

ATROPINE SULFATE

Classification: Parasympathetic blocker

Actions:

1. Inhibits parasympathetic stimulation by blocking acetylcholine at the muscarinic receptors.
2. Decreases vagal tone resulting in increased heart rate at the AV conduction.
3. Dilates bronchioles and decreases respiratory tract secretions.
4. Decreases gastrointestinal secretions.

Indications:

1. Bradycardia
2. Organophosphate poisoning
3. Exposure to nerve agents

Contraindications: **None significant in the above indications.**

Adverse Effects:

Neurological

Restlessness
Seizures
Pupillary dilation
Blurred vision
Dizziness
Confusion

Other

Hot, dry skin
Worsens glaucoma

Cardiovascular

Tachycardia
Greater oxygen demand

Respiratory

Mucous plugs

Gastrointestinal

Dry mouth
Difficulty swallowing

Administration:

ADULT DOSE

1. **Bradycardia:** 0.5 mg IVP, repeat every 3-5 minutes, not to exceed 3 mg
2. **Organophosphate poisoning:** 2 mg IV/IO/IM, repeat as needed, per physician order

PEDIATRIC DOSE

Remember that Epi. 1:10,000 IVP/IO is the recommended initial medication for the pediatric patient with bradycardia.

1. **Base Order for Symptomatic Bradycardia:** 0.02 mg/kg IV/IO, minimum dose of 0.1 mg and a maximum dose of 0.5 mg, may repeat once in 3-5 minutes, not to exceed 1 mg
2. **Organophosphate poisoning:** 0.05 – 0.1 mg/kg IV/IO/IM, repeat every 5-15 min, per physician order

Onset: 2-5 minutes

Duration: 20 minutes

ATROPINE SULFATE - continued**Notes:**

- See Weapons of Mass Destruction Guidelines for complete instructions for nerve agent exposure.
- **OPTIONAL- Use for agencies carrying the MARK 1 kits**
Exposure to nerve Agents: (self-administration)
 - a. Mild Signs: MARK I auto-injector antidote kit, 1 dose initially, may repeat once in 10 minutes, not to exceed 2 doses
 - b. Moderate Signs: MARK I auto-injector antidote kit, 1 dose initially, may repeat once in 10 minutes, not to exceed 2 doses
 - c. Severe Signs: MARK I auto-injector antidote kit, 3 doses initially
- Place patient on oxygen and cardiac monitor during administration, as Atropine increases oxygen demands by increasing the heart rate.
- Use with caution in a patient with suspected myocardial ischemia
- The acronym “SLUDGE” is used to represent the various signs/symptoms of an organophosphate poisoning. These signs/symptoms include increased salivation, lacrimation, urination, defecation, gastrointestinal cramping, and emesis. Some common organophosphates include bug bombs, roach/ant sprays, flea and tick collars, and common garden sprays. Atropine is the medication of choice in this situation since it prevents the over-stimulation of the muscarinic receptors.