

Atropine

Classification

Anticholinergic

Antimuscarinic

Indications

- ACP: Restoration of heart rate in bradycardia
- ACP: Sinus bradycardia (rate < 50/minute) with hemodynamic compromise
- ACP: Bradycardia secondary to atrioventricular nodal blocks
- ACP: Treatment of organophosphate poisoning
- ACP: Control of secretions in palliative care (requires additional endorsement)

Contraindications

- Hypersensitive to atropine or other anticholinergics
- Tachycardia
- Narrow-angle glaucoma
- Thyrotoxicosis
- Prostatic hypertrophy
- Myasthenia gravis

Adult dosages

Atropine must be given in the correct dose, and must be given quickly: underdosing, or slow administration, may cause paradoxical slowing of the heart rate.

- ACP: Bradycardia
 - 0.6 mg IV push to maximum dose of 0.04 mg/kg (~3 mg in most patients)
- ACP: Organophosphate toxicity
 - Mandatory: Contact ClinCall to discuss treatment plan
 - 1-2 mg IM/IV, repeated every 5-60 minutes until symptoms resolve
- ACP: Secretion control in palliative care
 - 0.6 mg IM

Pediatric Considerations And Dosing

Atropine must be given in the correct dose, and must be given quickly: underdosing, or slow administration, may cause paradoxical slowing of the heart rate.

[Follow weight-based dosing.](#)

- ACP: Bradycardia
 - 0.02 mg/kg IV push. Minimum dose is 0.1 mg. Maximum dose of 0.04 mg/kg.
- ACP: Organophosphate toxicity
 - Mandatory: Contact ClinCall to discuss treatment plan.
 - 0.02-0.05 mg IV every 10-20 minutes until atropine effects are seen

Mechanism Of Action

Atropine competitively antagonizes acetylcholine at muscarinic receptors, producing parasympatholytic and vagolytic effects.

Pharmacokinetics

Following intravenous administration:

- Onset: 2-4 minutes
- Peak: 2-4 minutes
- Half-life: 13-40 hours
- Duration: 4-6 hours

Adverse Effects

Common adverse effects include tachycardia, dry mouth, headaches, blurred vision, and dysphagia.

Overdose

Signs and symptoms of overdose are similar to adverse effects.

Warning And Precautions

Atropine produces pupillary dilation. Assessment of pupils may be unreliable.

