Vasoconstrictor / Bronchodilator

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| **Epinephrine 1:1,000**Sympathetic nervous system drug* **Type of drug**: Bronchodilator, non-specific adrenergic agonist
* **Mechanism of Action**: B-1 and B-2 agonist. Produces bronchodilation, vasoconstriction, and cardiac and CNS stimulation.
* **Indications**: Anaphylaxis, (Advanced EMTs and above - allergic reactions, acute asthma attacks, bronchospasm)
* **Contraindications**: None in the emergent setting, hypersensitivity, use with caution in pt’s > 40 y/o
* **Precautions**: Pregnancy, cardiac disorders, hyperthyroidism, diabetes, hypertension
* **Route and Dosage**:
	+ Anaphylactic reaction;
		- Adult SQ/IM 0.1 – 0.5 mg (usual dose 0.3 mg) Concentration 1:1,000 q 5 - 10 min., max 1 mg/dose
		- Pediatric SQ/IM 0.1 mg/kg (Epi Pen Jr is 0.15 mg) concentration 1:1000 q 5 – 10 min
* **Adverse reactions and side effects:** cerebral hemorrhage, tremors, anxiety, dizziness, palpitations, tachycardia, dysrhythmias, anorexia, N/V, dyspnea
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**Antiplatelet**

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| Aspirin acetylsalicylic acidNSAID* **Type of drug:** antiplatelet, non-steroidal anti-inflammatory (NSAID); non-opioid analgesic;
* **Mechanism of Action**: decreases platelet aggregation, reduces inflammation by inhibition of prostaglandin synthesis:
* **Indications:** suspected MI or angina,
* **Contraindications:** GI Bleed, allergy and other anticoagulation meds such as Coumadin, warfarin, Aggrenox
* **Precautions:** anemia, gastritis
* **Route and Dosage:** MI, angina: PO 81 – 325 mg (usual dose 324 mg)
* **Adverse reactions and side effects:** GI bleeding, anaphylaxis, seizures, coma, hepatitis, Reye’s syndrome (children), ,
* **How supplied:** Chewable tabs 81 mg
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**Vasodilator**

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| NitroglycerineAffects calcium, phosphorus, and the completion of the action potential* **Type of drug:** vasodilator, anti-anginal
* **Mechanism of Action:** dilates coronary arteries, dilates arterial, venous beds systemically decreases preload, afterload, decreases systemic vascular resistance, improves blood flow through coronary arteries
* **Indications:** Angina pain and suspected acute MI
* **Contraindications:** use of sexual enhancement drugs within past 36-48 hours, systolic BP < 90 mmHg, hypersensitivity, cerebral hemorrhage
* **Precautions:** postural hypotension, severe hepatic disease
* **Route and Dosage:** SL tablet or spray, 0.4 mg q 5 min. max dose 3 tabs or sprays
* **Adverse reactions and side effects**: headache, flushing, dizziness, postural hypotension, tachycardia
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| Activated Charcoal Drug works in the intestinal lumen * T**ype of drug:** antidote, adsorbent
* **Mechanism of Action:** binds poisons, toxins, irritants: inactivates toxins and binds until excreted; increases adsorption in the GI tract:
* **Indications:** oral poisonings and overdoses
* **Contraindications:** unconsciousness, poisoning of cyanide, mineral acids, alkalis, esophageal reflex disease, ethanol intoxication
* **Precautions:**
* **Route and Dosage**: PO: Adult and child: 0.5 - 1 G/kg
* **Adverse reactions and side effects:** nausea, black stools, constipation
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**Adsorbent**

Bronchodilator

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| Proventil, Ventolinalbuterol* **Type of drug:** Bronchodilator, sympathomimetic, adrenergic β-2 agonist, ,
* **Mechanism of Action:** Causes bronchodilation by action on β-2 receptors which relaxes smooth muscle, producing bronchodilation, CNS, cardiac stimulation, as well as increased diuresis and gastric acid secretion.
* **Indications:** acute bronchospasm, asthma, emphysema, bronchitis or other reversible reactive airway disease.
* **Contraindications:** hypersensitivity, extreme tachycardia, severe cardiac disease
* **Precautions:** cardiac disorders, diabetes mellitus, hypertension, seizures
* **Route and Dosage:** 2.5 mg nebulized inhaler or MDI as prescribed
* **Adverse reactions and side effects:** bronchospasm, tremors, anxiety, palpitations, tachycardia, hypertension
* **How supplied:**, ‘fish’; 2.5 mg in 3 ml normal saline, MDI
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**Anti-Hypoglycemic**

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| Oral GlucoseGlutose * **Type of drug:** Carbohydrate, Antihypoglycemic
* **Mechanism of Action:** rapidly increases blood glucose
* **Indications:** acute hypoglycemia
* **Contraindications:** Absence of gag reflex, altered mentation, unconsciousness, inability to swallow, hyperglycemia, CVA, delirium tremens
* **Precautions:** altered mentation, renal, hepatic, cardiac disease, diabetes mellitus
* **Route and Dosage:** Oral – 1 tube, 10 – 45G, dependent on supply
* **Adverse reactions and side effects:** CHF, pulmonary edema, venous irritation
* **How supplied:** bottle, 10 – 45 G in suspension
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**Anti-Hypoxia**

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| Oxyen * **Type of drug:** gas, odorless, tasteless, necessary for life
* **Mechanism of Action:** increases oxygen concentration in the alveoli, which increases oxygen saturation of available hemoglobin, required for efficient breakdown of glucose
* **Indications:** possible hypoxia, hemorrhage
* **Contraindications:** None in the emergent setting
* **Precautions:** use with caution with COPD or other hypoxic drive patients
* **Route and Dosage:** NC: 1 – 6 LPM, Nebulizer 4-6 LPM NRB: 12 – 15 LPM, BVM: N12 – 15 LPM, CPAP: 15 – 25 LPM
* **Adverse reactions and side effects:** watch for respiratory depression in all suspected COPD patients
* **How supplied:** Compressed gas, 500 – 2000 psi
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**Anti-Dote**

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| **Narcan** (naloxone)* **Type of drug**: Opioid antagonist, antidote
* **Mechanism of Action:** competes with opioids at opiate receptor sites, blocks opiate receptors
* **Indications:** respiratory depression induced by opioids, coma of unknown origin (to rule out narcotic OD)
* **Contraindications:** none in the emergency setting
* **Precautions**: opioid dependency, pregnancy, cardiovascular disease, seizure disorder. NOTE: repeat doses of naloxone may be necessary due to shorter half-life than narcotics
* **Route and Dosage:** SQ/IM/IN; 0.4-2 mg q 2-3 min.; Peds 0.01 mg/kg
* **Adverse reactions and side effects:** recurrent respiratory depression, may precipitate withdrawal symptoms in the dependent or addicted patient
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