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# CHLORPROMAZINE (Thorazine) Fact Sheet [G]

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## **BOTTOM LINE:**

Not commonly used in children, but may be considered in those with severe behavioral disturbances who may benefit from sedation.

## **PEDIATRIC FDA INDICATIONS:**

**Severe behavioral problems** (6 months–17 years); **excessive motor activity and impulsivity.**

## **ADULT FDA INDICATIONS:**

Psychosis; mania; nausea and vomiting; intractable hiccups.

## **OFF-LABEL USES:**

Bipolar disorder; impulse control disorders.

## **DOSAGE FORMS:**

- **Tablets (G):** 10 mg, 25 mg, 50 mg, 100 mg, 200 mg.
- **Oral concentrate (G):** 30 mg/mL, 100 mg/mL.
- **Injectable (G):** 25 mg/mL.

## **PEDIATRIC DOSAGE GUIDANCE:**

Start 0.5 mg/kg Q4–6 hours PRN (eg, 20-kg or 45-lb child, use 10 mg Q4–6 hours PRN). In more severe patients, doses may range up to 50–100 mg/day or 200 mg/day in older children.

**MONITORING:** BP/P; ECG in patients at risk; prolactin in patients with symptoms, weight, waist circumference, lipids, glucose, abnormal movements.

**COST:** \$\$–\$\$\$\$ (depending on dose); oral concentrate: \$\$\$\$

## **SIDE EFFECTS:**

- Most common: Sedation, orthostasis, tachycardia, drowsiness, dry mouth, constipation, blurred vision, prolactin elevation (sexual side effects, amenorrhea, galactorrhea), EPS, weight gain.
- Serious but rare: Skin pigmentation and ocular changes (both dose related); jaundice.

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

- Dopamine D2 receptor antagonist.
- Metabolized primarily by CYP2D6, also 1A2 and 3A4. Patients who are poor metabolizers of CYP2D6 metabolize the drug more slowly; may have increased effects; t<sub>1/2</sub>: 23–37 hours.
- CYP2D6 inhibitors (eg, fluoxetine, paroxetine, duloxetine, quinidine) may increase chlorpromazine levels.

## **EVIDENCE AND CLINICAL PEARLS:**

- Although used in children (especially autistic and other neurodiverse kids and teens) for many years, data supporting its use are minimal and side effects may be significant.
- While chlorpromazine is approved for treating children with excessive motor activity and impulsivity (symptoms consistent with ADHD), stimulants were found to be more effective than antipsychotics in studies comparing the two.
- Chlorpromazine is a low-potency conventional (first-generation) antipsychotic; this leads to less EPS compared to high-potency agents (eg, haloperidol, fluphenazine) and to more anticholinergic side effects compared to mid- and high-potency agents (eg, perphenazine and haloperidol, respectively).
- Extremely sedating agent and often used for this effect. Dosing limited by orthostasis and sedation.

## **FUN FACT:**

Thorazine was developed by a French surgeon in 1948 to induce relaxation and indifference in surgical patients.