



## EMS System for Metropolitan Oklahoma City and Tulsa 2022 Medical Control Board Treatment Protocols



Approved 9/8/21, Effective 1/17/22, replaces all prior versions

### 16F – ATROPINE SULFATE

#### PARAMEDIC

**Class:** Parasympatholytic

**Actions/Pharmacodynamics:** Blocks parasympathetic impulses to the heart via the vagus nerve. Atropine increases the rate of cardiac sinoatrial (SA) node discharges, enhances conduction through the atrioventricular (AV) node, and by increasing heart rate, increases the cardiac output and blood pressure. Additionally, in the treatment of indicated poisonings (organophosphates) atropine reverses muscarinic effects of acetylcholine, including diaphoresis, diarrhea, urination, bronchorrhea (secretions from the lower respiratory tract), emesis, lacrimation (tearing), and salivation. Atropine produces dilation of pupils by blocking stimulation of the ciliary muscle surrounding the pupils.

**Indications:** Bradycardia (5D)  
Poisonings – General Management (Organophosphate) (8A)

**Contraindications:** None absolute in indicated situations.

**Pharmacokinetics:** Typical onset within 60 seconds given IV. Effects can persist in excess of 1 hour.

**Side Effects:** Tachycardia (either supraventricular or ventricular), hypertension, palpitations, blurred vision due to pupillary dilation, photophobia, dry mouth.

**Adult organophosphate poisoning:** 2 mg IVP/IOP/IM. Use IVP for more severe presentations. May repeat as often as every 3-5 minutes if symptoms progressive or persistent.

**Dosage:** **Bradycardia – Symptomatic & Systolic BP < 100 mmHg (Sinus, First Degree, 2nd Degree Type I) - Adult (5D)**  
In Non-Acute Coronary Syndrome, 0.5 mg IVP/IOP.  
May repeat every 5 minutes to cumulative maximum dose of 3 mg

**Bradycardia - Symptomatic & Systolic BP < 70 + (2 x age in years) mmHg (Sinus, First Degree, 2nd Degree Type I) - Pediatric (5D)**  
Unresponsive to Epinephrine, 0.02 mg/kg IVP/IOP; minimum dose 0.1 mg  
Max. single dose 0.5 mg  
May repeat once.

**Poisonings – General Management (Organophosphate) – Adult (8A)**  
2 mg IVP/IOP/IM. Use IVP for more severe presentation.  
Repeat every 3-5 minutes if symptoms progressive.



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### **PROTOCOL 16F: Atropine Sulfate, cont.**

#### **Dosage, cont:**

#### **Poisonings – General Management (Organophosphate) – Pediatric (8A)**

0.05 mg/kg IVP/IOP/IM. Use IVP for more severe presentation.

Minimum dose 0.1 mg.

Consult with OLMCP for repeat dosing needs.

#### **How Supplied:**

1 mg/10 mL prefilled syringe

1 mg/1 mL vial

0.25 mg/5 mL prefilled syringe for pediatric use

(Always check concentration and dose per container at time of patient medication administration)