ADHD Table

Drug Name (include if IR, XR, ODT, LA)	Indication (include approved ages) Neurotransmitter(s) Affected Target Symptoms	Short-acting, intermediate-acting or long-acting. Duration of action, peak (if noted)	Notable side effects /Patient educat
Methylphenidate (D/L) (Concerta, Ritalin)	**Indication (include approved ages)** Attention deficit hyperactivity disorder (ADHD) in children and adults (approved ages vary based on formulation) Narcolepsy (Metadate ER, Methylin ER, Ritalin, Ritalin SR) **Neurotransmitter(s) Affected** dopamine, norepinephrine reuptake inhibitor and releaser (DN-RIRe) **Target Symptoms** Concentration, attention span Motor hyperactivity Impulsiveness Physical and mental fatigue Daytime sleepiness Depression	Pharmacokinetics • Average half-life in adults is 3.5 hours (1.3–7.7 hours) • Average half-life in children is 2.5 hours (1.5–5 hours) • First-pass metabolism is not extensive with transdermal dosing, thus resulting in notably higher exposure to methylphenidate and lower exposure to metabolites as compared to oral dosing • Immediate-release formulations (Ritalin, Methylin, generic methylphenidate) have 2–4 hour durations of clinical action • Sustained-release formulations such as Methylin ER, Ritalin SR, Metadate ER, and generic methylphenidate sustained-release all have approximately 4–6 hour durations of	**Notable side effects** • Insomnia, headache, exacerb nervousness, irritability, ove tremor, dizziness Anorexia, r pain, weight loss Can tempo growth in children (controve Transdermal: application site including contact sensitizatio edema, papules, vesicles) an leukoderma **Nobable side effects link to neurotr** • Increases in norepinephrine cause autonomic side effects tremor, tachycardia, tachyca hypertension, and cardiac ar • Increases in norepinephrine dopamine centrally can caus effects such as insomnia, agitation, psychos substance abuse **Patient education instructions** • Use with caution in patients of hypertension, hyperthyro drug abuse • Children who are not growi weight should stop treatmer temporarily • May worsen motor and pho • May worsen symptoms of th and behavioral disturbance i patients • Stimulants have a high pote and must be used with cauti a current or past history of s alcoholism or in emotionally