

ATROPINE

Drug Classification: Anticholinergic

BACKGROUND

Pharmacodynamics

Atropine competes reversibly with acetylcholine at the site of the muscarinic receptor. Receptors affected, in order from the most sensitive to the least sensitive, include salivary, bronchial, sweat glands, eye, heart, and GI tract.

Indications

- For bradyarrhythmias (electrical activity less than 60 beats/minute) of supraventricular origin, accompanied by significant hypotension, PVCs or lightheadedness.
- Organophosphate poisoning or nerve agent exposure.
- Drug Facilitated Airway Management (DFAM) to control secretions.
- Drug Facilitated Airway Management (DFAM) pre-treatment to prevent bradycardia in children.

Contraindications

- None in the emergency setting.

Cautions

- Acute MI, myasthenia gravis, GI obstruction, glaucoma.
- Will not be effective for second-degree type II and third degree AV blocks.
- Avoid administration of this medication in hypothermic bradycardia.
- Do not give less than 0.1 mg in pediatric patients as this may cause paradoxical bradycardia.

DOSAGE and ADMINISTRATION

ADULT	PEDIATRICS (less than 60 kg)
<p><u>Symptomatic bradycardia</u></p> <p>1. If <u>NOT</u> 3rd degree heart block, administer 0.5 to 1 mg IV/IO push every 3 to 5 minutes as needed to a maximum total dose of 3 mg.</p> <p><u>For beta-blocker overdose</u>³ (e.g., Atenolol, Metoprolol, Propranolol)</p> <p>1. Administer atropine 1 mg IV/IO every 10 minutes as needed for symptomatic bradycardia</p>	<p><u>Symptomatic bradycardia</u></p> <p>1. If epinephrine is ineffective, give 0.02 mg/kg IV/IO push. The dose may be repeated once after 3 to 5 minutes.</p> <p><u>For beta-blocker overdose</u>³ (e.g., Atenolol, Metoprolol, Propranolol)</p> <p>1. Administer atropine 0.01 mg/kg (minimum dose 0.1 mg, maximum dose 1 mg) every 10</p>

HEALTHEAST MEDICAL TRANSPORTATION
MEDICAL OPERATIONS MANUAL

ADULT	PEDIATRICS (less than 60 kg)
<p><u>Organophosphate/carbamate poisoning</u></p> <ol style="list-style-type: none"> Administer 1 to 5 mg IV/IO/IM until drying of secretions, pupil dilatation, or stabilization of cardiac arrhythmias occurs. <p><u>Drug Facilitated Airway Management (DFAM)</u></p> <ol style="list-style-type: none"> Administer 1 mg IV/IO, if excessive respiratory secretions. 	<p>minutes as needed for symptomatic bradycardia.</p> <p><u>Organophosphate/carbamate poisoning</u></p> <ol style="list-style-type: none"> Administer 0.05 mg/kg (minimum dose 0.1mg) IV/IO/IM every 5 minutes until drying of secretions, pupil dilatation, or stabilization of cardiac arrhythmias occurs. <p><u>Drug Facilitated Airway Management (DFAM)</u></p> <ol style="list-style-type: none"> Administer 0.01 mg/kg (minimum dose 0.1 mg, maximum dose 0.5 mg) IV/IO to prevent bradycardia and control excessive respiratory secretions.

ADVERSE REACTIONS/SIDE EFFECTS

- Adverse effects following single or repeated injections of this medication are most often the result of excessive dosage. These effects include: palpitations, dilated pupils, difficulty swallowing, hot/dry skin, dizziness, restlessness, tremors, fatigue, and ataxia.

NOTES

REFERENCE GUIDELINE:

2G Bradycardia/Heart Block

5D Toxic Exposure