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	~ 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[MD] (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

Note: Illustrations do not reflect real size of pills/capsules. For specific details on how to start, adjust and switch ADHD medications, clinicians are invited to refer to the Canadian ADHD Practice Guidelines (www.caddra.ca)

[1] Pharmacokinetics and pharmacodynamic response vary from individual to individual. The clinician must use clinical judgement as to the duration of efficacy and not solely rely on reported values for PK and duration of effect.

[2] Starting doses are from product monographs. CADDRA recommends generally starting with the lowest dose available. [3] Higher abuse potential. * Vyvanse 70 mg is an off-label dosage for ADHD treatment in Canada.

Document developed by Annick Vincent MD (www.attentiondeficit-info.com) and Direction des communications et de la philanthropie, Laval University, with the special collaboration of CADDRA.

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Version: September 2019

Pharmacological treatment for ADHD must be integrated in a multimodal approach and needs to include medical evaluation and follow-up. Comorbid disorders and co-administration of other medications must be taken into account. Here is a brief summary of contraindications and possible drug interactions.

CONTRAINDICATIONS TO PSYCHOSTIMULANTS*

- Treatment with MAO inhibitors and for up to 14 days after discontinuation
- Symptomatic cardiovascular disease
- Glaucoma
- Advanced arteriosclerosis
- Untreated hyperthyroidism
- Known hypersensitivity or allergy to the products
- Acute psychiatric conditions such as mania or psychosis
- Moderate to severe hypertension

Contraindications to Atomoxetine (Strattera)

- Treatment with MAOI and for up to 14 days after discontinuation
- Narrow angle glaucoma
- Uncontrolled hyperthyroidism
- Pheochromocytoma
- Moderate to severe hypertension
- Symptomatic cardiovascular disease
- Severe cardiovascular disorders
- Advanced arteriosclerosis
- Known hypersensitivity or allergy to the products

Contraindications to Guanfacine XR (Intuniv XR)

- Known hypersensitivity or allergy to the products
- Precautions are advised for those with a history of bradycardia, cardiovascular disease, heart block, hypotension, and syncope.

* For contraindications to guanfacine XR and atomoxetine hydrochloride, see chapter 5, Canadian ADHD Practice Guidelines 4th Edition, 2018, www.caddra.ca

MAIN POTENTIAL DRUG INTERACTIONS

Psychostimulants

- Monoamine oxidase inhibitors are contraindicated
- SSRIs and SNRIs – possible increased risk of serotonin syndrome
- TCAs – amphetamines and methylphenidate may interact with TCAs by different mechanisms
- Antipsychotics (e.g. chlorpromazine, fluphenazine) – may reduce the effect of amphetamines
- Anticonvulsants – methylphenidate may increase the level of phenytoin, primidone and phenobarbital
- Warfarin – methylphenidate may increase serum concentrations of warfarin

Atomoxetine (Strattera)

- Monoamine oxidase inhibitors are contraindicated.
- Inhibitors of CYP2D6 (e.g., paroxetine, fluoxetine, bupropion, quinidine) – may increase atomoxetine serum concentrations.
- Decongestants (e.g. pseudoephedrine) – possible increase in blood pressure and heart rate.
- QT prolonging agents (e.g. quetiapine, quinidine)- May ↑ QTc interval, consider alternatives.

Guanfacine XR (Intuniv XR)

- QT prolonging drugs (e.g. quetiapine, quinidine) – since quanfacine XR may cause a decrease in heart rate, concomitant use with QT prolonging drugs is not recommended.
- Beta-blockers – may increase risk of rebound hypertensive effect if guanfacine XR is stopped abruptly.

  Anticonvulsants – guanfacine XR may ↑ serum concentrations of valproic acid. Carbamazepine, phenobarbital and phenytoin may ↓ serum concentrations of guanfacine XR through CYP3A4 induction.
- CYP3A4 inducers or inhibitors (e.g. rifampin, fluconazole, ritonavir) - Inducers may ↓ serum concentrations of guanfacine XR Inhibitors may ↑ serum concentrations of guanfacine XR.

Additional information: Chapter 5, Canadian ADHD Practice Guidelines 4th Edition, 2018, www.caddra.ca

How can CADDRA help you in your practice?

- **The Canadian ADHD Practice Guidelines**: Written and reviewed by a multidisciplinary team of medical experts, the Guidelines provide practicalinformation on how to screen, assess and treat ADHD in children, adolescents and adults.
- **ADHD Assessment Toolkit**: This is a step-by-step guide to ADHD assessment, provides information on differential diagnosis and comorbid disorders, and includes all required forms and handouts.
- **CADDRA eLearning Portal**: www.adhdlearning.caddra.ca is a virtual library of resources, including video presentations, podcasts, ePosters and documents on ADHD.
- **Education and Training programs**: Training on ADHD and comorbid disorders across the lifespan.
- **Benefits of becoming a Member**: Join a network of health professionals working in the field of ADHD, receive newsletters, updates and notifications, obtain a discount of 20% on the cost of our annual conference; get premium access to our ADHD Learning and receive a printed copy of the Canadian ADHD Practice Guidelines in French or English.
- **During our annual conferences**, you have an opportunity to hear the top international experts in the field of ADHD speaking on topical subjects, to participate in practical and interactive workshops on ADHD and take part in networking sessions.

www.caddra.ca

Clinicians are invited to refer to the Canadian ADHD Practice Guidelines, 4th edition, for more information on ADHD diagnosis and treatments, www.caddra.ca

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