

# ATROPINE SULFATE

## **ACTION: Anticholinergic (Vagolytic)**

- Blocks acetylcholine receptors resulting in reduction of parasympathetic tone and increased conduction through the AV node.
- Increases sinus node automaticity and AV conduction when suppressed by abnormal parasympathetic or vagal discharges.
- Antagonizes action of organophosphate agents.

## **INDICATIONS:**

- Symptomatic bradycardia.
- Organophosphate or carbamate insecticide or nerve agent exposure.

## **CONTRAINDICATIONS:**

- Atrial fibrillation or atrial flutter
- Glaucoma

## **POTENTIAL SIDE EFFECTS:**

- Increase heart rate causing tachycardias.
- Post-atropine tachycardias can precipitate V-Fib or V-Tach.
- Can worsen patient's ischemia or extend size of infarct.
- Dry mouth.
- Doses lower than 0.5 mg can produce slowing of the heart.
- Dilated pupils.
- Decreased salivation.
- Flushed, hot skin.

## **ADULT DOSE/ROUTE:**

- ⇒ **Symptomatic Bradycardia:** 0.5mg IVP or IO. May repeat every 5min up to 3 mg if no resolution of bradycardia.
- ⇒ **Organophosphate Poisoning/Nerve agent Exposure:** 2 – 5mg IVP or IO. May repeat in 5 minutes. No max dose.

## **PEDIATRIC DOSE/ROUTE:**

- ⇒ **Symptomatic Bradycardia:** 0.02 mg/kg IVP or IO (min dose 0.1mg, max dose 0.5mg)
- ⇒ **Organophosphate Poisoning:** 0.02 mg/kg IVP or IO (min dose 0.1mg, no max dose)

## **NOTES:**

- External pacing is the treatment of choice for symptomatic bradycardia if there is suspected myocardial ischemia, or 2<sup>nd</sup> or 3<sup>rd</sup> degree AV blocks are present.
- Can be given IM in thigh for suspected organophosphate poisoning /nerve agent exposure.
- Note: the primary cause of bradycardia in pediatric patients is hypoxia.

**Atropine is no longer recommended for adult or pediatric asystole.**

*Effective: 11/01/17  
Supersedes: 03/01/15*