PHARMACOLOGIC AGENTS FOR ADHD

Stimulant Medications - Immediate Release			
Active Ingredient	**Drug Name**	**Dosing**	**Duration of Behavioral Effects**
Mixed salts of Amphetamine (Dextroamphetamine/ Levoamphetamine)	ADDERALL/GENERIC tab (scored): 5, 7.5, 10, 12.5, 15, 20, 30 mg.	Start at 5 mg 1-2 times per day; increase by 5 mg weekly until control achieved. Max rec'd daily dose: 40 mg. Do not use in patients with cardiac disease.	4-6 hrs depending on dose.
Dextroamphetamine	PROCENTRA: 5 mg/tsp liq. GENERIC tabs (scored): 5, 10 mg.; 5 mg/tsp liq may be available.	Start at 5 mg 1-2 times per day; increase by 5 mg weekly until control achieved. Max rec'd daily dose: 40 mg.	4-6 hrs.
Methylphenidate	METHYLIN: 5 mg tab; 10 & 20 mg scored tabs; 2.5, 5, & 10 mg chewable tabs; 5 & 10 mg/tsp liq. RITALIN: 5 mg tab; 10 & 20 mg scored tabs. GENERIC: Similar tabs/liq.	Start at 5 mg 1-2 times per day; increase by 5 mg weekly until control is achieved. May need a third, smaller dose in the afternoon. Max rec'd daily dose: 60 mg; some adults/older children may need 80 mg/day.	3-5 hrs.
Dexmethylphenidate	FOCALIN tab: 2.5, 5, 10 mg.	Start at 2.5 mg 1-2 times per day; increase by 5 mg weekly until control is achieved. Max rec'd daily dose: 20 mg, though 30 mg may actually be needed.	5-6 hrs.
Stimulant Medications - Sustained Release			
Active Ingredient	**Drug Name**	**Dosing**	**Duration of Behavioral Effects**
Mixed salts of amphetamine (Dextroamphetamine/ Levoamphetamine)	*Bimodal Release* ADDERALL XR cap (can be sprinkled): 5, 10, 15, 20, 25, 30 mg.	Start at 5-10 mg in AM; increase by 10 mg weekly until control achieved. Max rec'd daily dose: 40 mg. Do not use in patients with cardiac disease.	8–10 hrs.
Dextroamphetamine	DEXEDRINE SPANSULE/ GENERIC caps (can be sprinkled): 5, 10, 15 mg.	Start at 5 mg in AM; increase by 5 mg weekly until control achieved. Max rec'd daily dose: 45 mg.	6-8 hrs.
Lisdexamfetamine	VYVANSE cap (can be opened & disolved in water): 20, 30, 40, 50, 60, 70 mg.	Typically start at 30 mg QAM; increase by 10 mg weekly until control achieved. Max rec'd daily dose: 70 mg. No euphoric effect IV/nasally; should have less abuse potential.	Peak 1-4 hrs, duration 10-12 hrs.
Methylphenidate intermediate-acting	RITALIN SR tab: 20 mg. GENERIC SR tab: 20 mg.	Start at 20 mg in AM; increase by 20 mg weekly until control achieved. May need a 2nd dose or a regular methylphenidate dose in afternoon. Max rec'd daily dose: 60 mg; some adults/older children may need 80 mg/day.	4–8 hrs.

	METADATE/METHYLIN ER tab: 10, 20 mg.	Start at 10 mg in AM; increase by 10 mg weekly until control is achieved. May need a 2nd dose or a regular methylphenidate dose in afternoon. Max rec'd daily dose: 60 mg; some adults/older children may need 80 mg/day.	4–8 hrs.
Methylphenidate long-acting	*Bimodal Osmotic Release* CONCERTA cap (noncrushable): 18, 27, 36, 54 mg.	Start at 18 mg in AM; increase by 18 mg weekly until control achieved. Max rec'd daily dose: 72 mg.	8–12 hrs.
	Bimodal Release METADATE CD ER cap (can be sprinkled): 10, 20, 30, 40, 50, 60 mg. RITALIN LA cap (can be sprinkled): 10, 20, 30, 40 mg.	Start at 10 mg in AM; increase by 10 mg weekly until control achieved. Max rec'd daily dose: 60 mg; some adults/older children may need 80 mg/day.	8-12 hrs.
	Liquid QUILLIVANT XR: 5 MG/ML	Start at 20 mg PO in AM; increase by 10 mg weekly until control achieved. Max rec'd daily dose: 60 mg.	8-12 hrs.
	Patch DAYTRANA: 10, 15, 20, 30 mg patches.	Start at 10 mg; increase by 10 mg weekly until control achieved. Max rec'd daily dose: 30 mg. Wear 9 hrs., remove for 15 hrs. May have more anorexia, insomnia, tics; can remove earlier to help sleep.	10-12 hrs.
Dexmethylphenidate	*Bimodal Release* FOCALIN XR ER cap (can be sprinkled): 5, 10, 15, 20, 30, 40 mg.	Start at 5 mg in AM; if changing from methylphenidate, start at 1/2 that dose. Increase by 5 mg weekly until control is achieved. Max rec'd daily dose: 30 mg peds, 40 mg adults.	12 hrs.

Stimulant Contraindications and Side Effects

Active Ingredient	Contraindications *(Stimulants can be used in children with epilepsy.)*
Mixed salts of amphetamine	MAO inhibitors within 14 days, glaucoma, cardiovascular disease, hyperthyroidism, moderate to severe hypertension.
Dextroamphetamine	MAO inhibitors within 14 days, glaucoma.
Methylphenidate	MAO inhibitors within 14 days, glaucoma, preexisting severe gastrointestinal narrowing. Caution should be used when prescribing concomitantly with anticoagulants, anticonvulsants, and tricyclic antidepressants.

Common Side Effects: Decreased appetite, sleep problems, transient headache, transient stomachache, behavioral rebound.

Infrequent Side Effects: Weight loss, increased heart rate, increased blood pressure, dizziness, growth suppression, hallucinations/mania, exacerbation of tics and Tourette syndrome (rare).

Possible Strategies for Common Side Effects: (In general, if one stimulant is not working or produces too many adverse side effects, try another stimulant before using a different class of medications.)
Dose after meals • Try sustained-release stimulant • Decrease dose • Frequent snacks • Try drug holidays • Add reduced dose in late afternoon • Consider coexisting conditions, especially depression • Restrict or eliminate caffeine • Stabile bedtime routine • Consider small bedtime medication dose • Consider referral to mental health specialist.

Non Stimulant Medications		
Active Ingredient	**Drug Name**	**Dosing/Notes**
Atomoxetine HCL	STRATTERA cap: 10, 18, 25, 40, 60, 80, 100 mg.	Start as a single daily dose, based on weight, 0.5 mg/kg/day for the first week, then increase up to a max 1.4 mg/kg/day, all given in 1 daily dose. May cause initial somnolence/nausea, usually relieved by slower titration or splitting to BID. SNRI, so titrate slowly if using other SNRIs. No MAO inhibitors within 14 days
Clonidine immediate-release	CATAPRES/GENERIC: 0.1, 0.2, 0.3 mg scored tabs.	Off-label use; no standardized dosing. Reasonable to start at very low BID dose, increasing to effect or intolerance due to sedation or hypotension, to theoretical max 2.5 mg/day. Probably better in addition to a stimulant than instead of one.
Clonidine extended-release	KAPVAY ER tabs: 0.1, 0.2 mg	Start 0.1 mg QHS, increasing to effect or intolerance due to sedation or hypotension, to max 0.4 mg/day. Probably better in addition to a stimulant than instead of one.
Guanfacine immediate-release	TENEX/GENERIC tabs: 1, 2 mg	Off-label use; no standardized dosing. Reasonable to start at 1 mg QHS, increasing to effect or intolerance due to sedation or hypotension, to theoretical max 3 mg/day. Probably better in addition to a stimulant than instead of one.
Guanfacine extended-release	INTUNIV ER tab: 1, 2, 3, 4 mg (The IR version Tenex/generic 1, 2 mg tabs has been used off-label as well.)	Start 1 mg QAM; increase 1 mg wkly as needed to label max of 4 mg. However, additional benefit may be seen at doses up to 0.12 mg/kg/day in adolescents. Sedation common. Off-label, it may be more beneficial combined with a stimulant than as a single agent.
Modafinil	PROVIGIL: 100 mg tab, 200 mg scored tab.	Has been used off-label for ADHD at 200-400 mg QAM. Company withdrew FDA application for ADHD.

Adapted from the National Initiative for Children's Healthcare Quality ADHD Toolkit and Treatment Guidelines from The Medical Letter; updated as newer agents released.