# REGIONAL ADULT PARENTERAL DRUG MONOGRAPH

GENERIC NAME
**pralidoxime**

| **Effective Date:** Mar12-2014<br>**Revised Date:** January 2025 | CLASSIFICATION<br>**Anticholinesterase antagonist** | OTHER NAMES<br>**Protopam** | PAGE<br>1 of 3 |
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**ADMINISTRATION POLICY:**

IV Bolus – **May be administered by a nurse experienced in ED/Cardiac Room/ICU**
IM Injection – **May be administered by a nurse experienced in ED/Cardiac Room/ICU**
IV Infusion – **May be administered by a nurse experienced in ED/Cardiac Room/ICU**
Subcutaneous – **May be administered by a nurse experienced in ED/Cardiac Room/ICU**

**RECONSTITUTION/DILUTION/ADMINISTRATION:**

**Available as:** 1 gram vial

| Strength | Volume of sterile water for injection* | Final concentration | Final volume |
|---|---|---|---|
| 1gram | 20 mL | 50 mg/mL | 20 mL |

**IV bolus:** Administer undiluted over at least 5 minutes (maximum 200 mg/minute)

**IV intermittent:** (*preferred*) Administer over 30 minutes

| Dose | Dose Preferred Diluent Volumes Bag size<br>NaCl 0.9% or D5W |
|---|---|
| ordered | 100mL |

**IV Infusion:** Add 1000 mg (20 mL of 50 mg/mL) in 50 mL normal saline bag.
Final volume: 70 mL Final concentration: 14.3 mg/mL

**IM/Subcut:** Administer undiluted.

| Strength | Volume of sterile water for injection* | Final concentration | Final volume |
|---|---|---|---|
| 1gram | 3.3 mL | 300 mg/mL | 3.3 mL |

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**DOSAGE:**

**Intravenous:** IV administration preferred to IM

Anticholinesterase overdose: 1 to 2 g IV followed by increments of 250 mg IV every 5 minutes as needed.

Organophosphate poisoning: Load: 30 mg/kg IV up to 2 g

Maintenance: IV infusion at 8 to 10 mg/kg/hour (maximum 650 mg/hour) OR repeat loading dose within 1 to 2 hours then every 4 to 6 hours as needed

**IM/Subcutaneous**: IM Preferred to subcutaneous administration

Organophosphate poisoning: 600 mg. Repeat dose based on severity of symptoms:

Mild symptoms: every 15 minutes up to maximum of 1,800 mg or in rapid succession if severe symptoms develop

Severe symptoms: repeat twice in rapid succession to delivery total dose of 1,800 mg

Persistent symptoms: Repeat entire series of 1,800 mg beginning about 1 hour after administration of last injection.

**Maximum single dose:** 2 grams

**Maximum daily dose:** 12 grams

| | | |
|---|---|---|
| **Maximum rate:** | IV bolus/IV intermittent: | 200 mg/minute |
| | IV infusion: | 650 mg/hour |
| **Maximum concentration:** | IV bolus/IV intermittent: | 50 mg/mL |
| | IV continuous: | 20mg/mL |
| | IM/subcut: | 300 mg/mL |

**STABILITY/COMPATIBILITY:**

**Stability of reconstituted solution:** Use immediately

**Stability of Final Admixture:** Use immediately

**Compatibility:** Compatible with normal saline

**PRECAUTIONS, POTENTIAL ADVERSE REACTIONS:**

- Although it is difficult to differentiate the side effects of pralidoxime administration from those of concomitant atropine or the insecticide itself, the following have been reported from large doses in normal volunteers:
- Dizziness, drowsiness, headache
- Blurred vision, diplopia, impaired accommodation
- Nausea
- Tachycardia, laryngospasm, muscle rigidity, and transient neuromuscular blockade with rapid IV injection
- Mild pain at injection site with IM injection

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**ADDITIONAL NOTES AND NURSING CONSIDERATIONS:**

- Required monitoring
  - Reversal of symptoms of toxic exposure to organophosphate pesticides and chemicals (e.g. muscle fasciculations, weakness, paralysis, tachycardia, hypertension)
  - Continuous Cardiac
  - Temperature, blood pressure, heart rate, respiratory rate and oxygen saturation at baseline and as clinically indicated
- Pralidoxime for organophosphate poisoning must be administered with concurrent atropine in order to prevent worsening symptoms due to transient oxime-induced acetylcholinesterase inhibition.
- Treatment is most effective if given within a few hours after poisoning
- Concomitant atropine use is needed in most cases of organophosphate poisoning
- Therapeutic endpoint: control of muscle fasciculations, paralysis, respiratory failure
- Reduce dose in renal insufficiency; however, no dosing guidelines are available
- Use with caution in patients with myasthenia gravis who are receiving anticholinesterase agents