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# Emergency Medical Programs

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**Common Drugs - Indications & Administration**

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**ACTIVATED CHARCOAL**

**INDICATIONS:**

- Used to treat certain types of poisonings and overdoses

**ADMINISTRATION:**

- Administered PO

**DOSAGE**

**ADULT:**

- 50 Grams

**PEDIATRIC:**

- 1 Gram/kg

**THERAPEUTIC EFFECTS:**

- Binds and absorbs various chemicals and poisonous compounds, thereby reducing their absorption into the body.

**CONTRAINDICATIONS:**

- Caustic / Corrosive substances
- Cyanide poisonings
- Semi-conscious or unconscious patients

**SIDE EFFECTS:**

- Abdominal cramping, constipation, dark stools, nausea and vomiting

**SPECIAL NOTES / RESTRICTIONS:**

- Does not absorb all drugs or toxic substances (i.e., Cyanide, lithium, iron, lead, arsenic, etc.)
- Has no effect in methanol, or organophosphate poisonings.
- Has little therapeutic value in caustic alkalis and acid poisonings.
- Should not be given with ice cream, milk, sherbet or syrup of ipecac

<b>ADENOSINE (Adenocard)</b>	
<b>INDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Paroxysmal supraventricular tachycardia</li> <li>➤ Supraventricular tachycardia</li> <li>➤ Wolf-Parkinson-White Syndrome</li> </ul>
<b>ADMINISTRATION:</b>	<ul style="list-style-type: none"> <li>➤ Rapid IV, Rapid IO followed by NS flush</li> </ul>
<b>DOSAGE:</b>	
<b>ADULT:</b>	<ul style="list-style-type: none"> <li>➤ Supraventricular tachycardia: initial 6 mg IV bolus over 1-2 seconds, increase to 12 mg every 1-2 min as needed for 2 doses, maximum single dose 12 mg</li> </ul>
<b>PEDIATRIC:</b>	<ul style="list-style-type: none"> <li>➤ Initial: 0.1 mg/kg IVP (MAX: 6 mg)</li> <li>➤ Repeat: 0.2 mg/kg IVP (MAX: 12 mg)</li> </ul>
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Slows conduction time through AV node</li> <li>➤ Interrupts reentry pathways through AV node</li> <li>➤ Restores sinus rhythm in patients with SVT</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Hypersensitivity to adenosine</li> <li>➤ Second or third degree AV block</li> <li>➤ Sinus node dysfunction, such as sick sinus syndrome or symptomatic bradycardia</li> <li>➤ Atrial flutter/Atrial fibrillation</li> <li>➤ Sick sinus syndrome</li> <li>➤ Ventricular tachycardia</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Transient AV block, asystole, and other dysrhythmias</li> <li>➤ Chest pressure</li> <li>➤ Dizziness</li> <li>➤ Flushing</li> <li>➤ Nausea</li> <li>➤ Shortness of breath</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	<ul style="list-style-type: none"> <li>➤ Onset is generally within less than one minute</li> <li>➤ Adverse effects are usually short-lived and easily tolerated</li> <li>➤ Effects may be more pronounced in patients on dipyridamole</li> <li>➤ Effects may be attenuated in patients on theophylline preparations</li> </ul>

<b>ALBUTEROL</b> <b>(Ventolin, Proventil)</b>	
<b>INDICATIONS:</b>	➤ Acute bronchospasm
<b>ADMINISTRATION:</b>	➤ Handheld Nebulizer, Nebulizer Mask, ETT
<b>DOSAGE:</b>	
<b>ADULT:</b>	➤ 2.5 mg/3 cc NSS
<b>PEDIATRIC:</b>	➤ 2.5 mg/3 cc NSS
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Decreases bronchospasm via beta receptors</li> <li>➤ Improves pulmonary function</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Hypersensitivity to any of the contents of the solution</li> <li>➤ Tachydysrhythmias</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Cough</li> <li>➤ Dizziness or nervousness</li> <li>➤ Nausea</li> <li>➤ Tachycardia</li> <li>➤ Tremor</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	➤ May be put down the ETT in intubated asthmatics or COPD patients

<b>AMIODARONE (Cordarone)</b>	
<b>INDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Ventricular fibrillation, Ventricular tachycardia, Rapid Atrial Fibrillation, Rapid Atrial Flutter, SVT</li> </ul>
<b>ADMINISTRATION:</b>	<ul style="list-style-type: none"> <li>➤ IVP or IV Infusion</li> </ul>
<b>DOSAGE:</b>	
<b>ADULT:</b>	<ul style="list-style-type: none"> <li>➤ Pulseless VF/VT - Initial: 300 mg IVP</li> <li>➤ Pulseless VF/VT - Repeat: 150 mg IVP</li> <li>➤ Rapid A Fib/Flutter: 2.5 — 5 mg/kg slow IVP</li> <li>➤ Rapid A Fib/Flutter (alternative): 150 mg/100 cc D5W over 10 min</li> <li>➤ SVT: 2.5 — 5 mg/kg IVP</li> <li>➤ SVT (alternative): 150 mg/100 cc D5W over 10 min</li> <li>➤ Stable V Tach: 2.5 — 5 mg/kg slow IVP</li> <li>➤ Stable V Tach (alternative): 150 mg/100 cc D5W over 10 min</li> </ul>
<b>PEDIATRIC:</b>	<ul style="list-style-type: none"> <li>➤ Pulseless VF/VT: 5 mg/kg IVP</li> <li>➤ Rapid A Fib/Flutter: 5 mg/kg IV over 20 to 60 minutes</li> <li>➤ SVT: 5 mg/kg IV over 20 to 60 minutes</li> <li>➤ Stable V Tach: 5 mg/kg IV over 10 minutes</li> </ul>
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Prolongs action potential and refractory period</li> <li>➤ Reduces ventricular dysrhythmias and raises fibrillatory threshold</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Cardiogenic shock</li> <li>➤ Hypersensitivity to amiodarone</li> <li>➤ Second or third degree AV block</li> <li>➤ Severe sinus bradycardia</li> <li>➤ Severe sinus node dysfunction</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Hypotension, Bradycardia, Asystole, and Pulseless Electrical Activity</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	<ul style="list-style-type: none"> <li>➤ Serial use of calcium channel blockers, beta blockers, and other antiarrhythmics may cause additive hypotensive, bradycardic, and proarrhythmogenic effects</li> <li>➤ Draw up slowly to prevent bubbling</li> </ul>

<b>ASPIRIN</b>	
<b>INDICATIONS:</b>	➤ Myocardial infarction, Chest Pain
<b>ADMINISTRATION:</b>	➤ Chewed PO
<b>DOSAGE:</b>	
<b>ADULT:</b>	➤ 4 Baby ASA (81mg each)
<b>PEDIATRIC:</b>	➤ Not indicated
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Inhibits platelet aggregation by blocking formation of Thromboxane A2</li> <li>➤ Reduces overall mortality of acute MI</li> <li>➤ Reduces non-fatal re-infarction</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Hypersensitivity to aspirin</li> <li>➤ Active bleeding condition or ulcer</li> <li>➤ Pregnancy</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Heartburn</li> <li>➤ Indigestion</li> <li>➤ Nausea</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	➤ Patients on Coumadin (warfarin) MAY take aspirin in the acute setting

<b>ATROPINE</b> <b>(Atropine, Component of Mark I Auto-Injector)</b>	
<b>INDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Symptomatic Bradycardia, Asystole, Pulseless Electrical Activity, Nerve Agent Poisoning, Organophosphate Poisoning</li> </ul>
<b>ADMINISTRATION:</b>	<ul style="list-style-type: none"> <li>➤ IV, IO, ET, IM</li> </ul>
<b>DOSAGE:</b>	
<b>ADULT:</b>	<ul style="list-style-type: none"> <li>➤ Asystole: 1 mg IVP or 2 mg ETT q3-5min (up to 0.04 mg/kg)</li> <li>➤ Bradycardia: 0.5-1 mg IVP (up to 0.04 mg/kg)</li> <li>➤ Nerve Agents: 2 mg IVP/IM q5min until relief of symptoms</li> </ul>
<b>PEDIATRIC:</b>	<ul style="list-style-type: none"> <li>➤ Bradycardia: 0.02 mg/kg IVP (min 0.1 mg, max 1 mg; up to 0.04 mg/kg)</li> <li>➤ Nerve Agents: 2 mg IVP/IM q5min until relief of symptoms</li> </ul>
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Blocks acetylcholine receptor sites</li> <li>➤ Decreases vagal tone</li> <li>➤ Increases SA and AV nodal conduction</li> <li>➤ Dries secretions</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Tachycardia</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Blurred vision</li> <li>➤ Dry mouth</li> <li>➤ Headache</li> <li>➤ Pupillary dilatation</li> <li>➤ Tachycardia</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	<ul style="list-style-type: none"> <li>➤ Organophosphate or nerve agent poisoning may require large doses</li> <li>➤ Consider atropine before epinephrine in pediatric bradycardia only if the bradycardia is suspected to be from increased vagal tone or primary AV block</li> </ul>



<b>CALCIUM CHLORIDE</b>	
<b>INDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Hyperkalemic cardiac arrest, Calcium channel blocker overdose, Hypocalcemia</li> </ul>
<b>ADMINISTRATION:</b>	<ul style="list-style-type: none"> <li>➤ IV, IO</li> </ul>
<b>DOSAGE:</b>	
<b>ADULT:</b>	<ul style="list-style-type: none"> <li>➤ 1 g (10 cc of 10% solution) IVP</li> </ul>
<b>PEDIATRIC:</b>	<ul style="list-style-type: none"> <li>➤ 20 mg/kg (0.2 cc/kg of 10% solution) up to 500 mg IVP</li> </ul>
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Stabilizes cardiac tissue to effects of high potassium</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Digoxin toxicity</li> <li>➤ Hypercalcemia</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Arrhythmias</li> <li>➤ Bradycardia</li> <li>➤ Cardiac arrest</li> <li>➤ Hypotension</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	<ul style="list-style-type: none"> <li>➤ Do not administer with sodium bicarbonate or it may crystallize in the intravenous line</li> <li>➤ Not to be routinely used during cardiac arrest</li> </ul>

**CYANIDE ANTIDOTE KIT**  
**SODIUM THIOSULFATE**

**INDICATIONS:** ➤ Victims of Cyanide Poisoning in severe distress (shock)

**ADMINISTRATION:** ➤ IV

**DOSAGE:**

**ADULT:** ➤ 12.5 g (50 cc) IV over 10 min (Adults and children >25kg)

**PEDIATRIC:** ➤ 75mg/kg (0.3cc/kg) IV over 10 min (children <25kg)

**THERAPEUTIC EFFECTS:** ➤ The role of Sodium Thiosulfate alone is an adjunct to the normal rhodanese metabolism of free cyanide.

**CONTRAINDICATIONS:**

**SIDE EFFECTS:** ➤ No significant side effects

**SPECIAL NOTES / RESTRICTIONS:** ➤ Repeat at half dose if symptoms persist

<b>DEXTROSE (D50, D25, D10)</b>	
<b>INDICATIONS:</b>	➤ Hypoglycemia
<b>ADMINISTRATION:</b>	➤ IV, IO
<b>DOSAGE:</b>	
<b>ADULT:</b>	➤ 25 g (50 cc D50) IVP
<b>PEDIATRIC:</b>	<ul style="list-style-type: none"> <li>➤ Newborn: 5 cc/kg D10 slowly (1 cc/kg D50 mixed with 4 cc/kg NS)</li> <li>➤ Less than 13 yrs: 2 cc/kg D25 (1 cc/kg D50 mixed with 1 cc/kg NS)</li> <li>➤ 13 or older: 1 cc/kg D50</li> </ul>
<b>THERAPEUTIC EFFECTS:</b>	➤ Immediate source of glucose
<b>CONTRAINDICATIONS:</b>	➤ CVA with normal serum glucose
<b>SIDE EFFECTS:</b>	➤ Local irritation
<b>SPECIAL NOTES / RESTRICTIONS:</b>	<ul style="list-style-type: none"> <li>➤ Dilute dextrose before administration to pediatric patients</li> <li>➤ To make D25 from D50: dilute D50 1:1 with sterile water or NS</li> <li>➤ To make D10 from D50: dilute D50 1:4 with sterile water or NS</li> <li>➤ Can potentially precipitate acute neurologic symptoms in alcoholics</li> <li>➤ Causes local tissue necrosis if IV infiltrates</li> </ul>

<b>DIAZEPAM (Valium)</b>	
<b>INDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Major motor seizures, Status Epilepticus, Premedication for Painful Procedures, Combative Patients</li> </ul>
<b>ADMINISTRATION:</b>	<ul style="list-style-type: none"> <li>➤ IV, IO, PR, IM (if necessary)</li> </ul>
<b>DOSAGE:</b>	
<b>ADULT:</b>	<ul style="list-style-type: none"> <li>➤ Procedural Sedation and Pain Management: 2-5 mg IV</li> <li>➤ Seizures: 5 mg IV over 2 minutes, 10 mg PR, or 2-5 mg IM</li> <li>➤ Eclamptic Seizures: 2 mg IV q5min for effect or 10 mg PR</li> <li>➤ Nerve Agents: 2-10 mg IV or 10 mg IM titrated to effect</li> </ul>
<b>PEDIATRIC:</b>	<ul style="list-style-type: none"> <li>➤ Procedural Sedation and Pain Management: 0.1 mg/kg IV/IO</li> <li>➤ Seizures: 0.1 mg/kg IV over 2 minutes or 0.5 mg/kg PR</li> <li>➤ Nerve Agents: 0.1 mg/kg IV/IM MAX DOSES: 5 mg in children and 10 mg in adolescents</li> </ul>
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Suppresses spread of seizure activity through the motor cortex</li> <li>➤ Skeletal muscle relaxant</li> <li>➤ Reduces anxiety and causes sedation</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Respiratory depression</li> <li>➤ Hypotension</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Hypotension</li> <li>➤ Respiratory depression</li> <li>➤ Use caution in elderly patients</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	<ul style="list-style-type: none"> <li>➤ Intramuscular administration leads to widely variable absorption and should be avoided if possible</li> </ul>

<b>DIPHENHYDRAMINE (Benadryl)</b>	
<b>INDICATIONS:</b>	➤ Anaphylaxis, Allergic Reactions, Dystonic Reactions
<b>ADMINISTRATION:</b>	➤ IV, IM, IO
<b>DOSAGE:</b>	
<b>ADULT:</b>	➤ 25 mg IVP or 50 mg IM
<b>PEDIATRIC:</b>	➤ 1 mg/kg (0.02 cc/kg) IVP (MAX: 25 mg)
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Inhibits histamine release and effects</li> <li>➤ Anticholinergic effects antagonize extrapyramidal symptoms</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Acute asthma exacerbation</li> <li>➤ Acute glaucoma</li> <li>➤ Pregnancy</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Blurred vision</li> <li>➤ Headache</li> <li>➤ Palpitations</li> <li>➤ Sedation</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	

<b>DOBUTAMINE (Dobutrex)</b>	
<b>INDICATIONS:</b>	➤ Cardiogenic shock, Septic shock
<b>ADMINISTRATION:</b>	➤ IV infusion, IO infusion
<b>DOSAGE:</b>	
<b>ADULT:</b>	➤ 5-20 mcg/kg/min infusion
<b>PEDIATRIC:</b>	➤ 5-20 mcg/kg/min infusion
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Improves cardiac output with little systemic vasoconstriction</li> <li>➤ Increases cardiac contractility</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Idiopathic Hypertrophic Subaortic Stenosis (IHSS)</li> <li>➤ Hypovolemia (uncorrected)</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Bronchospasm</li> <li>➤ Ectopy</li> <li>➤ Hypertension or hypotension</li> <li>➤ Palpitations</li> <li>➤ Tachycardia</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	<ul style="list-style-type: none"> <li>➤ If systolic blood pressure is less than 70, dopamine should be used</li> <li>➤ 6 mg/kg in 100 cc D5W at 1.0 cc/hr equals 1 mcg/kg/min</li> <li>➤ Hypovolemia should be corrected with volume expansion fluids prior to the administration of dobutamine</li> </ul>

<b>DOPAMINE (Intropin)</b>	
<b>INDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Cardiogenic shock, Neurogenic shock, Sepsis, Refractory Hypotension, Bradycardia</li> </ul>
<b>ADMINISTRATION:</b>	<ul style="list-style-type: none"> <li>➤ IV Infusion, IO infusion</li> </ul>
<b>DOSAGE:</b>	
<b>ADULT:</b>	<ul style="list-style-type: none"> <li>➤ 5-20 mcg/kg/min infusion</li> </ul>
<b>PEDIATRIC:</b>	<ul style="list-style-type: none"> <li>➤ 5-20 mcg/kg/min infusion</li> </ul>
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Stimulates alpha, beta, and dopamine receptors, depending on dose</li> <li>➤ Increases cardiac output and systemic arterial pressure</li> <li>➤ Dilates vessels to brain, heart, and kidneys</li> <li>➤ Increases heart rate</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Uncorrected hypovolemic shock</li> <li>➤ Uncorrected tachydysrhythmias</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Angina</li> <li>➤ Ectopy</li> <li>➤ Headache</li> <li>➤ Tachydysrhythmias</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	<ul style="list-style-type: none"> <li>➤ Titrate to blood pressure</li> <li>➤ Use dobutamine in cardiogenic shock with systolic BP over 70</li> <li>➤ 6 mg/kg in 100 cc D5W at 1 cc/hr equals 1 mcg/kg/min</li> <li>➤ Hypovolemia should be corrected with volume expansion fluids prior to the administration of dopamine</li> </ul>

<b>EPINEPHRINE</b>	
<b>INDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Cardiac arrest, Anaphylaxis, Bronchospasm, Shock</li> </ul>
<b>ADMINISTRATION:</b>	<ul style="list-style-type: none"> <li>➤ IV, IO, SC, ET, IV Infusion, 10 Infusion, Handheld Nebulizer</li> </ul>
<b>DOSAGE:</b>	
<b>ADULT:</b>	<ul style="list-style-type: none"> <li>➤ Cardiac arrest: 1 mg IVP q3-5min or 2 mg ET q3-5min</li> <li>➤ Bradycardia: 0.5-1 mg IVP or 2-10 mcg/kg/min infusion</li> <li>➤ Septic or Spinal shock: 1-4 mcg/min infusion</li> <li>➤ Allergic Rxn: 0.1-0.3 mg 1:1000 SC or 0.1-0.5 mg 1:10000 slow IVP</li> <li>➤ Respiratory Distress: 0.1-0.3 mg 1:1000 SC</li> </ul>
<b>PEDIATRIC:</b>	<ul style="list-style-type: none"> <li>➤ Cardiac arrest — INITIAL: 0.01 mg/kg IVP/IO or 0.1 mg/kg ET</li> <li>➤ Cardiac arrest — REPEAT: 0.1 mg/kg IVP, JO, or ET q3-5min</li> <li>➤ Bradycardia — INITIAL: 0.01 mg/kg IVP/IO or 0.1 mg/kg ET</li> <li>➤ Bradycardia — REPEAT: 0.1 mg/kg IVP, JO, or ET q3-5min</li> <li>➤ Septic or Spinal Shock: 0.1-1 mcg/kg/min infusion</li> <li>➤ Allergic Rxn: 0.01 mg/kg (0.1 cc/kg) 1:1000 SC or 1:10000 slow IVP</li> <li>➤ Respiratory Distress: 5 cc 1:1000 via handheld nebulizer</li> </ul>
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Stimulates alpha and beta adrenergic receptors</li> <li>➤ Increases heart rate, systemic blood pressure, and coronary blood flow</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Hypertension</li> <li>➤ Tachycardia</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Hypertension</li> <li>➤ Palpitations</li> <li>➤ Tachycardia</li> <li>➤ Tremors</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	<ul style="list-style-type: none"> <li>➤ Pay special attention to using correct concentration (1:1000 or 1:10000)</li> </ul>



<b>FUROSEMIDE (Lasix)</b>	
<b>INDICATIONS:</b>	➤ Pulmonary edema
<b>ADMINISTRATION:</b>	➤ IV
<b>DOSAGE:</b>	
<b>ADULT:</b>	➤ 40 mg IVP or double patient's prescribed dose up to 120 mg IVP
<b>PEDIATRIC:</b>	➤ Not applicable
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Loop diuretic which inhibits resorption of sodium and chloride</li> <li>➤ Mild vasodilator</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Hypokalemia</li> <li>➤ Hypovolemia</li> <li>➤ Pregnancy</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Dehydration</li> <li>➤ Dysrhythmias</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	

<b>GLUCAGON</b>	
<b>INDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Hypoglycemia, Refractory Allergic Reaction, Beta Blocker Overdose</li> </ul>
<b>ADMINISTRATION:</b>	<ul style="list-style-type: none"> <li>➤ IV, IO, IM</li> </ul>
<b>DOSAGE:</b>	
<b>ADULT:</b>	<ul style="list-style-type: none"> <li>➤ Hypoglycemia: 1 mg IM</li> <li>➤ Refractory Allergic Reaction: 1-4 mg IV slow push</li> </ul>
<b>PEDIATRIC:</b>	<ul style="list-style-type: none"> <li>➤ Hypoglycemia: 0.1 mg/kg IM (MAX: 1 mg)</li> </ul>
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Promotes breakdown of hepatic glycogen to glucose</li> <li>➤ Bypasses blocked beta receptors to stimulate heart rate and contractility</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Insulinoma</li> <li>➤ Pheochromocytoma</li> <li>➤ Hypersensitivity to glucagon</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Nausea and vomiting</li> <li>➤ Urticaria</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	<ul style="list-style-type: none"> <li>➤ Patients need carbohydrate replacement after administration to prevent</li> <li>➤ secondary hypoglycemic events</li> <li>➤ May not be effective in patients with poor glycogen stores, (cancer patients, chronic alcoholics, malnutrition)</li> </ul>

<b>LIDOCAINE</b>	
<b>INDICATIONS:</b>	➤ Ventricular arrhythmias
<b>ADMINISTRATION:</b>	➤ IV, IO, ET, IV infusion, IO infusion
<b>DOSAGE:</b>	
<b>ADULT:</b>	➤ 1 mg/kg IV or 2 mg/kg ET (repeated at 0.5mg/kg to max of 3 mg/kg)
<b>PEDIATRIC:</b>	➤ 1 mg/kg IV/IO or 2 mg/kg ET (repeated at 0.5mg/kg to max of 3 mg/kg)
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Suppresses ventricular ectopy</li> <li>➤ Elevates threshold for ventricular fibrillation</li> <li>➤ Suppresses re-entry arrhythmias</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Idioventricular rhythms</li> <li>➤ Second and third degree AV block</li> <li>➤ Allergy to local anesthetics</li> <li>➤ Sinus bradycardia</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Arrhythmias</li> <li>➤ Hypotension</li> <li>➤ Irritability</li> <li>➤ Muscle twitching</li> <li>➤ Seizures</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	<ul style="list-style-type: none"> <li>➤ Successful use of lidocaine IVP should be followed by additional</li> <li>➤ boluses</li> <li>➤ Boluses should be reduced in cases of shock, CHF, or elderly patients</li> </ul>

<b>MAGNESIUM</b>	
<b>INDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Ventricular arrhythmias, Preeclampsia, Eclampsia, Asthma, Torsades de Pointes</li> </ul>
<b>ADMINISTRATION:</b>	<ul style="list-style-type: none"> <li>➤ IV, IO</li> </ul>
<b>DOSAGE:</b>	
<b>ADULT:</b>	<ul style="list-style-type: none"> <li>➤ Cardiac arrest: 2 g IVP</li> <li>➤ Ventricular tachycardia: 1-2 g IV over 5-20 min</li> <li>➤ Asthma: 1-2 g IV over 5-20 min</li> <li>➤ Pre-Eclampsia: 4g IV over 20 min</li> <li>➤ Eclampsia: 1 g/min IVP until seizure stops (MAX: 4g)</li> </ul>
<b>PEDIATRIC:</b>	<ul style="list-style-type: none"> <li>➤ Cardiac arrest: 20-50 mg/kg IVP/IO</li> </ul>
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Affects myocardial impulse formation and conduction time</li> <li>➤ Relaxes smooth muscle</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Absolute               <ul style="list-style-type: none"> <li>○ None</li> </ul> </li> <li>➤ Relative               <ul style="list-style-type: none"> <li>○ Active labor</li> <li>○ Heart block</li> <li>○ Hypocalcemia</li> <li>○ Renal failure</li> </ul> </li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Bradycardia</li> <li>➤ Hyporeflexia</li> <li>➤ Hypotension</li> <li>➤ Respiratory depression</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	<ul style="list-style-type: none"> <li>➤ Dilute to at least 10 cc before administration</li> <li>➤ Preferred anti-dysrhythmic for patients with Torsades de Pointes</li> </ul>

<b>MARK 1 AUTO-INJECTOR (Atropine/Pralidoxime)</b>	
<b>INDICATIONS:</b>	➤ Nerve Agent Poisoning
<b>ADMINISTRATION:</b>	➤ IM
<b>DOSAGE:</b>	
<b>ADULT:</b>	<ul style="list-style-type: none"> <li>➤ Mild symptoms: 1 kit IM</li> <li>➤ Moderate symptoms: 1 kit IM q5min for 3 doses</li> <li>➤ Severe symptoms: 3 kits IM immediately</li> </ul>
<b>PEDIATRIC:</b>	➤ Contact medical command
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Blocks acetylcholine receptor sites</li> <li>➤ Dries secretions</li> <li>➤ Reactivates acetylcholinesterase enzymes</li> </ul>
<b>CONTRAINDICATIONS:</b>	
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Laryngospasm</li> <li>➤ Muscle rigidity</li> <li>➤ Blurred vision</li> <li>➤ Dry mouth</li> <li>➤ Headache</li> <li>➤ Pupillary dilatation</li> <li>➤ Tachycardia</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	➤ Contains 2 mg atropine and 600 mg pralidoxime

<b>MORPHINE</b>	
<b>INDICATIONS:</b>	➤ Pain management, Pulmonary edema, Procedural Sedation
<b>ADMINISTRATION:</b>	➤ IV, IO, IM
<b>DOSAGE:</b>	
<b>ADULT:</b>	<ul style="list-style-type: none"> <li>➤ Chest Pain or Pulmonary Edema: 2-4 mg IV</li> <li>➤ Pain: 2-5 mg IV, titrated to effect</li> <li>➤ Procedural Sedation: 3-5 mg IV</li> </ul>
<b>PEDIATRIC:</b>	<ul style="list-style-type: none"> <li>➤ Pain: 1-3 mg IV/IO, titrated to effect</li> <li>➤ Procedural Sedation: 1-3 mg IV/IO</li> </ul>
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Binds with opiate receptors to reduce pain</li> <li>➤ Peripheral vasodilatation</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Use of Monoamine Oxidase Inhibitors (MAOIs) within past 14 days</li> <li>➤ Asthma</li> <li>➤ COPD</li> <li>➤ Head injury</li> <li>➤ Hypotension</li> <li>➤ Hypovolemia</li> <li>➤ Respiratory depression</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Bradycardia</li> <li>➤ Hypotension</li> <li>➤ Nausea and vomiting</li> <li>➤ Respiratory depression</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	➤ Naloxone and respiratory equipment should be immediately accessible

<b>NALOXONE (Narcan)</b>	
<b>INDICATIONS:</b>	➤ Opiate overdose
<b>ADMINISTRATION:</b>	➤ IV, IM, SC, ET
<b>DOSAGE:</b>	
<b>ADULT:</b>	➤ 2 mg IV/IM/SC/ET/Intranasal
<b>PEDIATRIC:</b>	<ul style="list-style-type: none"> <li>➤ &lt;5 yrs or &lt;20 kg 0.1 mg/kg IV/IM/SC/ET</li> <li>➤ &gt;5 yrs or &gt;20 kg 2 mg IV/IM/SC/ET</li> </ul>
<b>THERAPEUTIC EFFECTS:</b>	➤ Reverses effects of most narcotic agents
<b>CONTRAINDICATIONS:</b>	➤ Hypersensitivity to naloxone
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Acute narcotic withdrawal</li> <li>➤ Hypertension</li> <li>➤ Irritability</li> <li>➤ Nausea and vomiting</li> <li>➤ Tachycardia</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	<ul style="list-style-type: none"> <li>➤ Does not reverse benzodiazepine overdoses</li> <li>➤ May precipitate acute withdrawal symptoms</li> <li>➤ Caution should be exercised when administering naloxone to patients addicted to narcotics</li> </ul>

<b>NITROGLYCERIN</b> <b>(Nitro-Bid, Nitrostat)</b>	
<b>INDICATIONS:</b>	➤ Angina pectoris, Pulmonary Edema, Hypertension
<b>ADMINISTRATION:</b>	➤ SL
<b>DOSAGE:</b>	
<b>ADULT:</b>	<ul style="list-style-type: none"> <li>➤ Angina: 1 metered dose SL q5min for 3 doses</li> <li>➤ Pulmonary Edema — SBP&gt;160: 2 metered doses SL q3-5min</li> <li>➤ Pulmonary Edema — SBP 100-160: 1 metered dose SL q3-5min</li> </ul>
<b>PEDIATRIC:</b>	➤ Not indicated
<b>THERAPEUTIC EFFECTS:</b>	➤ Dilates coronary and systemic arteries
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Head trauma</li> <li>➤ Hypertrophic cardiomyopathy</li> <li>➤ Glaucoma</li> <li>➤ Hypotension</li> <li>➤ Use of Viagra (sildenafil) within preceding 48 hours</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Dizziness</li> <li>➤ Headache</li> <li>➤ Hypotension</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	➤ Contact medical command prior to administration if taking Viagra



<b>NITROUS OXIDE</b>	
<b>INDICATIONS:</b>	➤ Pain management
<b>ADMINISTRATION:</b>	➤ Inhalation
<b>DOSAGE:</b>	
<b>ADULT:</b>	➤ Self-administered by mask
<b>PEDIATRIC:</b>	➤ Self-administered by mask (must be old enough to self-administer)
<b>THERAPEUTIC EFFECTS:</b>	➤ Decreases sensitivity to pain
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Altered mental status</li> <li>➤ Decompression sickness</li> <li>➤ Suspected pneumothorax</li> <li>➤ Chronic lung disease</li> <li>➤ Head injury</li> <li>➤ Hypotension</li> <li>➤ Obvious intoxication</li> <li>➤ Suspected bowel obstruction</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Dizziness</li> <li>➤ Drowsiness</li> <li>➤ Nausea and vomiting</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	➤ Effects diminish 2-5 minutes after removing source

<b>PRALIDOXIME</b> <b>(2-PAM, Protopam, Component of Mark I Auto-Injector)</b>	
<b>INDICATIONS:</b>	➤ Nerve Agent Poisoning
<b>ADMINISTRATION:</b>	➤ IV, IM
<b>DOSAGE:</b>	
<b>ADULT:</b>	➤ 600 mg IM or 1000 mg IV over 15-30 min
<b>PEDIATRIC:</b>	➤ 20-50 mg/kg IV over 15-30 min
<b>THERAPEUTIC EFFECTS:</b>	➤ Reactivates acetylcholinesterase enzymes
<b>CONTRAINDICATIONS:</b>	
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Laryngospasm</li> <li>➤ Muscle rigidity</li> <li>➤ Tachycardia</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	

**SODIUM BICARBONATE**

**INDICATIONS:**

- Cardiac arrest, Tricyclic Antidepressant, Aspirin Overdose, Hyperkalemia, Acidosis,

**ADMINISTRATION:**

- IV, IO

**DOSAGE:**

**ADULT:**

- 1 mEq/kg IV

**PEDIATRIC:**

- 1 mEq/kg IV/IO

**THERAPEUTIC EFFECTS:**

- Buffers strong acids in the blood
- Antagonizes sodium channel blockade in TCA overdoses
- Prevents resorption of salicylates in renal tubules

**CONTRAINDICATIONS:**

- Hypokalemia
- Pulmonary edema

**SIDE EFFECTS:**

- Dysrhythmias secondary to potassium effects
- Metabolic alkalosis
- Pulmonary edema

**SPECIAL NOTES / RESTRICTIONS:**

- Not to be used in place of proper ventilation to prevent acidosis
- If less than 2 yrs old, must be diluted 1:1 with NS or D5W
- Use for cyanide poisoning only if antidotes not available or ineffective

<b>VERAPAMIL</b> <b>(Calan, Isoptin, Verelan, Covera)</b>	
<b>INDICATIONS:</b>	➤ Supraventricular Tachydysrhythmias
<b>ADMINISTRATION:</b>	➤ IV, IO
<b>DOSAGE:</b>	
<b>ADULT:</b>	➤ 2.5-5 mg IV over 2 min
<b>PEDIATRIC:</b>	➤ Not indicated
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Calcium channel blocker</li> <li>➤ Delays impulse propagation through AV node</li> <li>➤ Dilates coronary and systemic arterial systems</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Wolf-Parkinson-White (WPW) Syndrome</li> <li>➤ AV block</li> <li>➤ Cardiogenic shock</li> <li>➤ Hypotension</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ AV blockade</li> <li>➤ Bradycardia</li> <li>➤ Dizziness</li> <li>➤ Headache</li> <li>➤ Hypotension</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	<ul style="list-style-type: none"> <li>➤ Do NOT use in WPW patients as it can cause cardiac arrest</li> <li>➤ Use caution if wide complex tachycardia</li> </ul>

<b>TOPICAL BENZOCAINE</b>	
<b>INDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Use of Topical Benzocaine is limited to assisting with the placement of an endotracheal tube.</li> </ul>
<b>ADMINISTRATION:</b>	<ul style="list-style-type: none"> <li>➤ Topical</li> </ul>
<b>DOSAGE:</b>	
<b>ADULT:</b>	<ul style="list-style-type: none"> <li>➤ Spray mucous membranes (nose or mouth) for 1 second.</li> <li>➤ This may be repeated ONE time.</li> <li>➤ Avoid sprays in excess of 2 seconds.</li> </ul>
<b>PEDIATRIC:</b>	<ul style="list-style-type: none"> <li>➤ Spray mucous membranes (nose or mouth) for 1 second.</li> <li>➤ This may be repeated ONE time.</li> <li>➤ Avoid sprays in excess of 2 seconds.</li> </ul>
<b>THERAPEUTIC EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Topical Benzocaine is a local anesthetic chemically related to Lidocaine used to facilitate the placement of an endotracheal intubation.</li> </ul>
<b>CONTRAINDICATIONS:</b>	<ul style="list-style-type: none"> <li>➤ Known hypersensitivity to Benzocaine or other local anesthetics.</li> </ul>
<b>SIDE EFFECTS:</b>	<ul style="list-style-type: none"> <li>➤ Methemoglobinemia</li> <li>➤ Diminished gag reflex, edema of the airway mucosa, increased chance of aspiration.</li> </ul>
<b>SPECIAL NOTES / RESTRICTIONS:</b>	<ul style="list-style-type: none"> <li>➤ Use cautiously around the eyes</li> <li>➤ Do not apply to large inflamed tissue areas.</li> <li>➤ Due to retention of the medication, topical Benzocaine should not be used underneath dentures or applied to a cotton ball applicator.</li> <li>➤ The use of mouth sprays containing Benzocaine may impair swallowing and increase the risk of aspiration</li> </ul>

<b>DRUG</b>	
<b>INDICATIONS:</b>	
<b>ADMINISTRATION:</b>	
<b>DOSAGE:</b>	
<b>ADULT:</b>	
<b>PEDIATRIC:</b>	
<b>THERAPEUTIC EFFECTS:</b>	
<b>CONTRAINDICATIONS:</b>	
<b>SIDE EFFECTS:</b>	
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