

# Emergency Drug Cards

---

The following pages contain prepared three-by-five-inch index cards. Each card represents one of the drugs commonly used by the paramedic. They identify the name and class of the drug, a brief description, its indications, contraindications, precautions, common dosages, and routes of administration.

Detach and cut out the cards and review each one in detail. Be sure that your instructor identifies which drugs are used in your system and which need to be modified to indicate your system's specific indications, contraindications, precautions, doses, and methods of administration. You may also wish to prepare cards for the drugs used in your system that are not included in this card set.

Once your cards are prepared, begin to familiarize yourself with all of the information contained on the card when presented with the drug name. You will notice that the drug name appears on the back of each card. Working on just a few cards each week and then reviewing them as your course progresses will help you commit to memory the essential information you must know about each drug.



**Name/Class:** ACETAMINOPHEN (Tylenol, Anacin-3)/Analgesic, Antipyretic

**Description:** Acetaminophen is a clinically proven analgesic/antipyretic with little effect on platelet function.

**Indications:** For mild to moderate pain and fever when aspirin is otherwise not tolerated.

**Contraindications:** Hypersensitivity, children under 3 years.

**Precautions:** Patients with hepatic disease; children under 12 years with arthritic conditions; alcoholism; malnutrition; and thrombocytopenia.

**Dosage/Route:** 325 to 650 mg. PO/4 to 6 hours. 650 mg PR/4 to 6 hours.

©2006 Pearson Education, Inc.

**Name/Class:** ACTIVATED CHARCOAL (Actidose)/Adsorbent

**Description:** Activated charcoal is a specially prepared charcoal that will adsorb and bind toxins from the gastrointestinal tract.

**Indications:** Acute ingested poisoning.

**Contraindications:** An airway that cannot be controlled; ingestion of cyanide, mineral acids, caustic alkalis, organic solvents, iron, ethanol, methanol.

**Precautions:** Administer only after emesis or in those cases where emesis is contraindicated.

**Dosage/Route:** 1 g/kg mixed with at least 6 to 8 oz of water, then PO or via an NG tube.

©2006 Pearson Education, Inc.

**Name/Class:** ADENOSINE (Adenocard)/Antidysrhythmic

**Description:** Adenosine is a naturally occurring agent that can “chemically cardiovert” PSVT to a normal sinus rhythm. It has a half-life of 10 seconds and does not cause hypotension.

**Indications:** Narrow, complex paroxysmal supraventricular tachycardia refractory to vagal maneuvers.

**Contraindications:** Hypersensitivity, 2nd- and 3rd-degree heart block, sinus node disease, or asthma.

**Precautions:** It may cause transient dysrhythmias. COPD.

**Dosage/Route:** 6 mg rapidly (over 1 to 2 sec) IV, then flush the line rapidly with saline. If ineffective, 12 mg in 1 to 2 min, may be repeated. Ped: 0.1 mg/kg (over 1 to 2 sec) IV followed by rapid saline flush, then 0.2 mg/kg in 1 to 2 min to max 12 mg.

©2006 Pearson Education, Inc.

**ACETAMINOPHEN**

**ACTIVATED CHARCOAL**

**ADENOSINE**

**Name/Class: ALBUTEROL (Proventil, Ventolin)/Sympathomimetic Bronchodilator**

**Description:** Albuterol is a synthetic sympathomimetic that causes bronchodilatation with less cardiac effect than epinephrine and reduces mucus secretion, pulmonary capillary leaking, and edema in the lungs during allergic reactions.

**Indications:** Bronchospasm and asthma in COPD.

**Contraindications:** Hypersensitivity to the drug.

**Precautions:** The patient may experience tachycardia, anxiety, nausea, cough, wheezing, and/or dizziness. Vital signs and breath sounds must be monitored; use caution with elderly, cardiac, or hypertensive patients.

**Dosage/Route:** Two inhalations (90 mcg) via metered-dose inhaler (2 sprays) or 2.5 mg in 2.5 to 3 mL NS via nebulizer, repeat as needed. The duration of effect is 3 to 6 hours.

**Ped:** 0.15 mg/kg in 2.5 to 3 mL NS via nebulizer, repeat as needed.

©2006 Pearson Education, Inc.

**Name/Class: ALTEPLASE RECOMBINANT (tPA) (Activase)/Thrombolytic**

**Description:** Recombinant DNA-derived form of human tPA promotes thrombolysis by forming plasmin. Plasmin, in turn, degrades fibrin and fibrinogen and, ultimately, the clot.

**Indications:** To thrombolyse in acute myocardial infarction, acute ischemic stroke, and pulmonary embolism.

**Contraindications:** Active internal bleeding, suspected aortic dissection, traumatic CPR, recent hemorrhagic stroke (6 mo), intracranial or intraspinal surgery or trauma (2 mo), pregnancy, uncontrolled hypertension, or hypersensitivity to thrombolytics.

**Precautions:** Recent major surgery, cerebral vascular disease, recent GI or GU bleeding, recent trauma, hypertension, patient > 75 years, current oral anticoagulants, or hemorrhagic ophthalmic conditions.

**Dosage/Route:** *MI and stroke:* 15 mg IV, then 0.75 mg/kg (up to 50 mg) over 30 min, then 0.5 mg/kg (up to 35 mg) over 60 min.

*Pulmonary embolism:* 100 mg IV infusion over 2 hours.

©2006 Pearson Education, Inc.

**Name/Class: AMINOPHYLLINE (Aminophylline, Somophyllin)/Methylxanthine Bronchodilator**

**Description:** Aminophylline is a methylxanthine that prolongs bronchodilation and decreased mucus production and has mild cardiac and CNS stimulating effects.

**Indications:** Bronchospasm in asthma and COPD refractory to sympathomimetics and other bronchodilators and in CHF.

**Contraindications:** Hypersensitivity to methylxanthines or uncontrolled cardiac dysrhythmias.

**Precautions:** Cardiovascular disease, hypertension, or taking theophylline, hepatic impairment, diabetes, hyperthyroidism, young children, glaucoma, peptic ulcers, acute influenza or influenza immunization, and the elderly. Watch for PVCs or tachycardia. May cause hypotension.

**Dosage/Route:** 250 to 500 mg IV over 20 to 30 min. **Ped:** 6 mg/kg over 20 to 30 min. Max 12 mg/kg/day.

©2006 Pearson Education, Inc.

**ALBUTEROL**

**ALTEPLASE RECOMBINANT**

**AMINOPHYLLINE**

**Name/Class:** AMIODARONE (Cordarone, Pacerone)/Antidysrhythmic

**Description:** Amiodarone is an antidysrhythmic that prolongs the duration of the action potential and refractory period and relaxes smooth muscles, reducing peripheral vascular resistance and increasing coronary blood flow.

**Indications:** Life-threatening ventricular and supraventricular dysrhythmias, frequently atrial fibrillation.

**Contraindications:** Hypersensitivity, cardiogenic shock, severe sinus bradycardia, or advanced heart block.

**Precautions:** Hepatic impairment, pregnancy, nursing mothers, children.

**Dosage/Route:** 150 to 300 mg IV over 10 min, then 1 mg/min over next 6 hours. Ped: 5 mg/kg IV/IO, then 15 mg/kg/day.

©2006 Pearson Education, Inc.

**Name/Class:** AMRINONE (Inocor)/Cardiac Inotrope

**Description:** Amrinone enhances myocardial contractility, increasing output, and reduces systemic vascular resistance.

**Indications:** To increase cardiac output in CHF or children in septic shock or myocardial dysfunction.

**Contraindications:** Hypersensitivity to amrinone or bisulfites.

**Precautions:** CHF immediately after MI (may cause ischemia).

**Dosage/Route:** CHF: 0.75 mg/kg IV over 2 to 3 min, then drip at 5 to 15 mcg/kg/min titrated to hemodynamic response (may repeat bolus at 30 min).

*Septic shock or myocardial dysfunction in peds:* 0.75 to 1 mg/kg IV over 5 min, repeated up to 2 times to 3 mg/kg, then drip of 5 to 10 mcg/min IV.

©2006 Pearson Education, Inc.

**Name/Class:** AMYL NITRITE (Amyl Nitrite)/Vasodilator

**Description:** Amyl nitrite is a short-acting vasodilator similar to nitroglycerin. Binds with hemoglobin to help biodegrade cyanide.

**Indications:** Acute cyanide poisoning.

**Contraindications:** None for acute cyanide poisoning.

**Precautions:** None.

**Dosage/Route:** 0.3 mL ampule/min (crushed) until sodium nitrate infusion is ready. Ped: same as adult.

©2006 Pearson Education, Inc.

**AMIODARONE**

**AMRINONE**

**AMYL NITRITE**

**Name/Class:** ANISTREPLASE (APSAC) (Eminase)/Thrombolytic

**Description:** Anistreplase causes thrombolysis by converting plasminogen into plasmin, which then dissolves the fibrin and fibrinogen of the clot.

**Indications:** To reduce infarct size in acute MI.

**Contraindications:** Active internal bleeding, suspected aortic dissection, traumatic CPR, recent hemorrhagic stroke, intracranial or intraspinal surgery or trauma, tumors, pregnancy, hypertension, hypersensitivity to anistreplase or streptokinase.

**Precautions:** Recent major surgery, cerebral vascular disease, recent GI or GU bleeding, recent trauma, hypertension, patients over 75 years, current oral anticoagulants, or hemorrhagic ophthalmic conditions.

**Dosage/Route:** 30 units IV over 2 to 5 min.

©2006 Pearson Education, Inc.

**Name/Class:** ASPIRIN (Acetylsalicylic Acid) (Alka-Seltzer, Bayer, Empirin, St. Joseph Children's)/Analgesic, Antipyretic, Platelet Inhibitor, Antiinflammatory

**Description:** Aspirin inhibits agents that cause the production of inflammation, pain, and fever. It relieves mild to moderate pain by acting on the peripheral nervous system, lowers body temperature in fever, and powerfully inhibits platelet aggregation.

**Indications:** Chest pain suggestive of an MI.

**Contraindications:** Hypersensitivity to salicylates, active ulcer disease, asthma.

**Precautions:** Allergies to other NSAIDs, bleeding disorders, children or teenagers with varicella or influenza-like symptoms.

**Dosage/Route:** 160 to 325 mg PO (chewable).

©2006 Pearson Education, Inc.

**Name/Class:** ATENOLOL (Tenormin)/Antidysrhythmic, Antihypertensive

**Description:** Atenolol is a selective beta-blocker that reduces the rate and force of cardiac contraction and lowers cardiac output and blood pressure.

**Indications:** Non-Q-wave MI and unstable angina.

**Contraindications:** Sinus bradycardia, 2nd- or 3rd-degree heart block, CHF, cardiogenic failure or shock.

**Precautions:** Asthma, COPD, or CHF controlled by digitalis and diuretics.

**Dosage/Route:** 5 mg slow IV (over 5 min), if tolerated, then after 10 min repeat.

Ped: 0.8 to 1.5 mg/kg/day PO (max 2 mg/kg/day).

©2006 Pearson Education, Inc.

**ANISTREPLASE (APSAC)**

**ASPIRIN**

**ATENOLOL**

**Name/Class: ATRACURIUM (Tracrium)/Nondepolarizing Neuromuscular Blocker**

**Description:** Atracurium is a synthetic skeletal muscle relaxant that produces a short-duration neuromuscular blockade.

**Indications:** To produce skeletal muscle relaxation to facilitate endotracheal intubation and IPPV.

**Contraindications:** Myasthenia gravis.

**Precautions:** Asthma, anaphylaxis, cardiovascular or neuromuscular disease, electrolyte or acid/base imbalance, dehydration, or pulmonary impairment.

**Dosage/Route:** 0.4 to 0.5 mg/kg IV. Ped: < 2 years 0.3 to 0.4 mg/kg, otherwise same as adult.

©2006 Pearson Education, Inc.

**Name/Class: ATROPINE/Parasympatholytic**

**Description:** Atropine blocks the parasympathetic nervous system, specifically the vagal effects on heart rate. It does not increase contractility but may increase myocardial oxygen demand. Decreases airway secretions.

**Indications:** Hemodynamically significant bradycardia, bradysystolic arrest, and organophosphate poisoning.

**Contraindications:** None in the emergency setting.

**Precautions:** AMI, glaucoma.

**Dosage/Route:** *Symptomatic bradycardia:* 0.5 to 1 mg IV/2 mg ET. Repeat 3 to 5 min to 0.04 mg/kg. Ped: 0.02 mg/kg IV, 0.04 mg/kg ET, may repeat in 5 min up to 1 mg. *Asystole:* 1 mg IV or 2 mg ET, may repeat 3 to 5 min up to 0.04 mg/kg.

*Organophosphate poisoning:* 2 to 5 mg IV/IM/IO/10 to 15 min. Ped: 0.05 mg/kg IV/IM/IO/10 to 15 min.

©2006 Pearson Education, Inc.

**Name/Class: BRETYLIUM (Bretylol)/Antidysrhythmic**

**Description:** Bretylum causes a release of norepinephrine, depresses ventricular fibrillation, and reduces ectopy. Bretylum also suppresses ventricular tachydysrhythmias with reentry mechanisms.

**Indications:** Ventricular fibrillation and ventricular tachycardia refractory to lidocaine.

**Contraindications:** None in the presence of life-threatening dysrhythmias.

**Precautions:** Digitalized patients, digitalis-induced dysrhythmias, fixed cardiac output, angina, or renal impairment. May induce postural hypotension.

**Dosage/Route:** 5 mg/kg IV, then 10 mg/kg/15 to 30 min, to a max 30 mg/kg. Following conversion: 1 to 2 mg/min drip. Ped: 5 mg/kg IV, repeat 10 mg/kg in 15 to 30 min.

©2006 Pearson Education, Inc.

**ATRACURIUM**

**ATROPINE**

**BRETYLIUM**

**Name/Class: BUMETANIDE (Bumex)/Loop Diuretic**

**Description:** Bumetanide is related to furosemide, though it has a faster rate of onset, a greater diuretic potency (40 times), shorter duration, and produces only mild hypotension.

**Indications:** To promote diuresis in CHF and pulmonary edema.

**Contraindications:** Hypersensitivity to bumetanide and other sulfonamides.

**Precautions:** Pregnancy (use only for life-threatening conditions).

**Dosage/Route:** 0.5 to 1 mg IM/IV over 1 to 2 min, repeat in 2 to 3 hours as needed.

©2006 Pearson Education, Inc.

**Name/Class: BUTORPHANOL (Stadol)/Synthetic Narcotic Analgesic**

**Description:** Butorphanol is a centrally acting synthetic narcotic analgesic about 5 times more potent than morphine. A schedule IV narcotic.

**Indications:** Moderate to severe pain.

**Contraindications:** Hypersensitivity, head injury, or undiagnosed abdominal pain.

**Precautions:** May cause withdrawal in narcotic-dependent patients

**Dosage/Route:** 1 mg IV or 3 to 4 mg IM/3 to 4 hours.

©2006 Pearson Education, Inc.

**Name/Class: CALCIUM CHLORIDE (Calcium Chloride)/Electrolyte**

**Description:** Calcium chloride increases myocardial contractile force and increases ventricular automaticity.

**Indications:** Hyperkalemia, hypocalcemia, hypermagnesemia, and calcium channel blocker toxicity.

**Contraindications:** Ventricular fibrillation, hypercalcemia, and possible digitalis toxicity.

**Precautions:** It may precipitate toxicity in patients taking digoxin. Ensure the IV line is in a large vein and flushed before using and after calcium.

**Dosage/Route:** 2 to 4 mg/kg IV (10% solution)/10 min, as needed. Ped: 20 mg/kg IV (10% solution) repeat at 10 min, as needed.

©2006 Pearson Education, Inc.

**BUMETANIDE**

**BUTORPHANOL**

**CALCIUM CHLORIDE**

**Name/Class:** CALCIUM GLUCONATE (Kalcinate)/Electrolyte

**Description:** Calcium gluconate increases myocardial contractile force and increases ventricular automaticity. It is more potent than calcium chloride.

**Indications:** Hyperkalemia, hypermagnesemia, and calcium channel blocker toxicity.

**Contraindications:** Ventricular fibrillation.

**Precautions:** It may precipitate toxicity in patients taking digitalis, with renal or cardiac insufficiency, and immobilized patients.

**Dosage/Route:** 5 to 8 mL of 10% solution, repeated as necessary at 10-min intervals.

©2006 Pearson Education, Inc.

**Name/Class:** CHLORDIAZEPOXIDE (Librium)/Sedative, Hypnotic

**Description:** Chlordiazepoxide is a benzodiazepine derivative that produces mild sedation and anticonvulsant, skeletal muscle relaxant, and prolonged hypnotic effects.

**Indications:** Severe anxiety and tension, acute alcohol withdrawal symptoms (DTs).

**Contraindications:** Hypersensitivity to benzodiazepines, pregnant and nursing mothers, children under 6.

**Precautions:** Primary depressive disorders or psychoses, acute alcohol intoxication.

**Dosage/Route:** 50 to 100 mg IV/IM.

©2006 Pearson Education, Inc.

**Name/Class:** CHLORPROMAZINE (Thorazine)/Tranquilizer, Antipsychotic

**Description:** Chlorpromazine is a phenothiazine derivative used to manage psychotic episodes by providing strong sedation and moderate extrapyramidal symptoms. Produces reduced initiative, interest, and affect.

**Indications:** Acute psychotic episode, intractable hiccups, nausea/vomiting.

**Contraindications:** Hypersensitivity to phenothiazines, coma, sedative overdose, acute alcohol withdrawal, and children < 6 months.

**Precautions:** Agitated states with depression, seizure disorders, respiratory infection or COPD, glaucoma, diabetes, hypertension, peptic ulcer, prostatic hypertrophy, breast cancer, thyroid, cardiovascular, and hepatic impairment, and patients exposed to extreme heat or organophosphates.

**Dosage/Route:** 25 to 50 mg IM. Ped: 0.5 mg/kg IM or 1 mg/kg PR.

©2006 Pearson Education, Inc.

---

**CALCIUM GLUCONATE**

---

**CHLORDIAZEPOXIDE**

---

**CHLORPROMAZINE**

---

**Name/Class: DEXAMETHASONE (Decadron)/Steroid**

**Description:** Dexamethasone is a long-acting synthetic adrenocorticoid with intense antiinflammatory activity. It prevents the accumulation of inflammation generating cells at the sites of infection or injury.

**Indications:** Anaphylaxis, asthma, COPD, spinal cord edema.

**Contraindications:** No absolute contraindications in the emergency setting. Relative contraindications: systemic fungal infections, acute infections, tuberculosis, varicella, or vaccinia or live virus vaccinations.

**Precautions:** Herpes simplex, keratitis, myasthenia gravis, hepatic or renal impairment, diabetes, CHF, seizures, psychic disorders, hypothyroidism, and GI ulceration.

**Dosage/Route:** 4 to 24 mg IV/IM Ped: 0.5 to 1 mg/kg.

©2006 Pearson Education, Inc.

**Name/Class: DEXTROSE 50% IN WATER (D<sub>50</sub>W)/Carbohydrate**

**Description:** Dextrose is a simple sugar that the body can rapidly metabolize to create energy.

**Indications:** Hypoglycemia

**Contraindications:** None in hypoglycemia.

**Precautions:** Increased ICP. Determine blood glucose level before administration. Ensure good venous access.

**Dosage/Route:** 25g D<sub>50</sub>W (50 mL) IV. Ped: 2 mL/kg of a 25% solution IV.

©2006 Pearson Education, Inc.

**Name/Class: DIAZEPAM (Valium)/Antianxiety, Hypnotic, Anticonvulsant, Sedative**

**Description:** Diazepam is a benzodiazepine sedative and skeletal muscle relaxant that reduces tremors, induces amnesia, and reduces the incidence and recurrence of seizures. It relaxes muscle spasms in orthopedic injuries and produces amnesia for painful procedures (cardioversion).

**Indications:** Major motor seizures, status epilepticus, premedication before cardioversion, muscle tremors due to injury, and acute anxiety.

**Contraindications:** Hypersensitivity to the drug, shock, coma, acute alcoholism, depressed vital signs, obstetric patients, neonates.

**Precautions:** Psychoses, depression, myasthenia gravis, hepatic or renal impairment, addiction, elderly or very ill patients, or COPD. Due to a short half-life of the drug, seizure activity may recur.

**Dosage/Route:** *Seizures:* 5 to 10 mg IV/IM. Ped: 0.5 to 2 mg IV/IM.

*Acute anxiety:* 2 to 5 mg IV/IM. Ped: 0.5 to 2 mg IM.

*Premedication:* 5 to 15 mg IV. Ped: 0.2 to 0.5 mg/kg IV.

©2006 Pearson Education, Inc.

**DEXAMETHASONE**

**DEXTROSE 50% IN WATER (D<sub>50</sub>W)**

**DIAZEPAM**

**Name/Class: DIAZOXIDE (Hyperstat)/Antihypertensive**

**Description:** Diazoxide is a rapid-acting thiazide nondiuretic hypotensive and hyperglycemia agent that reduces BP and peripheral vascular resistance.

**Indications:** Rapidly decreases BP in hypertensive crisis

**Contraindications:** Hypersensitivity to thiazides, cerebral bleeding, eclampsia, significant coronary artery disease.

**Precautions:** Diabetes, impaired cerebral or cardiac circulation, renal impairment, corticosteroid or progesterone therapy, gout, or uremia.

**Dosage/Route:** 1 to 3 mg/kg IV up to 150 mg, repeated/5 to 15 min, as needed. Ped: same as adult.

©2006 Pearson Education, Inc.

**Name/Class: DIGOXIN (Digoxin, Lanoxin)/Cardiac Glycoside**

**Description:** Digoxin is a rapid-acting cardiac glycoside used in the treatment of CHF and rapid atrial dysrhythmias. It increases the force and velocity of myocardial contraction and cardiac output. It also decreases conduction through the AV node, thus decreasing heart rate.

**Indications:** Increase cardiac output in CHF and to stabilize supraventricular tachydysrhythmias.

**Contraindications:** Hypersensitivity, ventricular fibrillation, or ventricular tachycardia except due to CHF.

**Precautions:** Reduce dosage if digitoxin taken within 2 weeks. Toxicity potentiated by an MI and with hypokalemia, hypocalcemia, advanced heart disease, incomplete heart block, cor pulmonale, hyperthyroidism, respiratory impairment, children, elderly or debilitated patients, and hypomagnesemia.

**Dosage/Route:** 0.25 to 0.5 mg slowly IV. Ped: 10 to 50 mcg/kg IV.

©2006 Pearson Education, Inc.

**Name/Class: DIGOXIN IMMUNE FAB (Digibind)/Antidote**

**Description:** Digoxin immune FAB is comprised of fragments of antibodies specific for digoxin (and effective for digitoxin) and prevents the drug from binding to receptor sites.

**Indications:** Life-threatening digoxin or digitoxin toxicity.

**Contraindications:** Hypersensitivity to sheep products and renal or cardiac failure.

**Precautions:** Patients with prior sheep or bovine antibody fragments, renal impairment, and allergies.

**Dosage/Route:** Dose dependent upon patient digoxin or digitoxin levels.

©2006 Pearson Education, Inc.

**DIAZOXIDE**

**DIGOXIN**

**DIGOXIN IMMUNE FAB**

**Name/Class: DILTIAZEM (Cardizem)/Calcium Channel Blocker**

**Description:** Diltiazem is a slow calcium channel blocker similar to verapamil. It dilates coronary and peripheral arteries and arterioles, thus increasing circulation to the heart and reducing peripheral vascular resistance.

**Indications:** Supraventricular tachydysrhythmias (atrial fibrillation, atrial flutter, and PSVT refractory to adenosine) and to increase coronary artery perfusion in angina.

**Contraindications:** Hypersensitivity, sick sinus syndrome, 2nd- or 3rd-degree heart block, systolic BP < 90, diastolic BP < 60, wide-complex tachycardia and WPW.

**Precautions:** CHF (especially with beta blockers), conduction abnormalities, renal or hepatic impairment, the elderly, and nursing mothers.

**Dosage/Route:** 0.25 mg/kg IV over 2 min, may repeat as needed with 0.35 mg/kg followed by a drip of 5 to 10 mg/hr not to exceed 15 mg/hr over 24 hours.

©2006 Pearson Education, Inc.

**Name/Class: DIMENHYDRINATE (Dramamine)/Antihistamine**

**Description:** Dimenhydrinate is related to diphenhydramine though it is most frequently used for the prevention and treatment of motion sickness and vertigo rather than any antihistamine properties.

**Indications:** To relieve nausea/vomiting associated with motion sickness and narcotic use.

**Contraindications:** None in the emergency setting.

**Precautions:** Seizure disorders and asthma.

**Dosage/Route:** 12.5 to 25 mg IV; 50 mg IM/4 hours as needed. Ped: 1.25 mg/kg/4 hours up to 300 mg/day.

©2006 Pearson Education, Inc.

**Name/Class: DIMERCAPROL (BAL in Oil)/Antidote**

**Description:** Dimercaprol is a dithiol compound that combines with the ions of various heavy metals to form nontoxic compounds that can be excreted.

**Indications:** Antidote for acute arsenic, mercury, lead, and gold poisoning.

**Contraindications:** Hepatic and severe renal impairment and poisonings due to cadmium, iron, selenium, and uranium.

**Precautions:** Hypertensive patients.

**Dosage/Route:** *Gold and arsenic:* 2.5 to 3 mg/kg IM. Ped: same as adult.

*Mercury:* 5 mg/kg IM. Ped: same as adult.

*Lead:* 4 mg/kg IM. Ped: same as adult.

©2006 Pearson Education, Inc.

**DILTIAZEM**

**DIMENHYDRINATE**

**DIMERCAPROL**

**Name/Class: DIPHENHYDRAMINE (Benadryl)/Antihistamine**

**Description:** Diphenhydramine blocks histamine release, thereby reducing bronchoconstriction, vasodilation, and edema.

**Indications:** Anaphylaxis, allergic reactions, and dystonic reactions.

**Contraindications:** Asthma and other lower respiratory diseases.

**Precautions:** May induce hypotension, headache, palpitations, tachycardia, sedation, drowsiness, and/or disturbed coordination.

**Dosage/Route:** 25 to 50 mg IV/IM.

©2006 Pearson Education, Inc.

**Name/Class: DOBUTAMINE (Dobutrex)/Sympathomimetic**

**Description:** Dobutamine is a synthetic catecholamine and beta agent that increases the strength of cardiac contraction without appreciably increasing rate.

**Indications:** To increase cardiac output in congestive heart failure/cardiogenic shock.

**Contraindications:** Hypersensitivity to sympathomimetic amines, ventricular tachycardia, and hypovolemia without fluid resuscitation.

**Precautions:** Atrial fibrillation or preexisting hypertension.

**Dosage/Route:** 2 to 20 mcg/kg/min IV. Ped: same as adult.

©2006 Pearson Education, Inc.

**Name/Class: DOPAMINE (Intropin)/Sympathomimetic**

**Description:** Dopamine is a naturally occurring catecholamine that increases cardiac output without appreciably increasing myocardial oxygen consumption. It maintains renal and mesenteric blood flow while inducing vasoconstriction and increasing systolic blood pressure.

**Indications:** Nonhypovolemic hypotension (70 to 100 mmHg) and cardiogenic shock.

**Contraindications:** Hypovolemic hypotension without aggressive fluid resuscitation, tachydysrhythmias, ventricular fibrillation, and pheochromocytoma.

**Precautions:** Occlusive vascular disease, cold injury, arterial embolism. Ensure adequate fluid resuscitation of the hypovolemic patient.

**Dosage/Route:** 2 to 5 mcg/kg/min up to 20 mcg/kg/min, titrated to effect. Ped: same as adult.

©2006 Pearson Education, Inc.

---

**DIPHENHYDRAMINE**

---

**DOBUTAMINE**

---

**DOPAMINE**

---

**Name/Class: DROPERIDOL (Inapsine)/Antiemetic**

**Description:** Droperidol is related to haloperidol and antagonizes the emetic properties of morphine-like analgesics. It may also produce hypotension and mild sedation.

**Indications:** Nausea and vomiting (second line), to produce a tranquilizing effect, and in some cases as an antipsychotic.

**Contraindications:** Intolerance.

**Precautions:** Elderly, debilitated, hypotension, and hepatic, renal, or cardiac impairment and Parkinson's disease.

**Dosage/Route:** 2.5 to 10 mg IV. Ped: 0.088 to 0.165 mg/kg IV.

©2006 Pearson Education, Inc.

**Name/Class: ENOXAPARIN (Lovenox)/Anticoagulant**

**Description:** Enoxaparin is a heparin derivative that prevents the conversion of fibrinogen to fibrin.

**Indications:** To inhibit clot formation in unstable angina and non-Q-wave myocardial infarction.

**Contraindications:** Hypersensitivity to the drug, pork products or heparin, major active bleeding, or thrombocytopenia.

**Precautions:**

**Dosage/Route:** *Unstable angina and non-Q wave MI:* 1 mg/kg subcutaneously.

*Pulmonary embolism:* 0.5 mg/kg IV.

©2006 Pearson Education, Inc.

**Name/Class: EPINEPHRINE (Adrenalin)/Sympathomimetic**

**Description:** Epinephrine is a naturally occurring catecholamine that increases heart rate, cardiac contractile force myocardial electrical activity, systemic vascular resistance, and systolic blood pressure and decreases overall airway resistance and automaticity. It also, through bronchial artery constriction, may reduce pulmonary congestion and increase tidal volume and vital capacity.

**Indications:** To restore rhythm in cardiac arrest and severe allergic reactions.

**Contraindications:** Hypersensitivity to sympathomimetic amines, narrow angle glaucoma; hemorrhagic, traumatic, or cardiac shock; coronary insufficiency; dysrhythmias; organic brain or heart disease; or during labor.

**Precautions:** Elderly, debilitated patients, hypertension, diabetes, hyperthyroidism, Parkinson's disease, tuberculosis, asthma, emphysema, and in children < 6 years.

**Dosage/Route:** *Arrest:* 1 mg of 1:10,000 IV/3 to 5 min (ET: 2 to 2.5 mg 1:1,000).

Ped: 0.01 mg/kg 1:10,000 IV/IO (ET: 0.1 mg/kg 1:1,000). All subsequent doses 0.1 mg/kg IV/IO.

*Allergic reactions:* 0.3 to 0.5 mg of 1:1,000 subcutaneously/5 to 15 min as needed or 0.5 to

1 mg of 1:10,000 IV if subcutaneous dose ineffective or severe reaction. Ped: 0.01 mg/kg of 1:1,000

subcutaneously/10 to 15 min or 0.01 mg/kg of 1:10,000 IV if subcutaneous dose ineffective or severe.

©2006 Pearson Education, Inc.

**DROPERIDOL**

**ENOXAPARIN**

**EPINEPHRINE**

**Name/Class: ESMOLOL (Brevibloc)/Beta Blocker**

**Description:** Esmolol is an ultra–short-acting cardioselective beta blocker that inhibits the actions of the catecholamines.

**Indications:** Supraventricular tachycardias with rapid ventricular responses.

**Contraindications:** Cardiac failure, 2nd- and 3rd-degree block, sinus bradycardia, and cardiogenic shock.

**Precautions:** Allergies or bronchial asthma, emphysema, CHF, diabetes, and renal impairment.

**Dosage/Route:** 500 mcg/kg/min IV for 1 min, loading dose, then 50 mcg/kg/min for 4 min. If unsuccessful, repeat loading dose every 4 min and increase maintenance dose by 50 mcg/kg to 200 mcg/kg/min.

©2006 Pearson Education, Inc.

**Name/Class: ETOMIDATE (Amidate)/Hypnotic**

**Description:** Etomidate is an ultra–short-acting nonbarbiturate hypnotic with no analgesic effects and limited cardiovascular and respiratory effects.

**Indications:** Induce sedation for rapid sequence intubation.

**Contraindications:** Hypersensitivity.

**Precautions:** Marked hypotension, severe asthma, or severe cardiovascular disease.

**Dosage/Route:** 0.1 to 0.3 mg/kg IV over 15 to 30 sec. Ped: children > 10 years, same as for adults.

©2006 Pearson Education, Inc.

**Name/Class: FENTANYL (Sublimaze)/Narcotic Analgesic**

**Description:** Fentanyl is a potent synthetic narcotic analgesic similar to morphine and meperidine but with a more rapid and less-prolonged action.

**Indications:** Induce sedation for endotracheal intubation.

**Contraindications:** MAO inhibitors within 14 days, myasthenia gravis.

**Precautions:** Increased intracranial pressure, elderly, debilitated, COPD, respiratory problems, hepatic and renal insufficiency.

**Dosage/Route:** 25 to 100 mcg slowly IV (2 to 3 min). Ped: 2 mcg/kg slow IV/IM.

©2006 Pearson Education, Inc.

**ESMOLOL**

**ETOMIDATE**

**FENTANYL**

**Name/Class: FLECAINIDE (Tambocor)/Antidysrhythmic**

**Description:** Flecainide is a local anesthetic and antidysrhythmic that slows myocardial conduction and effectively suppresses PVCs and a variety of atrial and ventricular dysrhythmias.

**Indications:** Atrial flutter, atrial fibrillation, AV reentrant tachycardia, or SVT associated with WPW syndrome.

**Contraindications:** Hypersensitivity, 2nd- or 3rd-degree heart block, right bundle branch block with left hemiblock, cardiogenic shock, or significant hepatic impairment.

**Precautions:** CHF, sick sinus syndrome, or renal impairment.

**Dosage/Route:** 100 mg PO/12 hour or 2 mg/kg IV at 10 mg/min. Ped: 1 to 3 mg/kg/day PO in three equal doses (max 8 mg/kg/day).

©2006 Pearson Education, Inc.

**Name/Class: FLUMAZENIL (Romazicon)/Benzodiazepine Antagonist**

**Description:** Flumazenil is a benzodiazepine antagonist used to reverse the sedative, recall, and psychomotor effects of diazepam, midazolam, and the other benzodiazepines.

**Indications:** Respiratory depression secondary to the benzodiazepines.

**Contraindications:** Hypersensitivity to flumazenil or benzodiazepines; those patients who take flumazenil for status epilepticus or seizures; seizure-prone patients during labor and delivery; tricyclic antidepressant overdose.

**Precautions:** Hepatic impairment, elderly, pregnancy, nursing mothers, head injury, alcohol and drug dependency and physical dependence on benzodiazepines.

**Dosage/Route:** 0.2 mg IV over 30 sec/min, up to 1 mg.

©2006 Pearson Education, Inc.

**Name/Class: FOSPHENYTOIN (Cerebyx)/Anticonvulsant**

**Description:** Fosphenytoin is a drug that, once administered, is converted to phenytoin and causes the anticonvulsant properties associated with that drug.

**Indications:** Seizure control and status epilepticus.

**Contraindications:** Hypersensitivity, seizures due to hypoglycemia, sinus bradycardia, heart block, Stokes-Adams syndrome, late pregnancy, and lactating mothers.

**Precautions:** Hepatic or renal impairment, alcoholism, hypotension, bradycardia, heart block, severe CAD, diabetes, hyperglycemia, or respiratory depression.

**Dosage/Route:** 15 to 20 mg PE/kg IV given at 100 to 150 mg PE/min (PE = phenytoin equivalent).

©2006 Pearson Education, Inc.

**FLECAINIDE**

**FLUMAZENIL**

**FOSPHENYTOIN**

**Name/Class: FUROSEMIDE (Lasix)/Diuretic**

**Description:** Furosemide is a rapid-acting, potent diuretic and antihypertensive that inhibits sodium reabsorption by the kidney. Its vasodilating effects reduce venous return and cardiac workload.

**Indications:** Congestive heart failure and pulmonary edema.

**Contraindications:** Hypersensitivity to furosemide or the sulfonamides, fluid and electrolyte depletion states, hepatic coma, pregnancy (except in life-threatening circumstances).

**Precautions:** Infants, elderly, hepatic impairment, nephrotic syndrome, cardiogenic shock associated with acute MI, gout, or patients receiving digitalis or potassium-depleting steroids.

**Dosage/Route:** 40 to 120 mg slow IV. Ped: 1 mg/kg slow IV.

©2006 Pearson Education, Inc.

**Name/Class: GLUCAGON (GlucaGen)/Hormone, Antihypoglycemic**

**Description:** Glucagon is a protein secreted by pancreatic cells that causes a breakdown of stored glycogen into glucose and inhibits the synthesis of glycogen from glucose.

**Indications:** Hypoglycemia without IV access and to reverse beta-blocker overdose.

**Contraindications:** Hypersensitivity to glucagon or protein compounds.

**Precautions:** Cardiovascular or renal impairment. Effective only if there are sufficient stores of glycogen in the liver.

**Dosage/Route:** *Hypoglycemia:* 1 mg IM/SC repeat/5 to 20 min. Ped: 0.1 mg/kg 1 m/SC/IV for child < 10 kg; 1 mg/kg 1 m/SC/IV for child > 10 kg.

*Beta-blocker overdose:* 50 to 150 mg/kg IV over 1 min. Ped: 50 to 150 mg/kg IV over 1 min.

©2006 Pearson Education, Inc.

**Name/Class: HALOPERIDOL (Haldol)/Antipsychotic**

**Description:** Haloperidol is believed to block dopamine receptors in the brain associated with mood and behavior, is a potent antiemetic, and impairs temperature regulation.

**Indications:** Acute psychotic episodes.

**Contraindications:** Parkinson's disease, seizure disorders, coma, alcohol depression, CNS depression, and thyrotoxicosis, and with other sedatives.

**Precautions:** Elderly, debilitated patients, urinary retention, glaucoma, severe cardiovascular disease, or anticonvulsant, anticoagulant, or lithium therapy.

**Dosage/Route:** 2 to 5 mg IM. Ped: Children > 3 years, 0.015 to 0.15 mg/kg/day PO in 2 or 3 divided doses.

©2006 Pearson Education, Inc.

**FUROSEMIDE**

**GLUCAGON**

**HALOPERIDOL**

**Name/Class: HEPARIN (Heparin)/Anticoagulant**

**Description:** Heparin is a rapid-onset anticoagulant, enhancing the effects of antithrombin III and blocking the conversion of prothrombin to thrombin and fibrinogen to fibrin.

**Indications:** To prevent thrombus formation in acute MI.

**Contraindications:** Hypersensitivity; active bleeding or bleeding tendencies; recent eye, brain, or spinal surgery; shock.

**Precautions:** Alcoholism, elderly, allergies, indwelling catheters, elderly, menstruation, pregnancy, or cerebral embolism.

**Dosage/Route:** 5,000 units IV, then 20,000 to 40,000 units over 24 hours.

©2006 Pearson Education, Inc.

**Name/Class: HYDRALAZINE (Apresoline)/Antihypertensive**

**Description:** Hydralazine reduces blood pressure by arterial vasodilation, increasing cardiac output and renal and cerebral blood flow.

**Indications:** Hypertensive crisis and preeclampsia.

**Contraindications:** Hypersensitivity, coronary artery or mitral valve disease, AMI, tachydysrhythmias.

**Precautions:** CVA, renal impairment, and MAO inhibitor use.

**Dosage/Route:** 20 to 40 mg IV/IM repeated in 4 to 6 hours. Ped: 0.1 to 0.5 mg/kg/day IV/IM.

©2006 Pearson Education, Inc.

**Name/Class: HYDROCORTISONE (Solu-Cortef)/Steroid**

**Description:** Hydrocortisone is a short-acting synthetic steroid that inhibits histamine formation, storage, and release from mast cells, reducing allergic response.

**Indications:** Inflammation during allergic reactions, severe anaphylaxis, asthma, and COPD.

**Contraindications:** Hypersensitivity to glucocorticoids.

**Precautions:** Limited precautions in acute care.

**Dosage/Route:** 40 to 250 mg IV/IM. Ped: 4 to 8 mg/kg/day IV/IM.

©2006 Pearson Education, Inc.

**HEPARIN**

**HYDRALAZINE**

**HYDROCORTISONE**

**Name/Class: HYDROXYZINE (Vistaril)/Antihistamine**

**Description:** Hydroxyzine is an antihistamine with depressive, sedative, antiemetic, and bronchodilator properties.

**Indications:** Acute anxiety, nausea/vomiting.

**Contraindications:** Hypersensitivity.

**Precautions:** Elderly.

**Dosage/Route:** *Anxiety:* 50 to 100 mg deep IM. Ped: 1 mg/kg deep IM.

*Nausea/vomiting:* 25 to 50 mg deep IM. Ped: 1 mg/kg deep IM.

©2006 Pearson Education, Inc.

**Name/Class: IBUPROFEN (Advil, Motrin, Nuprin, Excedrin IB)/Nonsteroidal Antiinflammatory Drug (NSAID)**

**Description:** Ibuprofen is the prototype NSAID with significant analgesic and antipyretic properties. It also inhibits platelet aggregation and increases bleeding time.

**Indications:** Reduce fever and relieve minor to moderate pain.

**Contraindications:** Sensitivity to aspirin or other NSAIDs, active peptic ulcer, and bleeding abnormalities.

**Precautions:** Hypertension, GI ulceration, hepatic or renal impairment, cardiac decompensation.

**Dosage/Route:** 200 to 400 mg PO/4 to 6 hours up to 1,200 mg/day. Ped: 5 to 10 mg/kg PO/4 to 6 hours up to 40 mg/kg/day.

©2006 Pearson Education, Inc.

**Name/Class: IBUTILIDE (Corvert)/Antidysrhythmic**

**Description:** Ibutilide is a short-acting antidysrhythmic that may convert atrial flutter and fibrillation or may assist with electrical cardioversion.

**Indications:** Recent onset atrial flutter and fibrillation.

**Contraindications:** Hypersensitivity, hypokalemia, or hypomagnesemia.

**Precautions:** CHF, low ejection fraction, recent MI, prolonged QT intervals, hepatic impairment, cardiovascular disorder other than atrial dysrhythmias, or drugs that prolong the QT interval, lactation.

**Dosage/Route:** 1 mg over 10 min IV. Patients < 60 kg, 0.01 mg/kg IV, may repeat in 10 min as needed.

©2006 Pearson Education, Inc.

**HYDROXYZINE**

**IBUPROFEN**

**IBUTILIDE**

**Name/Class:** INSULIN (Regular Insulin, Humulin)/Hormone

**Description:** Insulin is a naturally occurring protein that promotes the uptake of glucose by the cells.

**Indications:** Hyperglycemia and diabetic coma.

**Contraindications:** Hypersensitivity and hypoglycemia.

**Precautions:**

**Dosage/Route:** 5 to 10 units IV/IM/SC. Ped: 2 to 4 units IV/IM/SC.

©2006 Pearson Education, Inc.

**Name/Class:** IPECAC SYRUP/Emetic

**Description:** Ipecac syrup is a gastric irritant and acts on the emetic centers of the medulla to induce vomiting. Emesis usually occurs within 5 to 10 minutes.

**Indications:** Poisoning and overdose.

**Contraindications:** Reduced level of consciousness, corrosive ingestion, petroleum distillate ingestion, alkali ingestion, or antiemetic ingestion (especially phenothiazine).

**Precautions:** Monitor the airway and have suction ready. Administer activated charcoal only after emesis. Caution with heart disease patients.

**Dosage/Route:** 30 mL PO, followed by 1 to 2 glasses of water, repeat in 20 min as needed.

Ped: 15 mL PO followed by 1 to 2 glasses of water, repeat in 20 min as needed.

©2006 Pearson Education, Inc.

**Name/Class:** IPRATROPIUM (Atrovent)/Anticholinergic

**Description:** Ipratropium is a bronchodilator used in the treatment of respiratory emergencies that causes bronchial dilation and dries respiratory tract secretions by blocking acetylcholine receptors.

**Indications:** Bronchospasm associated with asthma, COPD, and inhaled irritants.

**Contraindications:** Hypersensitivity to atropine or its derivatives, or as a primary treatment for acute bronchospasm.

**Precautions:** Elderly, cardiovascular disease, or hypertension.

**Dosage/Route:** 500 mcg in 2.5 to 3 mL NS via nebulizer or 2 sprays from a metered dose inhaler.

Ped: 125 to 250 mcg in 2.5 to 3 mL NS via nebulizer, or 1 or 2 sprays of a metered dose inhaler.

©2006 Pearson Education, Inc.

**INSULIN**

**IPECAC SYRUP**

**IPRATROPIUM**

**Name/Class: ISOETHARINE (Bronkosol)/Sympathomimetic Bronchodilator**

**Description:** Isoetharine is a synthetic sympathomimetic with rapid onset and prolonged duration that relaxes the bronchial smooth muscles, decreasing airway resistance and helping clear secretions.

**Indications:** Bronchospasm in asthma and COPD.

**Contraindications:** Hypersensitivity to or use of sympathomimetic amines, preexisting tachydysrhythmias, allergy to sodium bisulfite agents.

**Precautions:** Elderly, hypertension, acute coronary artery disease, CHF, hyperthyroidism, diabetes, tuberculosis, or seizures.

**Dosage/Route:** 1 or 2 sprays via metered dose inhaler, 0.5 mL in 2 to 3 mL saline via nebulizer.  
Ped: 0.01 mL/kg of 1% solution (max 0.5 mL) diluted in 2 to 3 mL saline by nebulizer.

©2006 Pearson Education, Inc.

**Name/Class: ISOPROTERENOL (Isuprel)/Sympathomimetic**

**Description:** Isoproterenol is a synthetic sympathomimetic that results in increased cardiac output by increasing the strength of cardiac contraction and somewhat increasing rate. It also reduces peripheral vascular resistance and venous return.

**Indications:** Bradycardia refractory to atropine when pacing is not available and for severe status asthmaticus.

**Contraindications:** Cardiogenic shock.

**Precautions:** Tachydysrhythmias and those associated with digitalis and acute myocardial infarction.

**Dosage/Route:** *Bradycardia:* 2 to 10 mcg/min titrated to cardiac rate. Ped: 0.1 mcg/kg/min titrated to cardiac rate.

*Status asthmaticus:* 1 or 2 sprays, metered dose inhaler. Ped: same as adult.

©2006 Pearson Education, Inc.

**Name/Class: KETOROLAC (Toradol)/Nonsteroidal Antiinflammatory Drug (NSAID)**

**Description:** Ketorolac is an injectable NSAID that exhibits analgesic, antiinflammatory, and antipyretic properties without sedative effects.

**Indications:** Mild or moderate pain.

**Contraindications:** Hypersensitivity to ketorolac, aspirin, or other NSAIDs, and asthma.

**Precautions:** Peptic ulcers, renal or hepatic impairment, or elderly.

**Dosage/Route:** 30 mg IV/IM (15 mg > 65 years or weighs < 50 kg)

©2006 Pearson Education, Inc.

**ISOETHARINE**

**ISOPROTERENOL**

**KETOROLAC**

**Name/Class: LABETALOL (Trandate, Normodyne)/Beta Blocker**

**Description:** Labetalol is a beta blocker with some alpha blocker characteristics. It induces vasodilation, reduces peripheral vascular resistance, and lowers blood pressure.

**Indications:** Acute hypertensive crisis.

**Contraindications:** Asthma, CHF, 2nd- and 3rd-degree heart block, severe bradycardia, or cardiogenic shock.

**Precautions:** COPD, heart failure, hepatic impairment, diabetes, peripheral vascular disease.

**Dosage/Route:** 20 mg slow IV, then 40 to 80 mg/10 min as needed, up to 300 mg OR a continuous drip 2 mg/min up to 300 mg.

©2006 Pearson Education, Inc.

**Name/Class: LIDOCAINE (Xylocaine)/Antidysrhythmic**

**Description:** Lidocaine is an antidysrhythmic that suppresses automaticity and raises stimulation threshold of the ventricles. It also causes sedation, anticonvulsant, and analgesic effects.

**Indications:** Pulseless ventricular tachycardia, ventricular fibrillation, ventricular tachycardia (w/ pulse).

**Contraindications:** Hypersensitivity to amide-type local anesthetics, supraventricular dysrhythmias, Stokes-Adams syndrome, 2nd- and 3rd-degree heart blocks, and bradycardias.

**Precautions:** Hepatic or renal impairment, CHF, hypoxia, respiratory depression, hypovolemia, myasthenia gravis, shock, debilitated patients, elderly, family history of malignant hypothermia.

**Dosage/Route:** *Cardiac arrest:* 1 to 1.5 mg/kg IV repeated every 3 to 5 min up to 3 mg/kg, follow conversion with a drip of 2 to 4 mg/min. *Ped:* 1 mg/kg IV, repeat/3 to 5 min up to 3 mg/kg, follow conversion with a drip of 20 to 50 mcg/kg/min.

*Ventricular tachycardia (w/ pulse):* 1 to 1.5 mg/kg slow IV. May repeat at one-half dose every 5 to 10 min until conversion up to 3 mg/kg. Follow conversion with an infusion of 2 to 4 mg/min. *Ped:* 1 mg/kg, followed by a drip at 20 to 50 mg/kg/min.

©2006 Pearson Education, Inc.

**Name/Class: LORAZEPAM (Ativan)/Sedative**

**Description:** Lorazepam is the most potent benzodiazepine available. It has strong antianxiety, sedative, hypnotic, and skeletal muscle relaxant properties, and a relatively short half-life.

**Indications:** Sedation for cardioversion and status epilepticus.

**Contraindications:** Sensitivity to benzodiazepines.

**Precautions:** Narrow-angle glaucoma, depression or psychosis, coma, shock, acute alcohol intoxication, renal or hepatic impairment, organic brain syndrome, myasthenia gravis, GI disorders, elderly, debilitated, limited pulmonary reserve.

**Dosage/Route:** *Sedation:* 2 to 4 mg IM, 0.5 to 2 mg IV. *Ped:* 0.03 to 0.5 mg/kg IV/IM/PR up to 4 mg.

*Status epilepticus:* 2 mg slow IV/PR (2 mg/min). *Ped:* 0.1 mg/kg slow IV/PR (2 to 5 min).

©2006 Pearson Education, Inc.

**LABETALOL**

**LIDOCAINE**

**LORAZEPAM**

**Name/Class:** MAGNESIUM SULFATE (Magnesium)/Electrolyte

**Description:** Magnesium sulfate is an electrolyte that acts as a calcium channel blocker, acting as a CNS depressant and anticonvulsant. It also depresses the function of smooth, skeletal, and cardiac muscles.

**Indications:** Refractory ventricular fibrillation and pulseless ventricular tachycardia (especially torsade de pointes), AMI, eclamptic seizures.

**Contraindications:** Heart block, myocardial damage, shock, persistent hypertension, and hypocalcemia.

**Precautions:** Renal impairment, digitalized patients, other CNS depressants, or neuromuscular blocking agents.

**Dosage/Route:** *Ventricular fibrillation or tachycardia:* 1 to 2 g IV over 2 min.

*Torsade de pointes:* 1 to 2 g IV followed by infusion of 0.5 to 1 g/hr IV.

*AMI:* 1 to 2 g IV over 5 to 30 min.

*Eclampsia:* 2 to 4 g IV/IM.

©2006 Pearson Education, Inc.

**Name/Class:** MANNITOL (Osmitol)/Osmotic Diuretic

**Description:** Mannitol is an osmotic diuretic that draws water into the intravascular space through its hypertonic effects, then causes diuresis.

**Indications:** Cerebral edema.

**Contraindications:** Hypersensitivity, pulmonary edema, CHF, organic CNS disease, intracranial bleeding, shock, or severe dehydration.

**Precautions:**

**Dosage/Route:** 1.5 to 2 g/kg slow IV. Ped: 0.25 to 0.5 g/kg over 60 min.

©2006 Pearson Education, Inc.

**Name/Class:** MEPERIDINE (Demerol)/Narcotic Analgesic

**Description:** Meperidine is a synthetic narcotic with sedative and analgesic properties comparable to morphine but without hemodynamic side effects.

**Indications:** Moderate to severe pain.

**Contraindications:** Hypersensitivity, seizure disorders, or acute abdomen prior to diagnosis.

**Precautions:** Increased intracranial pressure, asthma or other respiratory conditions, supraventricular tachycardias, prostatic hypertrophy, urethral stricture, glaucoma, elderly or debilitated patients, renal or hepatic impairment, hypothyroidism, or Addison's disease.

**Dosage/Route:** 25 to 50 mg IV, 50 to 100 mg IM. Ped: 1 mg/kg IV/IM.

©2006 Pearson Education, Inc.

---

**MAGNESIUM SULFATE**

---

**MANNITOL**

---

**MEPERIDINE**

---

**Name/Class: METAPROTERENOL (Alupent)/Sympathomimetic Bronchodilator**

**Description:** Metaproterenol is a synthetic sympathomimetic amine, similar to isoproterenol that causes smooth muscle relaxation of the bronchial tree, decreasing airway resistance, facilitating mucus drainage, and increasing vital capacity.

**Indications:** Bronchospasm, as in asthma and COPD.

**Contraindications:** Hypersensitivity to sympathomimetic agents, tachydysrhythmias, and hyperthyroidism.

**Precautions:** Elderly, hypertension, coronary artery disease, and diabetes.

**Dosage/Route:** 0.65 mg via metered dose inhaler (2 sprays); 0.2 to 0.3 mL in 2.5 to 3 mL NS via nebulizer. Ped: 0.1 to 0.2 mL/kg (5% solution) in 2.5 to 3 mL NS via nebulizer.

©2006 Pearson Education, Inc.

**Name/Class: METARAMINOL (Aramine)/Sympathomimetic**

**Description:** Metaraminol is a sympathomimetic similar to norepinephrine but less potent, with gradual onset and longer duration. It causes systemic vasoconstriction and increased cardiac contraction strength, increasing blood pressure and reducing flow to the kidneys.

**Indications:** Hypotension in a normovolemic patient.

**Contraindications:** Hypovolemia; MAO inhibitor therapy; peripheral or mesenteric thrombosis; pulmonary edema; cardiac arrest; untreated hypoxia, hypercapnia, and acidosis.

**Precautions:** Digitalized patients, hypertension, thyroid disease, diabetes, hepatic impairment, malaria.

**Dosage/Route:** 100 mg/500 mL D<sub>5</sub>W or NS, titrated to blood pressure: 5 to 10 mg IM.

©2006 Pearson Education, Inc.

**Name/Class: METHYLPREDNISOLONE (Solu-Medrol)/Corticosteroid, Antiinflammatory**

**Description:** Methylprednisolone is a synthetic adrenal corticosteroid, effective as an antiinflammatory and used in the management of allergic reactions and in some cases of shock. It is sometimes used in the treatment of spinal cord injury.

**Indications:** Spinal cord injury, asthma, severe anaphylaxis, COPD.

**Contraindications:** No major contraindications in the emergency setting.

**Precautions:** Only a single dose should be given in the prehospital setting.

**Dosage/Route:** *Asthma/COPD/anaphylaxis:* 125 to 250 mg IV/IM. Ped: 1 to 2 mg/kg/dose IV/IM.  
*Spinal cord injury:* 30 mg/kg IV over 15 min, after 45 min an infusion of 5.4 mg/kg/hr.

©2006 Pearson Education, Inc.

**METAPROTERENOL**

**METARAMINOL**

**METHYLPREDNISOLONE**

**Name/Class: METOCLOPRAMIDE (Reglan)/Antiemetic**

**Description:** Metoclopramide is a dopamine antagonist similar to procainamide but with few antidysrhythmic or anesthetic properties. Its antiemetic properties stem from rapid gastric emptying and desensitization of the vomiting reflex.

**Indications:** Nausea and vomiting.

**Contraindications:** Hypersensitivity, allergy to sulfite agents, seizure disorders, pheochromocytoma, mechanical GI obstruction or perforation, and breast cancer.

**Precautions:** CHF, hypokalemia, renal impairment, GI hemorrhage, intermittent porphyria.

**Dosage/Route:** 10 to 20 mg IM; 10 mg slow IV (over 1 to 2 min). Ped: 1 to 2 mg/kg/dose.

©2006 Pearson Education, Inc.

**Name/Class: METOPROLOL (Lopressor)/Beta Blocker**

**Description:** Metoprolol is a beta-adrenergic blocking agent that reduces heart rate, cardiac output, and blood pressure.

**Indications:** AMI.

**Contraindications:** Cardiogenic shock, sinus bradycardia < 45, 2nd- or 3rd-degree heart block, PR interval > 0.24, cor pulmonale, asthma, or COPD.

**Precautions:** Hypersensitivity, hepatic or renal impairment, cardiomegaly, CHF controlled by digitalis and diuretics, AV conduction defects, thyrotoxicosis, diabetes, or peripheral vascular disease.

**Dosage/Route:** 5 mg slow IV/5 min up to 3 times.

©2006 Pearson Education, Inc.

**Name/Class: MIDAZOLAM (Versed)/Sedative**

**Description:** Midazolam is a short-acting benzodiazepine with CNS depressant, muscle relaxant, anticonvulsant, and anterograde amnesic effects.

**Indications:** To induce sedation before cardioversion or intubation.

**Contraindications:** Hypersensitivity to benzodiazepines, narrow-angle glaucoma, shock, coma, or acute alcohol intoxication.

**Precautions:** COPD, renal impairment, CHF, elderly.

**Dosage/Route:** 1 to 2.5 mg slow IV; 0.07 to 0.08 mg/kg IM (usually 5 mg). Ped: 0.05 to 0.2 mg/kg IV; 0.1 to 0.15 mg/kg IM; 3 mg intranasal.

©2006 Pearson Education, Inc.

**METOCLOPRAMIDE**

**METOPROLOL**

**MIDAZOLAM**

**Name/Class: MILRINONE (Primacor)/Cardiac Inotrope, Vasodilator**

**Description:** Milrinone is related to amrinone and increases the strength of cardiac contraction without increasing rate, increasing cardiac output without increasing oxygen demand.

**Indications:** CHF or pediatric septic shock.

**Contraindications:** Hypersensitivity.

**Precautions:** Elderly, pregnancy, and nursing mothers.

**Dosage/Route:** *CHF:* 50 mcg/kg IV over 10 min, then a drip of 0.375 to 0.75 mcg/kg/min IV.

*Ped:* (septic shock) 50 to 75 mcg/kg IV, then a drip of 0.5 to 0.75 mcg/kg/min.

©2006 Pearson Education, Inc.

**Name/Class: MORPHINE SULFATE (Morphine)/Narcotic Analgesic**

**Description:** Morphine sulfate is a potent analgesic and sedative that causes some vasodilation, reducing venous return, and reduced myocardial oxygen demand.

**Indications:** Moderate to severe pain and in MI and to reduce venous return in pulmonary edema.

**Contraindications:** Hypersensitivity to opiates, undiagnosed head or abdominal injury, hypotension, or volume depletion, acute bronchial asthma, COPD, severe respiratory depression, or pulmonary edema due to chemical inhalation.

**Precautions:** Elderly, children, or debilitated patients. Naloxone should be readily available to counteract the effects of morphine.

**Dosage/Route:** *Pain:* 2.5 to 15 mg IV; 5 to 20 mg IM/subcutaneous. *Ped:* 0.05 to 0.1 mg/kg IV; 0.1 to 0.2 mg/kg IM/subcutaneous.

*AMI or PE:* 1 to 2 mg/6 to 10 min to response.

©2006 Pearson Education, Inc.

**Name/Class: NALBUPHINE (Nubain)/Narcotic Analgesic**

**Description:** Nalbuphine is a synthetic narcotic analgesic equivalent to morphine, though its respiratory depression does not increase with higher doses.

**Indications:** Moderate to severe pain.

**Contraindications:** Hypersensitivity, undiagnosed head or abdominal injury.

**Precautions:** Impaired respirations, narcotic dependency.

**Dosage/Route:** 5 mg IV/IM/subcutaneous, repeat as 2 mg doses as needed up to 20 mg. *Ped:* 0.1 to 0.15 mg/kg IV/IM/subcutaneous (rarely used).

©2006 Pearson Education, Inc.

**MILRINONE**

**MORPHINE SULFATE**

**NALBUPHINE**

**Name/Class: NALOXONE (Narcan)/Narcotic Antagonist**

**Description:** Naloxone is a pure narcotic antagonist that blocks the effects of both natural and synthetic narcotics and may reverse respiratory depression.

**Indications:** Narcotic and synthetic narcotic overdose, coma of unknown origin.

**Contraindications:** Hypersensitivity to the drug, non-narcotic-induced respiratory depression.

**Precautions:** Possible dependency (including newborns). It also has a half-life that is shorter than that of most narcotics; hence the patient may return to the overdose state.

**Dosage/Route:** 0.4 to 2 mg IV/IM (2 to 2.5 times the dose ET), repeated/2 to 3 min as needed up to 10 mg.  
Ped: 0.01 mg IV/IM (2 to 2.5 times the dose ET) repeated/2 to 3 min as needed up to 10 mg.

©2006 Pearson Education, Inc.

**Name/Class: NIFEDIPINE (Procardia, Adalat)/Calcium Channel Blocker**

**Description:** Nifedipine is a calcium channel blocker that reduces coronary artery spasm in angina. It also decreases peripheral vascular resistance, blood pressure, and cardiac workload.

**Indications:** Severe hypertension and angina.

**Contraindications:** Hypersensitivity or hypotension.

**Precautions:** Monitor blood pressure carefully, since it can drop significantly with nifedipine use.

**Dosage/Route:** One 10 to 20 mg capsule SL/PO.

©2006 Pearson Education, Inc.

**Name/Class: NITROGLYCERIN (Nitrostat)/Nitrate**

**Description:** Nitroglycerin is a rapid smooth muscle relaxant that reduces peripheral vascular resistance, blood pressure, venous return, and cardiac workload.

**Indications:** Chest pain associated with angina and acute myocardial infarction, and acute pulmonary edema.

**Contraindications:** Hypersensitivity, tolerance to nitrates, severe anemia, head trauma, hypotension, increased ICP, patients taking sildenafil, glaucoma, and shock.

**Precautions:** May induce headache that is sometimes severe. Nitroglycerin is light sensitive and will lose potency when exposed to the air.

**Dosage/Route:** 1 tablet (0.4 mg) SL. May be repeated/3 to 5 min up to 3 tablets, or ½ inch of topical ointment, or 0.4 mg (one spray)SL up to 3 sprays/2.5 min.

©2006 Pearson Education, Inc.

**NALOXONE**

**NIFEDIPINE**

**NITROGLYCERIN**

**Name/Class: NITROUS OXIDE (Nitronox)/Analgesic (gas)**

**Description:** Nitrous oxide is a self-administered analgesic gas composed of 50% oxygen and 50% nitrous oxide. Its effects last only 2 to 5 minutes after administration ceases.

**Indications:** Musculoskeletal, burn, and ischemic chest pain and severe anxiety (including hyperventilation).

**Contraindications:** Possible bowel obstruction, pneumothorax or tension pneumothorax, COPD, head injury, impaired mental status, or drug intoxication.

**Precautions:** Use in well-ventilated area. It may cause nausea and vomiting.

**Dosage/Route:** It is self-administered inhalation until the pain is relieved or the patient drops the mask.

©2006 Pearson Education, Inc.

**Name/Class: NOREPINEPHRINE (Levophed)/Sympathomimetic Agent**

**Description:** Norepinephrine is a naturally occurring catecholamine and causes vasoconstriction, cardiac stimulation, and increased blood pressure, myocardial oxygen demand, and coronary blood flow.

**Indications:** Refractory hypotension and neurogenic shock.

**Contraindications:** Hypotension due to hypovolemia.

**Precautions:** Hypertension, hyperthyroidism, severe heart disease, elderly, MAO inhibitor therapy, patients receiving tricyclic antidepressants. Monitor blood pressure frequently and infuse the drug through the largest vein available as it may cause tissue necrosis.

**Dosage/Route:** 0.5 to 30 mcg/min IV, titrated to BP. Ped: 0.01 mcg/kg/min (rarely used).

©2006 Pearson Education, Inc.

**Name/Class: OXYGEN/Oxidizing Agent (Gas)**

**Description:** Oxygen is an odorless, colorless, tasteless gas, essential for life. It is one of the most important emergency drugs.

**Indications:** Hypoxia or anticipated hypoxia, or in any medical or trauma patient to improve respiratory efficiency.

**Contraindications:** There are no contraindications to oxygen therapy.

**Precautions:** Chronic obstructive pulmonary disease and very prolonged administration of high concentrations in the newborn.

**Dosage/Route:** Hypoxia: 100% by inhalation or IPPV.

©2006 Pearson Education, Inc.

**NITROUS OXIDE**

**NOREPINEPHRINE**

**OXYGEN**

**Name/Class: OXYTOCIN (Pitocin)/Hormone**

**Description:** Oxytocin is a naturally occurring hormone that causes the uterus to contract, thereby inducing labor, encouraging delivery of the placenta, and controlling postpartum hemorrhage.

**Indications:** Severe postpartum hemorrhage.

**Contraindications:** Hypersensitivity, prehospital administration before delivery of the infant or infants.

**Precautions:** Before delivery may induce uterine rupture and fetal dysrhythmias, hypertension, intracranial bleeding, or asphyxia. Uterine tone, ECG, and vital signs should be monitored during administration.

**Dosage/Route:** 3 to 10 units IM after delivery of the placenta. 10 to 20 units in 1,000 mL of D<sub>5</sub>W or NS IV titrated to effect.

©2006 Pearson Education, Inc.

**Name/Class: PANCURONIUM (Pavulon)/Nondepolarizing Neuromuscular Blocker**

**Description:** Pancuronium is a nondepolarizing neuromuscular blocker that causes paralysis without bronchospasm or hypotension, it does not cause the fasciculations associated with polarizing agents.

**Indications:** To facilitate endotracheal intubation.

**Contraindications:** Hypersensitivity to pancuronium or bromides, or tachycardia.

**Precautions:** Debilitated patients, myasthenia gravis, pulmonary, hepatic, or renal disease, or fluid or electrolyte imbalance.

**Dosage/Route:** 0.04 to 0.1 mg/kg IV. Ped: same as adult.

©2006 Pearson Education, Inc.

**Name/Class: PHENOBARBITAL (Luminal)/Anticonvulsant**

**Description:** Phenobarbital is a long-acting barbiturate anticonvulsant with sedative and hypnotic effects that limits the spread of seizure activity.

**Indications:** Seizures, status epilepticus, and acute anxiety.

**Contraindications:** Hypersensitivity to barbiturates.

**Precautions:** Hepatic, renal, cardiac, or respiratory impairment, allergies, elderly, debilitated patients, fever, hyperthyroidism, diabetes, severe anemia, hypoadrenal function, and during labor, delivery, and lactation.

**Dosage/Route:** 100 to 300 mg slow IV/IM. Ped: 6 to 10 mg/kg slow IV/IM.

©2006 Pearson Education, Inc.

**OXYTOCIN**

**PANCURONIUM**

**PHENOBARBITAL**

**Name/Class: PHENYTOIN (Dilantin)/Anticonvulsant**

**Description:** Phenytoin is a derivative related to phenobarbital that reduces the spread of electrical discharges in the motor cortex and inhibits seizures. It also has antidysrhythmic properties that counteract the effects of digitalis.

**Indications:** Seizures, status epilepticus, or cardiac dysrhythmias secondary to digitalis toxicity.

**Contraindications:** Hypersensitivity to hydantoin products, seizures due to hypoglycemia, sinus bradycardia, heart block, and Adams-Stokes syndrome.

**Precautions:** Hepatic or renal impairment, alcoholism, cardiogenic shock, elderly, debilitated patients, diabetes, hyperglycemia, bradycardia, heart block, or respiratory depression.

**Dosage/Route:** *Seizures, status epilepticus:* 10 to 15 mg/kg slow IV. Ped: 8 to 10 mg/kg slow IV.

*Dysrhythmias:* 100 mg slow IV (over 5 min) to a maximum 1,000 mg. Ped: 3 to 5 mg/kg slow IV.

©2006 Pearson Education, Inc.

**Name/Class: PHYSOSTIGMINE (Antilirium)/Parasympathomimetic**

**Description:** Physostigmine inhibits the breakdown of acetylcholine, resulting in prolonged parasympathetic effects. It is sometimes used as an antidote for anticholinergic (e.g., atropine) and tricyclic antidepressant overdoses.

**Indications:** Tricyclic antidepressant (CNS and cardiac effects) and anticholinergic overdose.

**Contraindications:** Asthma, diabetes, gangrene, cardiovascular disease, or narrow-angle glaucoma.

**Precautions:** Reduce dose (or administer atropine) if increased salivation, emesis, or bradycardia develop.

**Dosage/Route:** 0.5 to 3 mg IV (not faster than 1 mg/min), repeat as needed. Ped: 0.01 to 0.03 mg/kg/15 to 20 min to max 2 mg.

©2006 Pearson Education, Inc.

**Name/Class: PRALIDOXIME (2-PAM)/Cholinesterase Reactivator**

**Description:** Pralidoxime reactivates cholinesterase and reinstates the degrading of acetylcholine and restores normal neuromuscular transmission. It is used to reverse severe organophosphate poisoning.

**Indications:** Organophosphate poisoning.

**Contraindications:** Carbamate insecticides (Sevin), inorganic phosphates, and organophosphates having no anticholinesterase activity, asthma, peptic ulcer disease, severe cardiac disease, or patients receiving aminophylline, theophylline, morphine, succinylcholine, reserpine, or phenothiazines.

**Precautions:** Rapid administration may result in tachycardia, laryngospasm, and muscle rigidity. Excited or manic behavior may be noted after regaining consciousness.

**Dosage/Route:** 1 to 2 g in 250 to 500 mL NS infused over 15 to 30 min; or 1 to 2 g IM/subcutaneous if IV not feasible. Ped: 20 to 40 mg/kg IV/IM subcutaneous.

©2006 Pearson Education, Inc.

**PHENYTOIN**

**PHYSOSTIGMINE**

**PRALIDOXIME**

**Name/Class: PROCAINAMIDE (Pronestyl)/Antiarrhythmic**

**Description:** Procainamide prolongs ventricular repolarization, slows conduction, and decreases myocardial excitability.

**Indications:** Ventricular fibrillation and pulseless ventricular tachycardia refractory to lidocaine.

**Contraindications:** Hypersensitivity to procainamide or procaine, myasthenia gravis, and 2nd- or 3rd-degree heart block.

**Precautions:** Hypotension, cardiac enlargement, CHF, AMI, ventricular dysrhythmias from digitalis, hepatic or renal impairment, electrolyte imbalance, or bronchial asthma.

**Dosage/Route:** 20 to 30 mg/min IV drip up to 17 mg/kg to effect, then 1 to 4 mg/min.

Ped: 15 mg/kg/IV/IO over 30 to 60 min.

©2006 Pearson Education, Inc.

**Name/Class: PROCHLORPERAZINE (Compazine)/Antiemetic**

**Description:** Prochlorperazine is a phenothiazine derivative similar to chlorpromazine with potent antiemetic properties and fewer sedative, hypotensive, and anticholinergic effects.

**Indications:** Severe nausea and vomiting or acute psychosis.

**Contraindications:** Hypersensitivity to phenothiazines coma or depression.

**Precautions:** Breast cancer, children with acute illness or dehydration.

**Dosage/Route:** 5 to 10 mg IV/IM. Ped: 0.13 mg/kg IV/IM/PR if > 10 kg or > 2 years.

©2006 Pearson Education, Inc.

**Name/Class: PROMETHAZINE (Phenergan)/Antiemetic**

**Description:** Promethazine is an anticholinergic agent that enhances the effects of analgesics and is a potent antiemetic.

**Indications:** Nausea and vomiting, motion sickness, to enhance the effects of analgesics, and to induce sedation.

**Contraindications:** Hypersensitivity to phenothiazines.

**Precautions:** Hepatic, respiratory, or cardiac impairment, asthma, hypertension, elderly, or debilitated patients.

**Dosage/Route:** 12.5 to 25 mg IV/IM/PR. Ped: 0.5 mg/kg IV/IM/PR.

©2006 Pearson Education, Inc.

**PROCAINAMIDE**

**PROCHLORPERAZINE**

**PROMETHAZINE**

**Name/Class: PROPAFANONE (Rythmol)/Antidysrhythmic**

**Description:** Propafanone is an antidysrhythmic that stabilizes the myocardial membranes, reduces automaticity and the rate of single and multiple PVCs, and suppresses ventricular tachycardia.

**Indications:** Ventricular and supraventricular dysrhythmias.

**Contraindications:** Hypersensitivity, uncontrolled CHF, cardiogenic shock, sick sinus syndrome, AV block, bradycardia, hypotension, bronchospastic disorders, electrolyte imbalances, non-life-threatening dysrhythmias, COPD, or nursing mothers.

**Precautions:** CHF, AV block, hepatic or renal impairment, elderly, or pregnancy.

**Dosage/Route:** 150 to 300 mg PO/8 hours or 1 to 2 mg/kg IV at 10 mg/min.

©2006 Pearson Education, Inc.

**Name/Class: PROPRANOLOL (Inderal)/Beta Blocker**

**Description:** Propranolol is a nonselective beta blocker affecting both bronchial and cardiac sites. It reduces heart rate, myocardial irritability, contraction force, cardiac output, and blood pressure.

**Indications:** Ventricular fibrillation and pulseless ventricular tachycardia refractory to lidocaine and bretylium and selected SVTs.

**Contraindications:** 2nd- and 3rd-degree heart blocks, CHF, cor pulmonale, sinus bradycardia, cardiac impairment, cardiogenic shock, bronchospasm, or bronchial asthma, COPD, adrenergic-augmenting psychotropic or MAO inhibitors.

**Precautions:** Peripheral vascular disease, bee sting allergy, mild COPD, renal or hepatic impairment, diabetes, hypoglycemia, myasthenia gravis, WPW syndrome, or major surgery.

**Dosage/Route:** 1 to 3 mg slow IV (over 2 to 5 min), not to exceed 1 mg/min, may repeat/2 min to 0.1 mg/kg. Ped: 0.01 mg/kg slow IV.

©2006 Pearson Education, Inc.

**Name/Class: PROSTAGLANDIN E<sub>1</sub> (Prostin VR Pediatric)/Vasodilator**

**Description:** Prostaglandin E<sub>1</sub> is derived from fatty acids and causes vasodilation, inhibits platelet aggregation, and stimulates intestinal and uterine smooth muscles. It also helps maintain ductus arteriosus patency in newborn infants.

**Indications:** Infant cyanotic heart disease.

**Contraindications:**

**Precautions:** Constant respiratory monitoring is required.

**Dosage/Route:** Infant: 0.05 to 0.1 mcg/kg/min IV/IO.

©2006 Pearson Education, Inc.

**PROPAFANONE**

**PROPRANOLO**

**PROSTAGLANDIN E<sub>1</sub>**

**Name/Class:** RACEMIC EPINEPHRINE (microNefrin, Vaponefrin)/Sympathomimetic Agonist

**Description:** Racemic epinephrine is a variation of epinephrine used only for inhalation to induce bronchodilation and to reduce laryngeal edema and mucus secretion.

**Indications:** Croup (laryngotracheobronchitis).

**Contraindications:** Hypersensitivity, hypertension, or epiglottitis.

**Precautions:** May result in tachycardia and other dysrhythmias. Patient vital signs and ECG should be monitored.

**Dosage/Route:** 0.25 to 0.75 mL of a 2.25% solution in 2 mL NS once by nebulizer. Ped: same as adult.

©2006 Pearson Education, Inc.

**Name/Class:** SODIUM BICARBONATE ( $\text{NaHCO}_3$ )/Alkalizing Agent

**Description:** Sodium bicarbonate provides vascular bicarbonate to assist the buffer system in reducing the effects of metabolic acidosis and in the treatment of some overdoses.

**Indications:** Tricyclic antidepressant and barbiturate overdose, refractory acidosis, or hyperkalemia.

**Contraindications:** None when used in severe hypoxia or late cardiac arrest.

**Precautions:** May cause alkalosis if given in too large a quantity. It may also deactivate vasopressors and may precipitate with calcium chloride.

**Dosage/Route:** 1 mEq/kg IV, then 0.5 mEq/kg/10 min. Ped: same as adult (may be given IO).

©2006 Pearson Education, Inc.

**Name/Class:** SODIUM NITROPRUSSIDE (Nipride)/Nitrate

**Description:** Sodium nitroprusside is a rapid-acting hypotensive agent producing peripheral vasodilation and a mild increase in heart rate, a decrease in cardiac output, and a slight decrease in peripheral vascular resistance.

**Indications:** Hypertensive crisis.

**Contraindications:** Compensatory hypertension or impaired cerebral circulation (head injury, stroke).

**Precautions:** Hepatic or renal impairment, hyponatremia, or hypothyroidism.

**Dosage/Route:** 0.5 to 0.1 mcg/kg/min IV drip. Ped: same as adult.

©2006 Pearson Education, Inc.

**RACEMIC EPINEPHRINE**

**SODIUM BICARBONATE**

**SODIUM NITROPRUSSIDE**

**Name/Class: SOTALOL (Betapace)/Beta Blocker, Antidysrhythmic**

**Description:** Sotalol is a nonselective beta blocker that slows heart rate and decreases AV conduction and irritability.

**Indications:** Ventricular and supraventricular dysrhythmias.

**Contraindications:** Hypersensitivity, bronchial asthma, sinus bradycardia, 2nd- and 3rd-degree heart block, long QT syndromes, cardiogenic shock, uncontrolled CHF, or COPD.

**Precautions:** CHF, electrolyte disturbances, recent MI, diabetes, sick sinus rhythms, or renal impairment.

**Dosage/Route:** 1 to 1.5 mg/kg IV at 10 mg/min or 80 mg PO bid or 160 mg PO QD.

©2006 Pearson Education, Inc.

**Name/Class: STREPTOKINASE (Streptase)/Fibrinolytic**

**Description:** Streptokinase is a fibrinolytic that acts by activating the process that converts plasminogen to plasmin and results in the degradation of fibrin and fibrinogen and decreases erythrocyte aggregation.

**Indications:** AMI, deep vein thrombosis (DVT), or pulmonary embolism.

**Contraindications:** Active internal bleeding, aortic dissection, traumatic CPR, recent stroke, intracranial or intraspinal surgery or trauma (within 2 months), intracranial tumors, uncontrolled hypertension, pregnancy, hypersensitivity to anistreplase or streptokinase.

**Precautions:** Recent major surgery (10 days), patients > 75 years, cerebral vascular disease, GI or GU bleeding, recent trauma, hypertension, hemorrhagic conditions, ophthalmic conditions, or oral anticoagulant use.

**Dosage/Route:** AMI: 1.5 million units IV over 1 hour.

*DVT and pulmonary emboli:* 250,000 units IV over 30 min, then 100,000 units/hr.

©2006 Pearson Education, Inc.

**Name/Class: SUCCINYLCHOLINE (Anectine)/Depolarizing Neuromuscular Blocker**

**Description:** Succinylcholine is an ultra–short-acting depolarizing neuromuscular blocker.

**Indications:** Facilitated endotracheal intubation.

**Contraindications:** Hypersensitivity, family history of malignant hyperthermia, penetrating eye injury, narrow-angle glaucoma.

**Precautions:** Severe burn or crush injury; electrolyte imbalances; hepatic, renal, cardiac, or pulmonary impairment; fractures; spinal cord injury; dehydration; severe anemia; porphyria.

**Dosage/Route:** 1 to 1.5 mg/kg IV/IM. Ped: 1 to 2 mg/kg IV/IM.

©2006 Pearson Education, Inc.

**SOTALOL**

**STREPTOKINASE**

**SUCCINYLCHOLINE**

**Name/Class:** TERBUTALINE (Brethine, Bricanyl)/Sympathetic Agonist

**Description:** Terbutaline is a synthetic sympathomimetic that causes bronchodilatation with less cardiac effect than epinephrine.

**Indications:** Bronchial asthma and bronchospasm in COPD.

**Contraindications:** Hypersensitivity to the drug.

**Precautions:** The patient may experience palpitations, anxiety, nausea, and/or dizziness. Vital signs and breath sounds must be monitored; use caution with cardiac or hypertensive patients.

**Dosage/Route:** Two inhalations with a metered dose inhaler, repeated once in 1 min or 0.25 mg SQ repeated in 15 to 30 mins.

©2006 Pearson Education, Inc.

**Name/Class:** THIAMINE/Vitamin

**Description:** Thiamine is vitamin B<sub>1</sub>, which is required to convert glucose into energy. It is not manufactured by the body and must be constantly provided from ingested foods.

**Indications:** Coma of unknown origin, chronic alcoholism with associated coma, and delirium tremens.

**Contraindications:** None.

**Precautions:** Known hypersensitivity to the drug.

**Dosage/Route:** 50 to 100 mg IV/IM. Ped: 10 to 25 mg IV/IM.

©2006 Pearson Education, Inc.

**Name/Class:** VASOPRESSIN (Pitressin)/Hormone, Vasopressor

**Description:** Vasopressin is a hormone with strong vasopressive and antidiuretic properties but that may precipitate angina and/or AMI.

**Indications:** To increase peripheral vascular resistance in arrest (CPR) or to control bleeding from esophageal varices.

**Contraindications:** Chronic nephritis with nitrogen retention, ischemic heart disease, PVCs, advanced arteriosclerosis, or 1st stage of labor.

**Precautions:** Epilepsy, migraine, heart failure, angina, vascular disease, hepatic impairment, elderly, and children.

**Dosage/Route:** *Arrest:* 40 units IV.

*Esophageal varices:* 0.2 to 0.4 units/min IV drip.

©2006 Pearson Education, Inc.

**TERBUTALINE**

**THIAMINE**

**VASOPRESSIN**

**Name/Class:** VECURONIUM (Norcuron)/Nondepolarizing Skeletal Muscle Relaxant

**Description:** Vecuronium is a nondepolarizing skeletal muscle relaxant similar to pancuronium with minimal cardiovascular effects.

**Indications:** Facilitated endotracheal intubation.

**Contraindications:** Hypersensitivity.

**Precautions:** Hepatic or renal impairment, impaired fluid and electrolyte or acid/base balance, severe obesity, myasthenia gravis, elderly, debilitated patients, or malignant hyperthermia.

**Dosage/Route:** 0.08 to 0.1 mg/kg IV. Ped: same as adult.

©2006 Pearson Education, Inc.

**Name/Class:** VERAPAMIL (Isoptin, Calan)/Calcium Channel Blocker

**Description:** Verapamil is a calcium channel blocker that slows AV conduction, suppresses reentry dysrhythmias such as PSVT, and slows ventricular responses to atrial tachydysrhythmias. Verapamil also dilates coronary arteries and reduces myocardial oxygen demand.

**Indications:** PSVT refractory to adenosine, atrial flutter, and atrial fibrillation with rapid ventricular response.

**Contraindications:** Severe hypotension, cardiogenic shock, 2nd- or 3rd-degree heart block, CHF, sinus node disease, and accessory AV pathways, WPW syndrome. It should not be administered to persons taking beta blockers.

**Precautions:** Hepatic and renal impairment, MI with coronary artery occlusion, or myocardial stenosis.

**Dosage/Route:** 2.5 to 5 mg IV bolus over 2 to 3 min, then 5 to 10 mg after 15 to 30 min to a max of 30 mg in 30 min. Ped: newborn—0.1 to 0.2 mg/kg (not to exceed 2 mg), age 1 to 15—0.1 to 0.3 mg/kg (not to exceed 5 mg).

©2006 Pearson Education, Inc.

©2006 Pearson Education, Inc.

**VECURONIUM**

**VERAPAMIL**