



Bonus Monographs



Pyridostigmine bromide

(peer-id-oh-STIG-meen)

PREGNANCY CATEGORY: C CLASSIFICATION(S):

Cholinesterase inhibitor, indirectly-acting

Rx: Mestinon, Regonol, Regonol

★**Rx:** Mestinon-SR

FOR ALL INFORMATION, SEE ALSO NEOSTIGMINE.

ACTION/KINETICS

Has a slower onset, longer duration of action, and fewer side effects than neostigmine. **Onset, PO:** 30–45 min for syrup and tablets and 30–60 min for extended-release tablets; **IM:** 15 min; **IV:** 2–5 min. **Duration, PO:** 3–6 hr for syrup and tablets and 6–12 hr for extended-release tablets; **IM, IV:** 2–4 hr. Poorly absorbed from the GI tract; excreted in urine up to 72 hr after administration.

USES

(1) Myasthenia gravis. (2) Antidote for nondepolarizing muscle relaxants (e.g., tubocurarine).

ADDITIONAL CONTRAINDICATIONS

Sensitivity to bromides.

SPECIAL CONCERNS

Safe use during pregnancy and during lactation has not been established. May cause uterine irritability and premature labor if given IV to pregnant women near term. Duration of action may be increased in the elderly.

ADDITIONAL SIDE EFFECTS

Skin rash. Thrombophlebitis after IV use.

OD OVERDOSE MANAGEMENT

Symptoms: Abdominal cramps, vomiting, diarrhea, epigastric distress, excessive salivation, cold sweating, pallor, blurred vision, urinary urgency, fasciculation and **paralysis of voluntary muscles** (including the tongue), miosis, increased BP (may be accompanied by bradycardia), sensation of internal trembling, panic, severe anxiety. **Treatment:** Discontinue medication temporarily. Give atropine, 0.5–1 mg IV (up to 5–10 mg or more may be needed to get HR to 80 beats/min). Supportive treatment including artificial respiration and oxygen.

HOW SUPPLIED

Injection: 5 mg/mL; **Syrup:** 60 mg/5 mL; **Tablet:** 60 mg; **Tablet, Extended-Release:** 180 mg

DOSAGE

• SYRUP, TABLETS

Myasthenia gravis.

Adults: 60–120 mg q 3–4 hr with dosage adjusted to client response. **Maintenance:** 600 mg/day (range: 60 mg–1.5 g). **Pediatric:** 7 mg/kg (200 mg/m²) daily in five to six divided doses.

• TABLETS, EXTENDED-RELEASE

Myasthenia gravis.

Adults: 180–540 mg 1–2 times/day with at least 6 hr between doses. Extended-release tablets not recommended for use in children.

• IM, IV

Myasthenia gravis.

Adults, IM, IV: 2 mg (about 1/30 the adult dose) q 2–3 hr.

2 PYRIDOSTIGMINE BROMIDE

Neonates of myasthenic mothers.

IM: 0.05–0.15 mg/kg q 4–6 hr.

Antidote for nondepolarizing drugs.

Adults, IV: 10–20 mg with 0.6–1.2 mg atropine sulfate given IV.

NURSING CONSIDERATIONS

SEE ALSO **NURSING CONSIDERATIONS FOR NEOSTIGMINE.**

ADMINISTRATION/STORAGE

1. During dosage adjustment, administer in a closely monitored environment.

IV 2. Parenteral dosage is $\frac{1}{30}$ of the PO dose. May give undiluted at a rate of 0.5 mg IV over 1 min for myasthenia and at a rate of 5 mg IV over 1 min (with atropine) for reversal of nondepolarizing drug effects.

ASSESSMENT

1. Note onset and characteristics of condition being treated. Monitor VS and observe for toxic reactions demonstrated by generalized cholinergic stimulation.

2. Assess for muscular weakness, cramps, or muscle quivering; may signal impending myasthenic crisis and cholinergic overdose.

3. Determine the best individualized administration schedule according to client's routines and life-style.

CLIENT/FAMILY TEACHING

1. Myasthenia is an autoimmune disease with an unclear etiology. Medications correct acetylcholine and cholinesterase imbalance at myoneural junction, which facilitates muscle contraction.

2. Do not crush and do not take extended-release tablets more often than q 6 hr; may be taken with conventional tablets, if prescribed.

3. With rest, muscle weakness and fatigue are temporarily resolved.

4. Rest and report symptoms of rash, toxic reaction and myasthenic crisis.

5. Take medication as prescribed, since too early administration may result in cholinergic crisis whereas too late administration may result in myasthenic crisis.

6. Drug resistance may develop; close medical supervision and prompt reporting of all side effects is paramount.

7. Identify local support groups that may assist to understand and cope with this disorder.

OUTCOMES/EVALUATE

- Improvement in muscle strength/function
- Reversal of nondepolarizing drugs