

# 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, both of which are now available generically.

## FDA Indications:

**ADHD** (adults and children  $\geq 6$  years); **narcolepsy**.

## Off-Label Uses:

Obesity; treatment-resistant depression.

## Dosage Forms (more commonly used):

### • Tablets

– **Ritalin SR, Metadate ER, Methylin ER, (G):** 10 mg, 20 mg.

### • Capsules

– **Concerta, Relexxii, (G):** 18 mg, 27 mg, 36 mg, 54 mg, 63 mg, 72 mg (22% IR/78% ER).

– **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).

• **Oral solution (Quillivant XR):** 25 mg/5 mL (20% IR/80% ER).

• **Chewable tablets (Quillichew ER):** 20 mg, 30 mg (scored), 40 mg (scored) (30% IR/70% ER).

• **Orally disintegrating tablets (Cotempla XR-ODT):** 8.6 mg, 17.3 mg, 25.9 mg (25% IR/75% ER).

## 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.

• Long-acting (Aptensio XR, Metadate CD, Ritalin LA, Quillivant XR, Quillichew ER):

– Start 10–20 mg QAM,  $\uparrow$  by 10–20 mg/day at weekly intervals; max 60 mg/day.

• Long-acting (Adhansia XR):

– Start 25 mg QAM,  $\uparrow$  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,  $\uparrow$  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, Relexxii):

– Start 18–36 mg QAM,  $\uparrow$  by 18 mg/day at weekly intervals; max 72 mg/day.

– Children  $\geq 6$  years: Start 18 mg QAM,  $\uparrow$  by 18 mg/day in weekly intervals to max 54 mg/day (ages 6–12) or 72 mg/day (age 13+).

• Jornay PM:

– Start 20 mg daily in the evening and increase by 20 mg/day up to maximum of 100 mg/day. Adjust timing between 6:30 and 9:30 p.m.

• Narcolepsy: Start 10–20 mg ER QAM,  $\uparrow$  by 10 mg/day at weekly intervals; max 60 mg/day.

**Monitoring:** ECG if history of cardiac disease.

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

## Side Effects and Mechanism, Pharmacokinetics, and Drug Interactions:

See methylphenidate IR fact sheet.

## Clinical Pearls:

• **ER capsules** contain a mixture of 30% IR and 70% ER beads. **Aptensio XR** contains a mixture of 40% IR and 60% ER beads, whereas **Adhansia XR** contains 20% IR and 80% ER. **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 XR-ODT** delivers a mixture of 25% IR and 75% ER in an orally disintegrating extended-release formulation. **Jornay PM** is dosed in the 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.