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# CLONIDINE (Catapres, Kapvay) Fact Sheet [G]

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## **BOTTOM LINE:**

Clonidine is a good option in kids with ADHD who also have tics, who experience excessive anxiety or insomnia on stimulants, or in whom substance misuse is a concern. Its delayed onset of effect (two to four weeks) and lower efficacy rates make it a second-line choice for ADHD generally; however, it can also be used as an add-on to stimulant medication. Commonly used off label for anxiety and insomnia, but efficacy data are limited.

## **PEDIATRIC FDA INDICATIONS:**

**ADHD** (6–17 years [ER formulation only]).

## **ADULT FDA INDICATIONS:**

Hypertension.

## **OFF-LABEL USES:**

ADHD (IR); insomnia; anxiety; PTSD; opioid withdrawal; autism; ODD; Tourette's and motor tics; migraine prophylaxis; aggression.

## **DOSAGE FORMS:**

- **IR tablets (Catapres, [G]):** 0.1 mg, 0.2 mg, 0.3 mg.
- **ER tablets (Kapvay, [G]):** 0.1 mg, 0.2 mg.
- **Patch (Catapres-TTS, [G]):** 0.1 mg/day, 0.2 mg/day, 0.3 mg/day.

## **PEDIATRIC DOSAGE GUIDANCE:**

- **ADHD or anxiety:**
  - ER: 0.1 mg QHS; increase by 0.1 mg/day weekly and give divided BID; max 0.4 mg QD.
  - IR: 0.05 mg QHS; increase by 0.05 mg/day increments every three to seven days; max 0.2 mg/day for 27–40.5 kg, 0.3 mg/day for 40.5–45 kg, or 0.4 mg/day for >45 kg; doses may be divided up to QID dosing.
- **Insomnia:** Start 0.05 mg IR QHS, titrate if needed by 0.05 mg (<45 kg) or 0.1 mg (>45 kg) increments every three to seven days; max 0.4 mg nightly, though most will respond to doses ≤0.2 mg at bedtime.

## **MONITORING:** BP.

## **COST:** \$

## **SIDE EFFECTS:**

- Most common: Somnolence, fatigue, dizziness, headache.
- Serious but rare: Hypotension, syncope, orthostasis.

## **MECHANISM, PHARMACOKINETICS, AND DRUG INTERACTIONS:**

- Centrally acting alpha-2 adrenergic agonist.
- Metabolized primary through CYP2D6;  $t_{1/2}$ : 12–16 hours.
- Avoid use with MAOIs. Additive effects with other antihypertensives. Caution with 2D6 inhibitors (eg, paroxetine, fluoxetine, duloxetine).

## **EVIDENCE AND CLINICAL PEARLS:**

- Studies support the use of clonidine to decrease residual hyperactivity, impulsivity, and aggression in ADHD.
- Several small limited (chart review, case series, descriptive, or retrospective) studies have supported the efficacy of clonidine as a sleep aid in autistic kids as well as children with and without ADHD, developmental delays, and genetic syndromes; however, a small systematic chart review showed significant subjective improvement in sleep in children, but only a nonsignificant trend for improvement of sleep in adolescents.
- Avoid abrupt discontinuation because of potential risk for rebound hypertension. When discontinuing, taper in no more than 0.1 mg/day decrements every three to seven days to reduce the risk of rebound hypertension. If a child misses two or more consecutive doses, consider repeating titration.
- Although a few studies support use of the patch for treating tic disorders, the patch formulation is not typically used except for treating hypertension because its effects on BP may be prolonged and continue even after patch removal.
- Many child psychiatrists prefer clonidine as an agent for sleep, but little empirical evidence exists to support this use. Still, anecdotal clinical experience suggests clonidine is generally safe and effective for insomnia, particularly in kids with ADHD.
- Generally more sedating than guanfacine.

## **FUN FACT:**

In the early 1960s, Boehringer Ingelheim wished to synthesize a peripherally active adrenergic drug for nasal decongestion as nose drops. After administering the potential compound to a secretary, she fell asleep for 24 hours, developing low blood pressure, low pulse, and dry mouth. This compound was subsequently developed as clonidine for treating hypertension.