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

BOTTOM LINE:
Adderall is effective but is probably the most misused and diverted of all stimulants, and it tends to have more side effects, all of which is why we recommend starting most patients on methylphenidate instead.

PEDIATRIC FDA INDICATIONS:
ADHD (3–17 years for IR, 6–17 years for XR, 13–17 years for Mydayis); **narcolepsy** (6–17 years).

ADULT FDA INDICATIONS:
ADHD; narcolepsy.

OFF-LABEL USES:
Obesity; treatment-resistant depression.

DOSAGE FORMS:
- **Tablets (Adderall, [G]):** 5 mg, 7.5 mg, 10 mg, 12.5 mg, 15 mg, 20 mg, 30 mg.
- **ER capsules (Adderall XR, [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.

PEDIATRIC DOSAGE GUIDANCE:
- ADHD:
  - For IR and ER Adderall and its generic equivalent preparation. Initial dose should be 0.3 mg/kg/day, but shoot for a target dose of 1.0 mg/kg/day and maximum dose of 2 mg/kg/day.
  - IR (ages 3–5): Start 2.5 mg QAM, increase by 2.5 mg/day increments in weekly intervals, max 40 mg/day divided BID.
  - IR (ages 6–17): Start 5 mg QAM or BID, increase by 5 mg/day increments in weekly intervals, max 40 mg/day divided BID.
  - ER (ages 6–12): Start 5–10 mg QAM, increase by 5–10 mg/day increments weekly, 30 mg/day.
  - ER (ages 13–17): Start 10 mg QAM, increase by 10 mg/day increments weekly, max 40 mg/day QAM in adolescents.
  - Mydayis (adolescents 13–17 years): Start 12.5 mg QAM, increase in increments of 12.5 mg/day weekly, max 25 mg/day.
- Narcolepsy: Start 5 mg QAM (ages 6–11) or 10 mg QAM (ages 12–17), increase by 5 mg/day (ages 6–11) or 10 mg/day (ages 12–17) at weekly increments, max 60 mg/day.

MONITORING: Weight, height, BP/P; ECG.

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.

MECHANISM, PHARMACOKINETICS, AND DRUG INTERACTIONS:
- Stimulant that inhibits reuptake of dopamine and norepinephrine.
- Metabolized primarily through CYP2D6; t ½: 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.

EVIDENCE AND CLINICAL PEARLS:
- FDA approved with many studies and long history of clinical use supporting its efficacy and safety, with a larger treatment effect size than non-stimulant medications.
- 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 immediate-release beads and delayed-release beads that release drug at pH 5.5 and pH 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 FACTS:
Was briefly pulled from the market in Canada in 2005 because of cardiac concerns, and now counterfeit Adderall is a common vehicle for overdose and death due to adulteration with fentanyl or methamphetamine.

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