

# METHYLPHENIDATE ER (Concerta, Ritalin SR and LA, others) Fact Sheet [G]

## **BOTTOM LINE:**

There are many longer-acting methylphenidate preparations. Two good options are Concerta and Ritalin LA, available as generics.

## **PEDIATRIC FDA INDICATIONS:**

**ADHD** (6–17 years).

## **ADULT FDA INDICATIONS:**

ADHD; narcolepsy.

## **OFF-LABEL USES:**

Obesity; treatment-resistant depression.

## **DOSAGE FORMS** (more commonly used):

- Tablets
  - **SR tablets (Ritalin SR, Metadate ER, Methylin ER, [G]):** 10 mg, 20 mg.
  - **ER capsule osmotic release oral system (OROS) (Concerta, [G]):** 18 mg, 27 mg, 36 mg, 54 mg (22% IR/78% ER).
- Capsules
  - **Ritalin LA, [G]:** 10 mg, 20 mg, 30 mg, 40 mg, 60 mg (50% IR/50% ER).
  - **Metadate CD, [G]:** 10 mg, 20 mg, 30 mg, 40 mg, 50 mg, 60 mg (30% IR/70% ER).
  - **Aptensio XR:** 10 mg, 15 mg, 20 mg, 30 mg, 40 mg, 50 mg, 60 mg (40% IR/60% ER).
  - **Adhansia XR:** 25 mg, 35 mg, 45 mg, 55 mg, 70 mg, 85 mg (20% IR/80% ER)
  - **Jornay PM:** 20 mg, 40 mg, 60 mg, 80 mg, 100 mg (onset delayed 10 hours).
  - **ER oral suspension (Quillivant XR):** 25 mg/5 mL (20% IR/80% ER).
  - **ER chewable tablets (Quillichew ER):** 20 mg, 30 mg (scored), 40 mg (scored) (30% IR/70% ER).
  - **ER orally disintegrating tablets (Cotempla XR-ODT):** 8.6 mg, 17.3 mg, 25.9 mg (25% IR/75% ER).

## **PEDIATRIC DOSAGE GUIDANCE:**

- Intermediate-acting (Ritalin SR, Metadate ER, Methylin ER): Titrate to effective daily dose with IR, then switch to equivalent eight-hour SR or ER dose QAM–BID or start 10 mg QAM and increase by 10 mg/day increments weekly; max 60 mg/day.
- Long-acting (Aptensio XR, Metadate CD, Ritalin LA, Quillivant XR, Quillichew ER): Start 10–20 mg QAM; ↑ by 10 mg/day at weekly intervals; max 60 mg/day.
- Long-acting (Adhansia XR): Start 25 mg QAM; ↑ by 10–15 mg/day at weekly intervals; max 70 mg/day (children) and 85 mg/day (adults).
- Long-acting (Cotempla XR-ODT):
  - Start 17.3 mg QAM; ↑ by 8.6–17.3 mg/day at weekly intervals; max 51.8 mg/day.
  - 8.6 mg, 17.3 mg, 25.9 mg equivalent to 10 mg, 20 mg, 30 mg of other methylphenidate formulations, respectively.
- Long-acting (Concerta):
  - Start 18 mg QAM (ages 6–12) or 36 mg (ages 13–17) QAM; ↑ by 18 mg/day in weekly intervals to max 54 mg/day (ages 6–12) or 72 mg/day (ages 13–17).
  - If switching from different form of methylphenidate:
    - 10–15 mg/day: Use 18 mg QAM.
    - 20–30 mg/day: Use 36 mg QAM.
    - 30–45 mg/day: Use 54 mg QAM.
    - 40–60 mg/day: Use 72 mg QAM.
    - 27 mg dose is available for situations in which a dose between 18 mg and 36 mg is desired.
- Jornay PM: Start 20 mg daily in the evening and increase in increments of 20 mg/day up to maximum of 100 mg/day. Adjust timing between 6:30 and 9:30 p.m.

**COST:** \$\$; Aptensio XR, Cotempla XR-ODT, Concerta, Jornay PM, Quillivant XR, and Quillichew ER: \$\$\$\$

## **SIDE EFFECTS AND MECHANISM, MONITORING, PHARMACOKINETICS, AND DRUG INTERACTIONS:**

Weight, height, BP/P; ECG. See methylphenidate IR fact sheet.

## **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.
- ER capsules contain mixture of 30% IR and 70% ER beads. Aptensio XR, a new branded formulation of ER capsules, contains a mixture of 40% IR and 60% ER beads. Ritalin LA and its generic ER capsules are a combination of 50% IR and 50% DR beads. These products mimic BID dosing of IR. Cotempla delivers a mixture of 25% IR and 75% ER in an orally disintegrating extended-release formulation. Jornay PM is dosed in evening; if early-morning awakening occurs, dose earlier in evening.
- Concerta is based on the OROS osmotic delivery system (also used for Invega). 22% of the dose is immediate (with effects in one to two hours) and 78% is delayed. If you prescribe a generic, you may need to investigate carefully to ensure that the delivery system is an OROS pump system. To avoid insomnia, dosing should be completed by noon.