
MIXED AMPHETAMINE SALTS (Adderall, Adderall XR, Mydayis) Fact Sheet [G]

Bottom Line:

Adderall contains 75% dextroamphetamine and 25% levoamphetamine. This ratio of amphetamine isomers is effective but is probably the most abused and diverted of all prescription stimulants.

FDA Indications:

ADHD (adults and children ≥ 3 years for IR, ≥ 6 years for XR, ≥ 13 years for Mydayis); **narcolepsy** (adults and children ≥ 6 years).

Off-Label Uses:

Obesity; treatment-resistant depression.

Dosage Forms:

- **Tablets (G):** 5 mg, 7.5 mg, 10 mg, 12.5 mg, 15 mg, 20 mg, 30 mg.
- **ER capsules (G):** 5 mg, 10 mg, 15 mg, 20 mg, 25 mg, 30 mg.
- **ER capsules (Mydayis):** 12.5 mg, 25 mg, 37.5 mg, 50 mg.

Dosage Guidance:

- **ADHD:**
 - Rule of thumb for both preparations: Initial dose should be 0.5 mg/kg, but shoot for a target dose of 1.0–1.2 mg/kg.
 - Adults:
 - IR: Start 5 QAM–BID, max 40 mg/day divided BID.
 - ER: Start 20 mg QAM, increase to max 60 mg/day QAM. For Mydayis, start 12.5 mg QAM, increase in increments of 12.5 mg/day weekly, to max 50 mg/day.
 - Children and adolescents:
 - IR: Start 2.5–5 mg BID, max 40 mg/day divided BID.
 - ER: Start 5–10 mg QAM, increase gradually to max 30 mg/day, or 40 mg/day QAM in adolescents. For Mydayis (adolescents ≥ 13 years), start 12.5 mg QAM, increase in increments of 12.5 mg/day weekly, to max 25 mg/day.
- **Narcolepsy:** Start 10 mg QAM, increase by 10 mg/day at weekly increments; max 60 mg/day.

Monitoring: ECG if history of cardiac disease.

Cost: IR/ER: \$; Mydayis: \$\$\$\$

Side Effects:

- Most common: Insomnia, headache, decreased appetite, abdominal pain, weight loss, agitation.
- Serious but rare: See class warnings in chapter introduction.
- Pregnancy/breastfeeding: Limited data in pregnancy; likely safe in breastfeeding.

Mechanism, Pharmacokinetics, and Drug Interactions:

- Stimulant that inhibits reuptake of dopamine and norepinephrine.
- Metabolized primarily through CYP2D6; $t_{1/2}$: 9–14 hours. Duration of action: 6–8 hours (IR), 8–12 hours (XR).
- Avoid use with MAOIs, antacids. Caution with 2D6 inhibitors, which may increase stimulant effects.

Clinical Pearls:

- Each dose contains a mixture of amphetamine salts, resulting in a 75:25 ratio of dextro- and levo-isomers of amphetamine.
- When converting from IR to ER, use the same total daily dose, given QAM.
- Adderall may provide more of a “kick” than methylphenidate preparations. Roughly twice as potent (per mg) as methylphenidate.
- Mydayis is formulated with pH-dependent drug-releasing beads, with IR and DR beads that release drug at pH 5.5 and 7.0. Duration of effect may be up to 16 hours.
- Dextroamphetamine and mixed amphetamine salts are the only stimulants approved for children < 6 years (approved for children ≥ 3 years), with the exception of Mydayis, which causes very high rates of side effects (insomnia, reduced appetite) in children < 13 years and should only be used in children ≥ 13 years.

Fun Fact:

Was briefly pulled from the market in Canada in 2005 because of cardiac concerns.