



ADHD Medications Table

Week 7

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THIS ASSIGNMENT SHOULD BE SUBMITTED TO THE WEEK 7 MEDICATION TABLE DROPBOX BY SUNDAY AT

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 education instructions
Methylphenidate (D/L) (Concerta, Ritalin)	Indications including approved ages: Attention deficit hyperactivity disorder (ADHD) in those 6 and over Narcolepsy Neurotransmitter(s) affected: Central norepinephrine and dopamine Target Symptoms: Concentration, attention span, distractibility Motor hyperactivity Impulsiveness	Multiple oral formulations are available including immediate (IR), long- acting (LA) Duration of action, peak (if noted): Concerta has a 12-hour duration of action Sustained release Ritalin (LA) has 2 strong peaks (immediately and at 4 hours) and a 6-8 hour duration of action *Half-life of methylphenidate is the same regardless of which	Notable side effects /Patient education Insomnia, headache, exacerbation of nervousness, irritability, overstimulation, dizziness Anorexia, nausea, abdominal pain, vomiting, mouth Peripheral vasculopathy, including Raynaud's syndrome Can temporarily slow normal growth (controversial) Blurred vision Taking oral formulations with food actions for 2-3 hours (Stahl, 2024)

	<p>Physical and mental fatigue Daytime sleepiness Depression (Stahl, 2024)</p>	<p>formulation; it is the release kinetics that determine the onset and duration of clinical effect* *Clinical duration of action often differs from pharmacokinetic half-life* (Stahl, 2024)</p>	
<p>Dexmethylphenidate (Focalin) (D)</p>	<p>Indications including approved ages: Indicated in ADHD for individuals aged six years and above</p> <p>Neurotransmitter(s) affected: blocks the reuptake of norepinephrine and dopamine and increases their release into the extraneuronal space.</p> <p>Target Symptoms: Hyperactivity and inattention symptoms (U.S. Food and Drug Administration, 2017)</p>	<p>Short-acting, intermediate-acting or long-acting: Immediate release and extended release</p> <p>Duration of action, peak (if noted): Focalin XR produces a bi-modal plasma concentration-time profile (i.e., 2 distinct peaks approximately 4 hours apart) when orally administered to healthy adults. The initial rate of absorption for Focalin XR is similar to that of Focalin tablets as shown by the similar rate parameters between the 2 formulations, i.e., first</p>	<p>Notable side effects /Patient education</p> <p>Pediatric: Use of CNS stimulants has been associated with weight loss and slow growth rate. Treatment interruption may be necessary for patients who are not growing or gaining weight as expected. Dexmethylphenidate is not recommended for use in children under 6 years of age (U.S. Food and Drug Administration, 2017)</p>

		<p>peak concentration (C_{max1}), and time to the first peak (t_{max1}), which is reached in 1.5 hours (typical range 1–4 hours). The mean time to the interpeak minimum (t_{minip}) is slightly shorter, and time to the second peak (t_{max2}) is slightly longer for Focalin XR given once daily (about 6.5 hours, range 4.5–7 hours) compared to Focalin tablets given in 2 doses 4 hours apart (see Figure 1), although the ranges observed are greater for Focalin XR. (U.S. Food and Drug Administration, 2017)</p>	
<p>Jornay PM</p>	<p>Indications including approved ages:</p> <p>Attention deficit hyperactivity disorder (ADHD) in those 6 and over</p>	<p>Short-acting, intermediate-acting, or long-acting: Long acting Duration of action, peak (if noted): Peak occurs in a single peak with a median T_{max} 14.0 hours,</p>	<p>Notable side effects /Patient education</p> <p>Insomnia, headache, exacerbation of nervousness, irritability, overstimulation, dizziness Anorexia, nausea, abdominal pain, vomiting, dry mouth Peripheral vasculopathy, including Raynaud's syndrome</p>