

CARDIAC DRUGS	Epinephrine 1: 10,000 Cardiac stimulator Vasoconstrictor Sympathetic nervous system	Vasopressin Cardiac stimulator Vasoconstrictor Maintains mineral and fluid balance	Atropine Sulfate Antiarrhythmic Anti-cholinergic	Amiodarone Antiarrhythmic Sympatholytic nervous System	Lidocaine Antiarrhythmic
Type of Drug	-Bronchodilator - Non-specific adrenergic agonist - Vasopressor	- Pituitary hormone - ADH (antidiuretic hormone)	-Antidysrhythmic -Anticholinergic (Parasympatholytic)	Antidysrhythmic	Antidysrhythmic
MOA	- Alpha & Beta agonist adrenergic receptors: - <u>Alpha 1</u> : peripheral vasoconstriction - <u>Beta 1</u> : increases inotropic, chronotropic & dromotropic - <u>Beta 2</u> : bronchodilation - Inhibits mass cell degranulation	- In high doses it acts as a non-adrenergic peripheral vasoconstrictor - When given during CPR it increases coronary perfusion pressure and vital organ blood flow, decreases defibrillation threshold -promotes reabsorption of water by action on renal tubular epithelium	- Blocks acetylcholine at postganglionic receptor sites in smooth muscle, secretory glands, CNS, SA, AV, cardiac muscle - No effect on its own. - <u>Low doses</u> : ↓ sweating, salivation, resp.secret,bronchodilation - <u>Interm doses</u> : ↑ HR, inotropy, chronotropy,pupil dilation, loss visual - <u>Lg doses</u> : ↓ GI secretions, GI+GU tract motility	- prolongs duration of action and effective refractory period - non competitive Alpha and Beta adrenergic blocker - ↑ PR and QT intervals - ↓ sinus rate - ↓ peripheral vascular resistance	- Suppresses automaticity, excitability & spontaneous depolarization of ventricles
Onset Duration	< 1 min / unknown	< 2 mines / 10-20 min	Rapid / 2-6 hours	10 min / up to 24 hrs ½ life up to 120 days	< 3 min peak 5-7 min 1.5 – 2 hours ½ life 10-20 min
Indications	1:10,000 - Cardiac Arrest: - Asystole - PEA - V-Fib - Pulseless V-Tach (>100 bpm) - Symptomatic Bradycardia (<60)	Cardiac Arrest: - Asystole - PEA - V-Fib - Pulseless V-Tach (>100 bpm)	- Cardiac arrest: - Asystole - Bradycardia PEA (< 60 bpm) - Symptomatic Bradycardia (< 60 bpm) - Organophosphate poisoning - Nerve agent poisoning - Usually ineffective for high degree 2 nd and 3 rd degree blocks	- Cardiac arrest: - V-Fib - Pulseless V-Tach (>100) - Supraventricular Tach (>150) - Atrial fibrillation	- Cardiac arrest: - V-Fib - Pulseless V-Tach (>100 bpm) - V-Tach with a pulse (>100 bpm) - Malignant PVC's (ensure HR>60 + BP>90 systolic)
Contra-indications	None in Emergency setting	None in Emergency setting	None in Emergency setting	- Bradycardia < 60 - 2 nd & 3 rd degree blocks - neonates - infants	- Bradycardia < 60 - 2 nd & 3 rd degree blocks - hypersensitivity - systolic < 90 - Supraventricular dysrhythmias
Precautions	With a pulse: - Cardiovascular disease - Hypertension - Tachydysrhythmias - Hyperthyroidism - Diabetes - Pregnancy	None in Emergency setting	- Small doses can cause paradoxical bradycardia - CHF - HYPER tension - 3 rd degree blocks	- CHF - severe hepatic - respiratory disease - children -1/2 life 15-100 days	- CHF - severe hepatic - respiratory disease - elderly
Route/ Dosage	IV / IO Cardiac arrest: 1 mg q 3-5 min Bradycardia: 2-10 mcg/min (as a drip medication only)	IV / IO 40 Units one time only After 10 minutes if no response, admin Epi 1:10,000 1mg q 3-5 min	IV / IO Asystole/PEA: 1 mg q 3-5 max 3 mg Bradycardia: 0.5-1mg q 3-5 min max 3 mg Poisoning: 1-2 mg q 5-60 prn	IV / IO Cardiac Arrest 300 mg IV bolus repeat 150 mg in 3-5 min If converted: 1 mg/min IV drip Tachycardia: 150 mg over 10 min repeat 10 min prn	IV / IO Pulseless V-tach/V-Fib: 1 -1.5 mg/kg q 5-8 min max 3mg/kg V-tach w/ pulse/ PVC's: 1 -1.5 mg/kg q 5-8 min max 3mg/kg (if pt. > 70 w/CHF or hepatic failure, decrease 2 nd dose to ¼ of 1 st dose) Post conversion:1-4 mg/min IV drip
Adverse Reactions and Side effects	- cerebral hemorrhage - tremors - anxiety - dizziness - palpitations, tachycardia - nausea and vomiting - dyspnea	unknown	- tachycardia - paradoxical slowing in 3 rd degree blocks - dehydration - elevated temperature - pupil dilation	- sinus arrest - CHF - hypotension - bradycardia - dysrhythmias - SA node dysfunction - respiratory distress syndrome	- convulsions - heart block - cardiac arrest - respiratory depression -tinnitus (ringing in ears)
How supplied	1:10,000 1 mg/10ML preload	Vial, 20 units/1 mL	0.1 mg/mL in 10 ML preload 0.1 mg/mL ampule	150 mg in 3 ML ampule (50mg/ML) same for preload	10 mg/mL in 10 mL preload (2%) 100 mg/mL in 10 mL preload (20%)