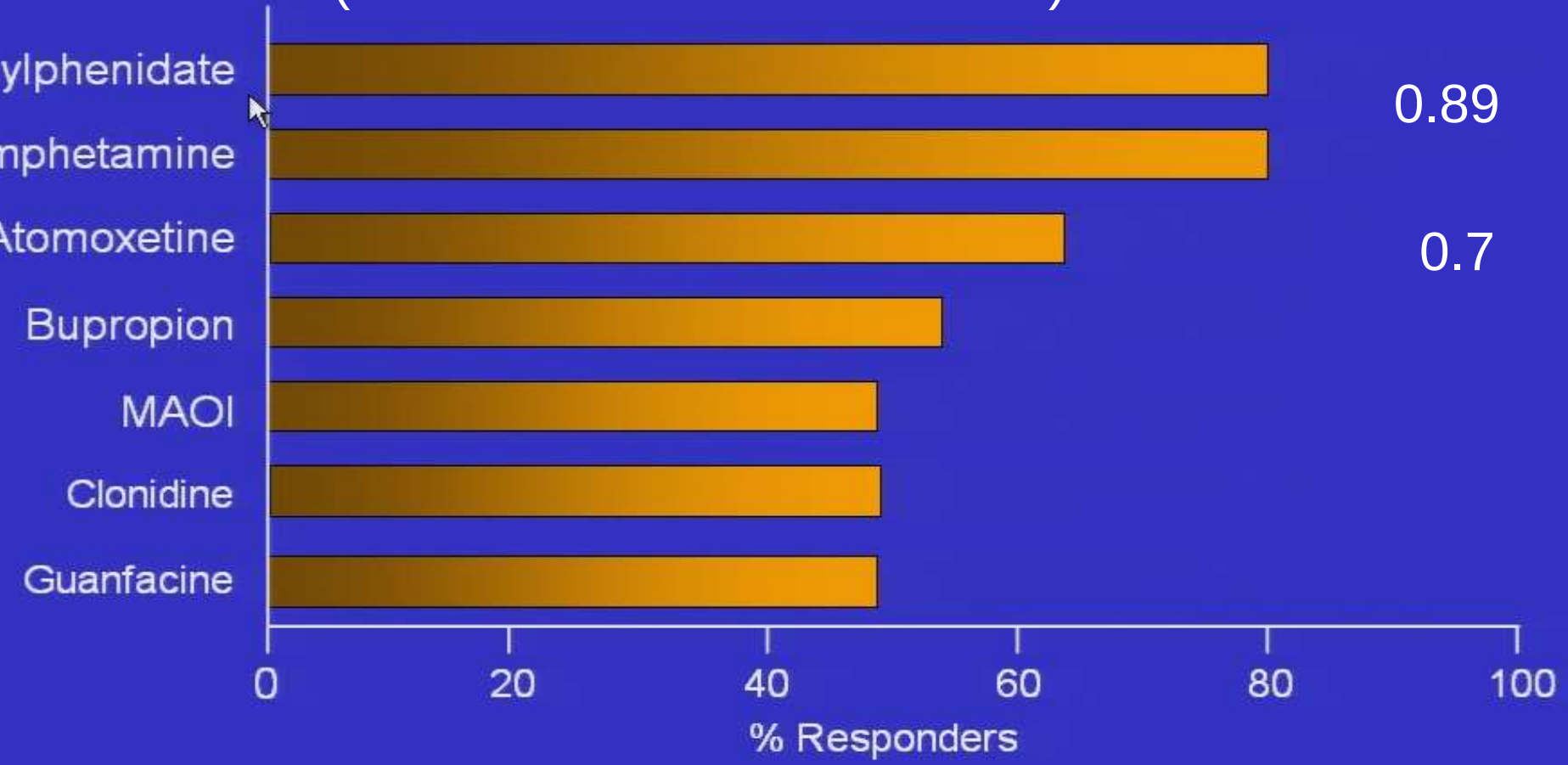
- Stimulant therapy is the backbone of short and long term improvement in all facets of the disorder and social development
- Compliance can be terrible given the forgetfulness and disorganization (I.e BID, TID dosings)
- Meds act quickly and effect fades quickly once blood levels drop: over minutes!
- This lack of 12-18 hour medication coverage has daily functional consequences
- There can be a huge difference in perceived and measured side effects and effectiveness with different formulations, even of the same molecule.
- Tendency for abuse, tolerability, and medication interactions varies significantly with longer vs. shorter acting formulations
- Non stimulants take weeks, not days to work

The 24-Hour Day of a Typical Adult and Why the Adult with ADHD Needs Longer than 8- to 12-Hour Coverage of Symptoms / Day



ADHD Pharmacotherapy – Responsiveness

(remission rates:15-20 % less)



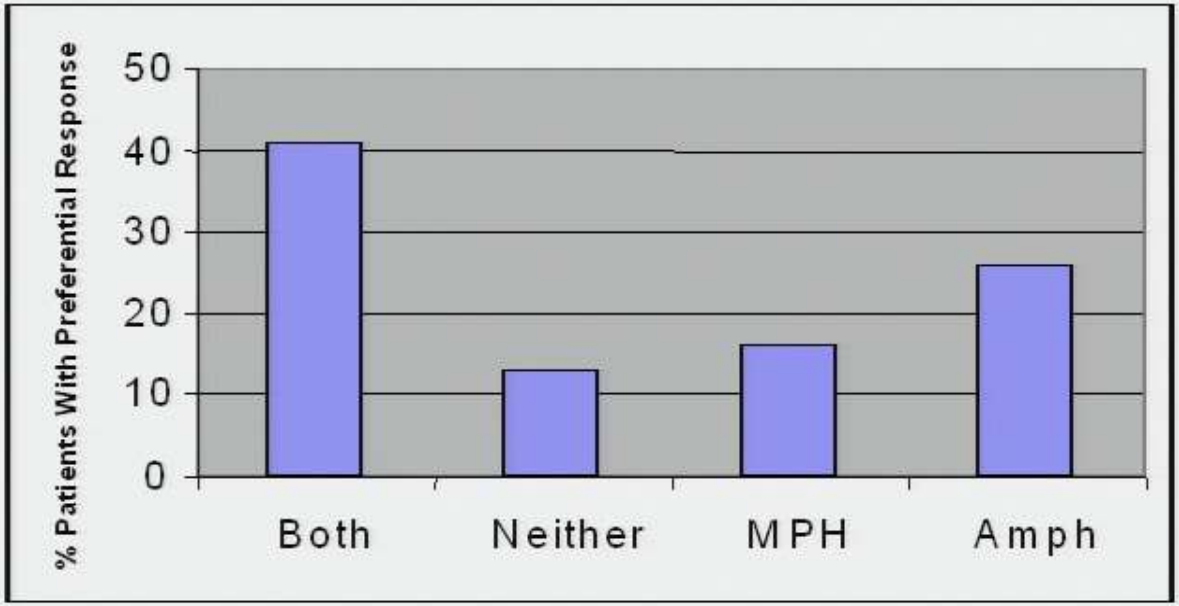
Effect size:

0.89

0.7

, Spencer, T., *Postered at MGH Child & Adolescent Psychopharmacology Meeting*, Boston 2000
, *CNS News*, 2003

Meta Analysis of Controlled Crossover Comparing Stimulants[1]

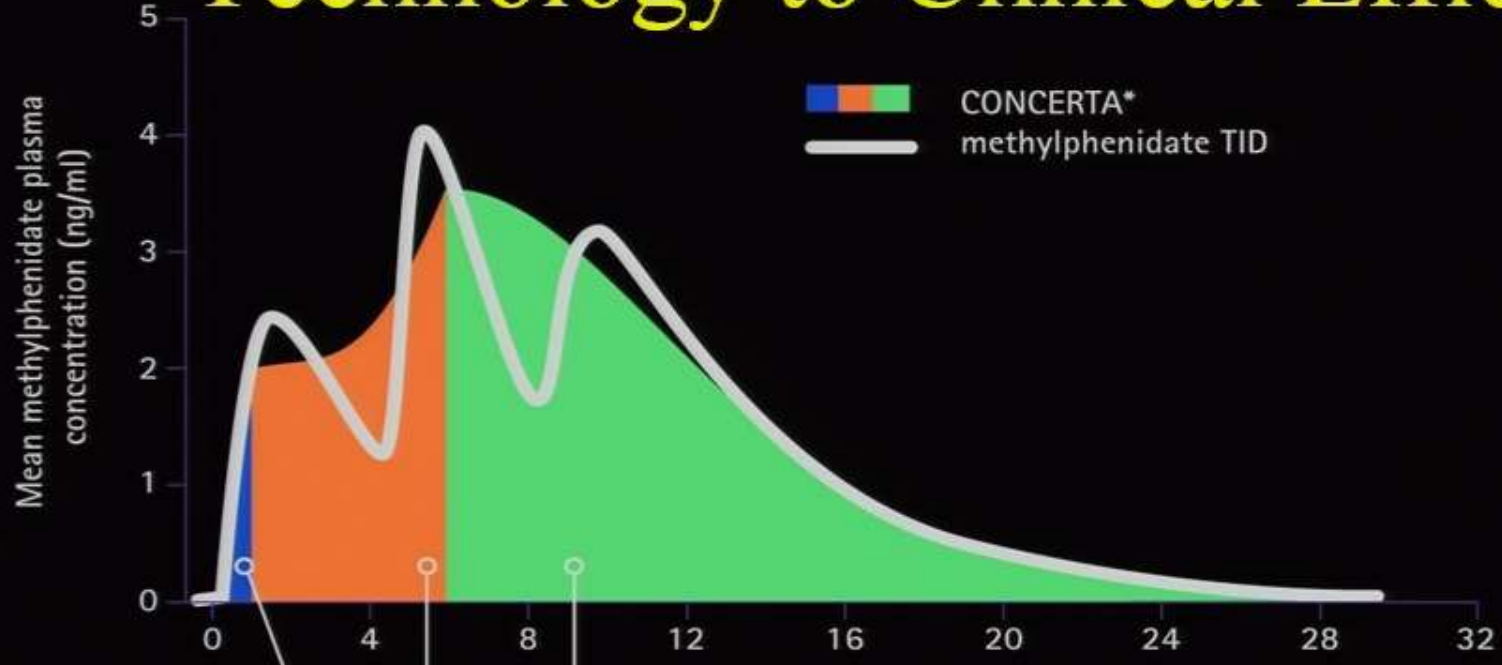


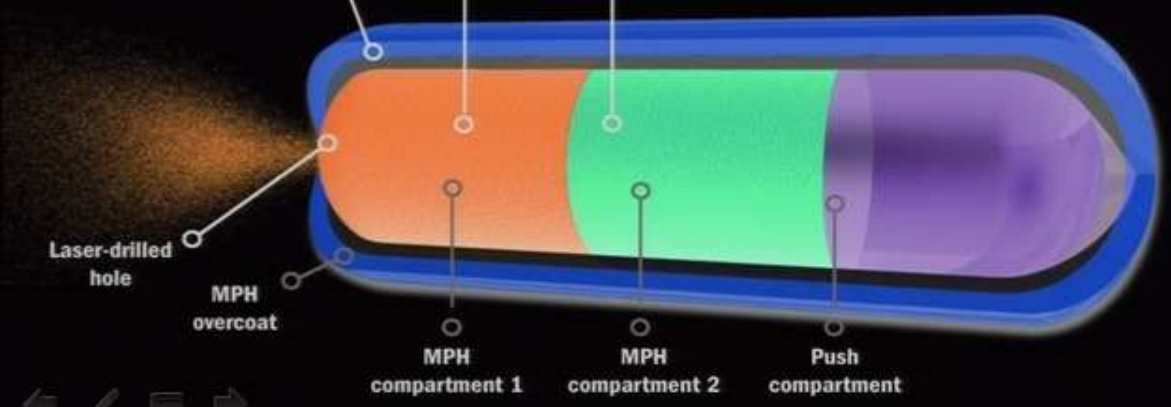
7 Studies

174 subjects

1. Arnold L.E. J Att Disorders 2000

CONCERTA*: OROS Technology to Clinical Efficacy

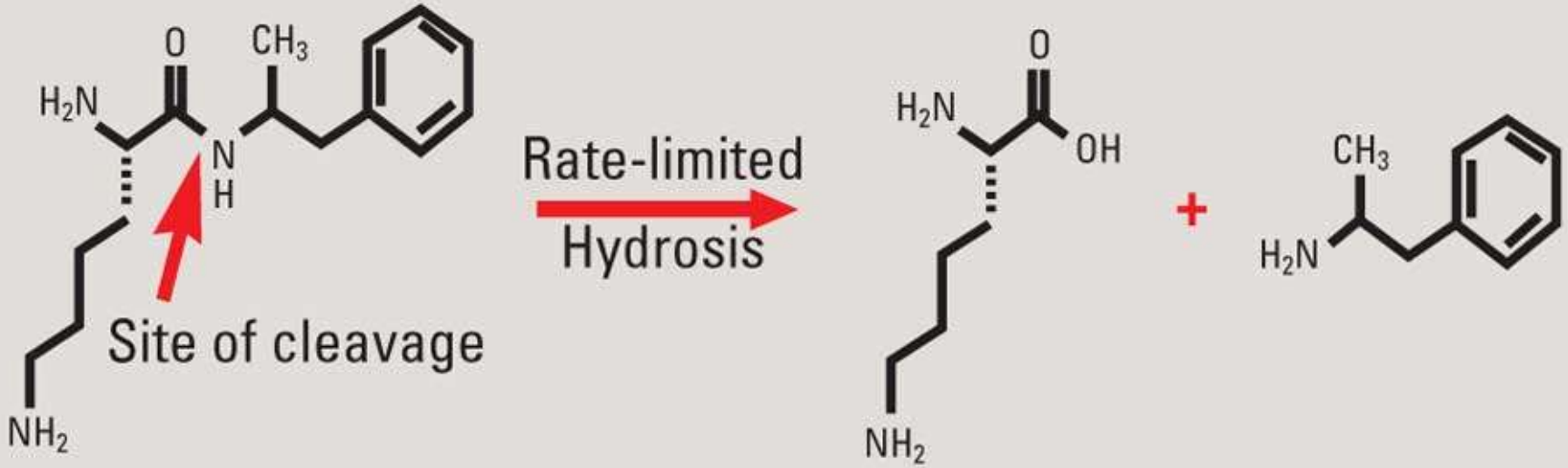




1. An initial dose dissolves within an hour
2. Specially engineered capsule releases a steadily rising concentration of methylphenidate
3. Design ensures that physiological activity lasts no longer than that seen with an immediate-release TID methylphenidate preparation

SLIDE 4

Lisdexamfetamine – a prodrug that is therapeutically inactive until it is converted to active dextroamphetamine in the body



Lisdexamfetamine (prodrug) **l-lysine** **d-amphetamine (active)**

Clinical issues

- Do long actings work better and prevent addiction?
- How to handle sleepy head ADHD
- The meds conk out too early
- Tremor and nightmares?
- Do these meds help depression?
- How do I switch from one formulation to another?

CADDRA Guide to ADHD Pharmacological Treatments in Canada - September 2019

Medications available and illustrations	Characteristics	Duration of action [1]	Starting dose [2]	Dose titration as per product monograph	Dose titration as per CADDRA www.caddra.ca
AMPHETAMINE-BASED PSYCHOSTIMULANTS					
Dexedrine® Tablets 5 mg 	Pill can be crushed [3]	~ 4 h	Tablets = 2.5 to 5 mg BID	↑ 2.5 - 5 mg at weekly intervals; Max. dose/day: (q.d. or b.i.d.) All ages = 40 mg	↑ 2.5 - 5 mg/day at weekly intervals Max. dose/day: (q.d. or b.i.d.) Children and Adolescents = 20 - 30 mg Adults = 50 mg
Dexedrine® Spansules 10, 15 mg 	Spansule (not crushable)	~ 6 - 8 h	Spansules = 10 mg q.d. a.m.		
Adderall XR® Capsules 5, 10, 15, 20, 25, 30 mg 	Sprinkable Granules	~ 12 h	5 - 10 mg q.d. a.m.	↑ 5 - 10 mg at weekly intervals Max. dose/day: Children = 30 mg Adolescents and Adults = 20 - 30 mg	Children: ↑ 5 mg at weekly intervals Max. dose/day = 30 mg Adolescents and Adults: ↑ 5 mg at weekly intervals max. dose/day = 50 mg
Vyvanse® Capsules 10, 20, 30, 40, 50, 60, 70* mg 	Capsule content can be diluted in water, orange juice and yogurt.	~ 13 - 14 h	20 - 30 mg q.d. a.m.	↑ by clinical discretion at weekly intervals Max. dose/day: All ages = 60 mg	↑ 10 mg at weekly intervals Max. dose/day: Children = 60mg Adolescents and Adults = 70 mg
Chewable Tablets 10, 20, 30, 40, 50, 60 mg 	Tablet must be chewed thoroughly before swallowing. Can be substituted with Vyvanse capsules on a mg per mg basis	~ 13 - 14 h	20 - 30 mg q.d. a.m.	↑ by clinical discretion at weekly intervals Max. dose/day: All ages = 60 mg	↑ 10 mg at weekly intervals Max. dose/day: Children = 60mg Adolescents and Adults = 70 mg
METHYLPHENIDATE-BASED PSYCHOSTIMULANTS					
Methylphenidate short acting Tablets 5 mg (generic) 10, 20 mg (Ritalin®) 	Pill can be crushed [3]	~ 3 - 4 h	5 mg b.i.d. to t.i.d. Adult = consider q.i.d.	↑ 5 - 10 mg at weekly intervals Max. dose/day: All ages = 60 mg	↑ 5 mg at weekly intervals Max. dose/day: Children and Adolescents = 60 mg Adults = 100 mg
Biphentin® Capsules 10, 15, 20, 30, 40, 50, 60, 80 mg 	Sprinkable Granules ***	~ 10 - 12 h	10 - 20 mg q.d. a.m.	↑ 10 mg at weekly intervals Max. dose/day: Children and Adolescents = 60 mg Adults = 80 mg	↑ 5 - 10 mg at weekly intervals Max. dose/day: Children = 60 mg Adolescents and Adults = 80 mg
Concerta® Extended Release Tabs 18, 27, 36, 54 mg 	Pill needs to swallowed whole to keep delivery mechanism intact. ***	~ 12 h	18 mg q.d. a.m.	↑ 18 mg at weekly intervals Max. dose/day: Children = 54 mg Adolescents = 54 mg / Adults = 72 mg	↑ 9 - 18 mg at weekly intervals Max. dose/day: Children = 72 mg Adolescents = 90 mg / Adults = 108 mg
Foquest® Capsules 25, 35, 45, 55, 70, 85, 100 mg 	Sprinkable Granules Morning effect ***	~ 16 h	25 mg q.d. a.m.	↑ 10-15 mg in intervals of no less than 5 days Max. dose/day: Children and Adolescents = 70 mg Adults = 100 mg	↑ 10-15 mg in intervals of no less than 5 days Max. dose/day: Children and Adolescents = 70 mg / Adults = 100 mg
NON PSYCHOSTIMULANT - SELECTIVE NOREPINEPHRINE REUPTAKE INHIBITOR					
Strattera® (Atomoxetine) Capsules 10, 18, 25, 40, 60, 80, 100 mg 	Capsule needs to swallowed whole to reduce GI side effects.	Up to 24 h	Children and Adolescents : 0.5 mg/kg/day Adults = 40 mg q.d. for 7-14 days	Maintain dose for a minimum of 7 - 14 days before adjusting: Children = 0.8 then 1.2 mg/kg/day 70 kg or Adults = 60 then 80 mg/day Max. dose/day : 1.4 mg/kg/day or 100 mg	Maintain dose for a minimum of 7 - 14 days before adjusting: Children = 0.8 then 1.2 mg/kg/day 70 kg or Adults = 60 then 80 mg/day Max. dose/day: 1.4 mg/kg/day or 100 mg
NON PSYCHOSTIMULANT - SELECTIVE ALPHA-2A ADRENERGIC RECEPTOR AGONIST					
Intuniv XR® (Guanfacine XR) Extended Release Tabs 1, 2, 3, 4 mg 	Pills need to be swallowed whole to keep delivery mechanism intact.	Up to 24 h	1 mg q.d. (morning or evening)	Maintain dose for a minimum of 7 days before adjusting by no more than 1 mg increment weekly Max. dose/day: Monotherapy: 6-12 years = 4 mg, 13-17 years = 7 mg As adjunctive therapy to psychostimulants 6-17 years = 4 mg	Maintain dose for a minimum of 7 days before adjusting by no more than 1 mg increment weekly Max. dose/day: Monotherapy: 6-12 years = 4 mg, 13-17 years = 7 mg As adjunctive therapy to psychostimulants 6-17 years = 4 mg

CADDRA Guide to ADHD Pharmacological Treatments in Quebec - September 2019

ications available and illustrations	Characteristics	Duration of action [1]	Starting dose [2]	Dose titration as per product monograph	Dose titration as per CADDRA www.caddra.ca	RAMQ-coverage (code)
PHETAMINE-BASED PSYCHOSTIMULANTS						
edrine® ets 5 mg 	Pill can be crushed [3]	~ 4 h	Tablets = 2.5 to 5 mg BID	↑ 2.5 - 5 mg at weekly intervals; Max. dose/day: (q.d. or b.i.d.) All ages = 40 mg	↑ 2.5 - 5 mg/day at weekly intervals Max. dose/day: (q.d. or b.i.d.) Children and Adolescents = 20 - 30 mg Adults = 50 mg	Covered
edrine® sules 10, 15 mg 	Spansule (not crushable)	~ 6 - 8 h	Spansules = 10 mg q.d. a.m.			Covered
erall XR® ules , 15, 5, 30 mg 	Sprinkable Granules	~ 12 h	5 - 10 mg q.d. a.m.	↑ 5 - 10 mg at weekly intervals Max. dose/day: Children = 30 mg Adolescents and Adults = 20 - 30 mg	Children: ↑ 5 mg at weekly intervals Max. dose/day = 30 mg Adolescents and Adults: ↑ 5 mg at weekly intervals max. dose/day = 50 mg	Exceptional medications Child-Adolescent: (SN2 Adult: (SN280)
nse® ules 10, 20, 0, 50, 60, mg 	Capsule content can be diluted in water, orange juice and yogurt.	~ 13 - 14 h	20 - 30 mg q.d. a.m.	↑ by clinical discretion at weekly intervals Max. dose/day: All ages = 60 mg	↑ 10 mg at weekly intervals Max. dose/day: Children = 60mg Adolescents and Adults = 70 mg	Capsules: Exceptional medications Child-Adolescent: (SN2 Adult: (SN280*)
vable Tablets 0, 30, 40, 60 mg 	Tablet must be chewed thoroughly before swallowing. Can be substituted with Vyvanse capsules on a mg per mg basis	~ 13 - 14 h	20 - 30 mg q.d. a.m.	↑ by clinical discretion at weekly intervals Max. dose/day: All ages = 60 mg	↑ 10 mg at weekly intervals Max. dose/day: Children = 60mg Adolescents and Adults = 70 mg	Chewable Tablets: Exception patient meas
THYLPHENIDATE-BASED PSYCHOSTIMULANTS						
ylphenidate short acting ets 5 mg (generic) 0 mg (Ritalin®) 	Pill can be crushed [3]	~ 3 - 4 h	5 mg b.i.d. to t.i.d. Adult = consider q.i.d.	↑ 5 - 10 mg at weekly intervals Max. dose/day: All ages = 60 mg	↑ 5 mg at weekly intervals Max. dose/day: Children and Adolescents = 60 mg Adults = 100 mg	Covered
entin® sules 10, 15, 20, 30, 50, 60, 80 mg 	Sprinkable Granules	~ 10 - 12 h	10 - 20 mg q.d. a.m.	↑ 10 mg at weekly intervals Max. dose/day: Children and Adolescents = 60 mg Adults = 80 mg	↑ 5 - 10 mg at weekly intervals Max. dose/day: Children = 60 mg Adolescents and Adults = 80 mg	Exceptional medications Child-Adolescent: (SN2 Adult: (SN280)
certa® nded Release 18, 27, 36, 54 mg 	Pill needs to swallowed whole to keep delivery mechanism intact.	~ 12 h	18 mg q.d. a.m.	↑ 18 mg at weekly intervals Max. dose/day: Children = 54 mg Adolescents = 54 mg / Adults = 72 mg	↑ 9 - 18 mg at weekly intervals Max. dose/day: Children = 72 mg Adolescents = 90 mg / Adults = 108 mg	Exceptional medications Child-Adolescent: (SN2 Adult: (SN280)
uest® sules 25, 35, 45, 70, 85, 100 mg 	Sprinkable Granules	~ 16 h	25 mg q.d. a.m.	↑ 10-15 mg in intervals of no less than 5 days Max. dose/day: Children and Adolescents = 70 mg, Adults = 100 mg	↑ 10-15 mg in intervals of no less than 5 days Max. dose/day: Children and Adolescents = 70 mg, Adults = 100 mg	Exception patient meas
N PSYCHOSTIMULANT - SELECTIVE NOREPINEPHRINE REUPTAKE INHIBITOR						
ttera®D moxetine) sules 10, 18, 0, 60, 80, mg 	Capsule needs to swallowed whole to reduce GI side effects.	Up to 24 h	Children and Adolescents: 0.5 mg/kg/day Adults = 40 mg q.d. for 7-14 days	Maintain dose for a minimum of 7 - 14 days before adjusting: Children = 0.8 then 1.2 mg/kg/day 70 kg or Adults = 60 then 80 mg/day Max. dose/day : 1.4 mg/kg/day or 100 mg	Maintain dose for a minimum of 7 - 14 days before adjusting: Children = 0.8 then 1.2 mg/kg/day 70 kg or Adults = 60 then 80 mg/day Max. dose/day: 1.4 mg/kg/day or 100 mg	Exceptional medications Child-Adolescent Exception patient meas Adult
N PSYCHOSTIMULANT - SELECTIVE ALPHA-2A ADRENERGIC RECEPTOR AGONIST						
niv XR® nfacine XR) nded Release 1, 2, 3, 4 mg 	Pills need to be swallowed whole to keep delivery mechanism intact.	Up to 24 h	1 mg q.d. (morning or evening)	Maintain dose for a minimum of 7 days before adjusting by no more than 1 mg increment weekly Max. dose/day: Monotherapy: 6-12 years: 4 mg 13-17 years: 7 mg. As adjunctive therapy to psychostimulants 6-17 years: 4 mg	Maintain dose for a minimum of 7 days before adjusting by no more than 1 mg increment weekly Max. dose/day: Monotherapy: 6-12 years: 4 mg 13-17 years: 7 mg. As adjunctive therapy to psychostimulants 6-17 years: 4 mg	Exceptional medications Child-Adolescent Exception patient meas Adult

Switching from One Type of Medication to Another: Points to consider

Generally, it is best to only be medicating with one medication at a time. Thus, it is often best to gradually decrease on the first medication and stop it before starting on the second. Trying to use two medications at the same time often results in side effects from each medication and prevents the clinician from reaching optimal clinical dosages because of side effects.

Situation A: Switching from a psychostimulant to another psychostimulant

- Choose an opportune time for transition, such as during holidays or at the weekend.
- Consider if there is an equivalent dose or if the new medication needs to be initiated at the starting dose.

<table>
<tr><th>Presently on:</th><th>Changing to:</th><th>Comments:</th></tr>
<tr><td>MPH-based medication</td><td>MPH-based medication</td><td>Stop the first and start the second at the calculated equivalent dose while taking into account the release mechanism
<table>
<tr><th>MPH-Based Medication</th><th>% Immediate/Delayed Release</th></tr>
<tr><td>Ritalin</td><td>100/0</td></tr>
<tr><td>Biphentin</td><td>40/60</td></tr>
<tr><td>Concerta</td><td>22/78</td></tr>
<tr><td>Generics</td><td>Unknown (not disclosed by manufacturer)</td></tr>
</table></td></tr>
<tr><td>MPH-based medication</td><td>AMP-based medication</td><td rowspan="3">No direct equivalent dose. Stop the first and begin the second at the starting dose.

Note: Methylphenidate: MPH; Amphetamine: AMP</td></tr>
<tr><td>AMP-based medication</td><td>MPH-based medication</td></tr>
<tr><td>AMP-based medication</td><td>AMP-based medication</td></tr>
</table>

Indications for Atomoxetine

Substance abusers: active or with high relapse risk

- Patients not responsive to stimulants
- Patients with significant side effects to stimulants (e.g., rebound, tics)
- Patients with Tourette's Syndrome or chronic motor tic disorders
- Epilepsy
- Comorbid Anxiety
- Abuse or diversion is a concern

Bipolar disorder? Unstudied

Treatment (continued)

Canadian Resources

- CADDRA (www.caddra.ca)
- CADDAC (www.caddac.ca)
- Teach ADHD (www.teachadhd.ca)
- Learning Disabilities Assn of Canada (www.ldac-taac.ca)
- Learning Disabilities Assn of Ontario (www.ldao.ca)
- Association Québecoise des troubles d'apprentissage (www.aqeta.qc.ca)
- CH.A.D.D. Canada (www.chaddcanada.org)
- PANDA (www.associationpanda.qc.ca)
- The AD/HD Foundation (www.adhdfoundation.ca)