

SOUTH PLAINS EMERGENCY MEDICAL SERVICE

PROTOCOL SUPPLEMENT 2019

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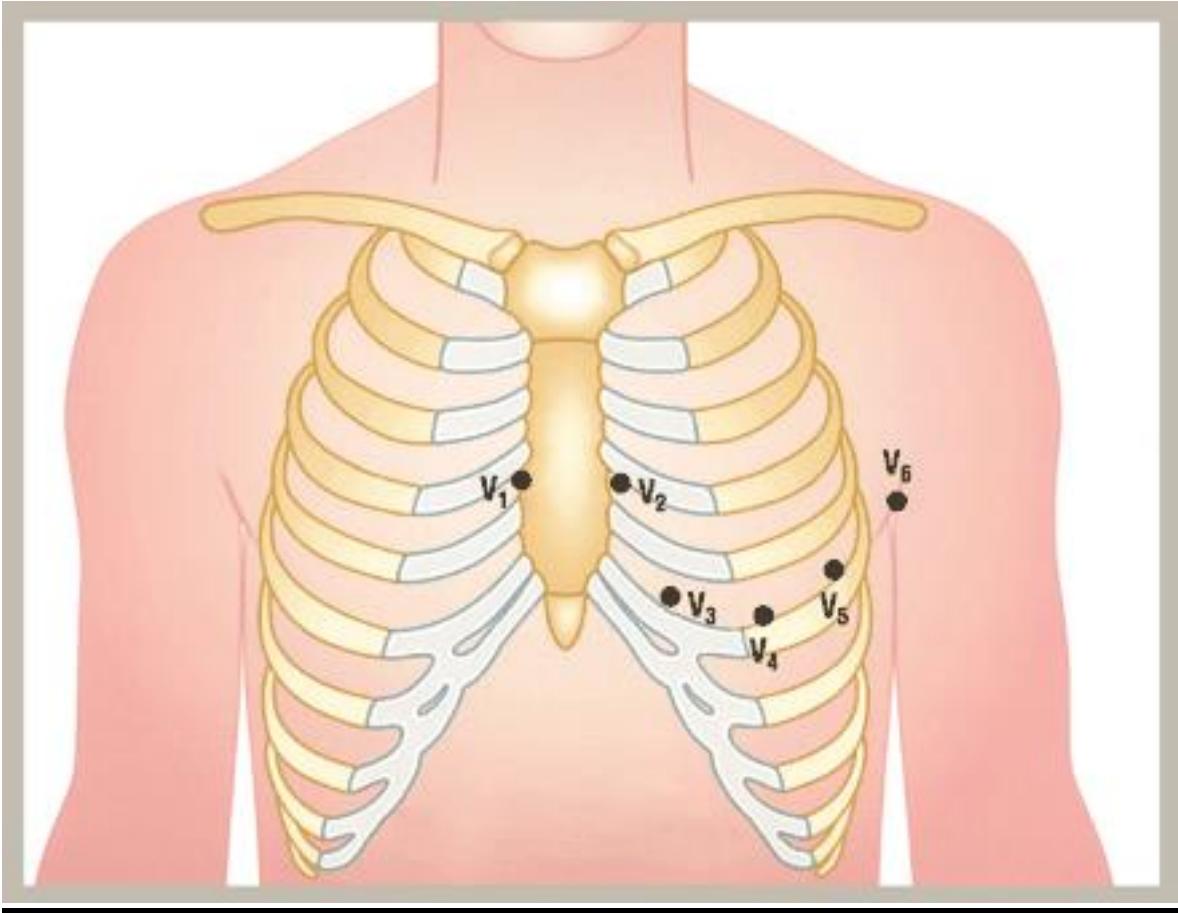
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SUPPLEMENT

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LEFT SIDED V-LEAD PLACEMENT



V₁: Right 4th intercostal space

V₂: Left 4th intercostal space

V₃: Halfway between V₂ and V₄

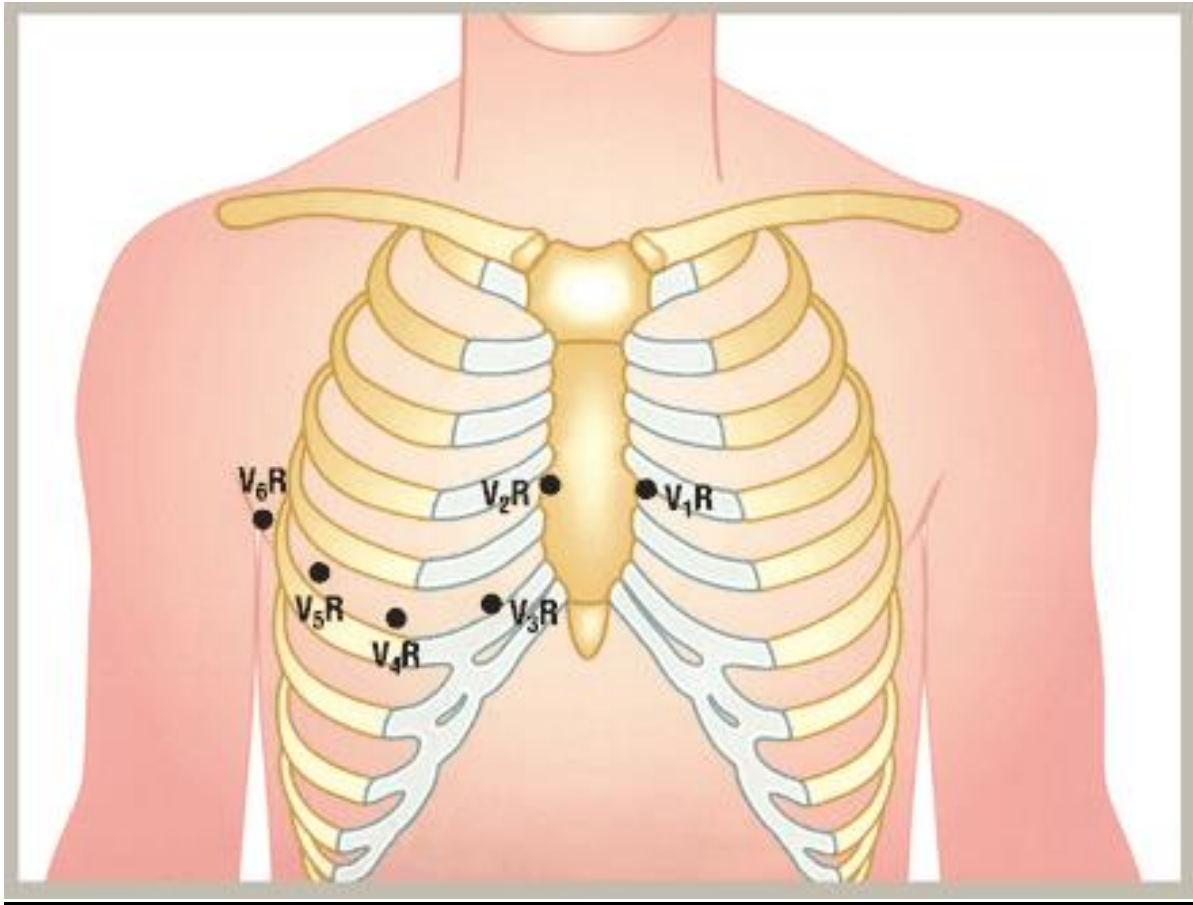
V₄: Left 5th intercostal space, mid-clavicular line

V₅: Horizontal to V₄, anterior axillary line

V₆: Horizontal to V₅, mid-axillary line

In an emergent situation and time does not permit a complete right sided EKG, move **V₄** to the **V_{4R}** position to confirm a right ventricular infarct.

RIGHT SIDED V-LEAD PLACEMENT



V₁R: Left 4th intercostal space

V₂R: Right 4th intercostal space

V₃R: Halfway between V₂ and V₄

V₄R: Right 5th intercostal space, mid-clavicular line

V₅R: Horizontal to V₄, anterior axillary line

V₆R: Horizontal to V₅, mid-axillary line

In an emergent situation and time does not permit a complete right sided EKG, move **V₄** to the **V₄R** position to confirm a right ventricular infarct.

ACETAMINOPHEN

(Tylenol, APAP)

| | |
|-----------------------------------|---|
| INDICATIONS | Used for the management of fever of 100.4° F. or greater |
| ADMINISTRATION | Orally |
| DOSAGE | |
| ADULT | 10mg/kg up to 1,000mg. Given in 500mg tablets so medication dosage will be rounded to nearest 500mg increment |
| PEDIATRIC | Not used for pediatrics. Liquid Children's Motrin is used for pediatrics |
| THERAPEUTIC EFFECTS | As an antipyretic, Acetaminophen is used to manage fever and to treat/prevent sepsis |
| CONTRAINDICATIONS | <ul style="list-style-type: none">• Allergy• History of liver disease• Has taken Acetaminophen within the last 90 minutes |
| SIDE EFFECTS | Skin Reactions (rare) |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none">• Acute overdose may lead to liver damage/failure |

ACTIVATED CHARCOAL

| | |
|-----------------------------------|---|
| INDICATIONS | Used to treat certain types of poisonings and overdoses |
| ADMINISTRATION | PO |
| DOSAGE | |
| ADULT | 1g/kg up to a max of 50g |
| PEDIATRIC | 1g/kg up to a max of 50g |
| THERAPEUTIC EFFECTS | Binds and absorbs various chemicals and poisonous compounds, thereby reducing their absorption into the body |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> • Caustic/Corrosive substances • Cyanide poisonings • Semi-conscious or unconscious patients |
| SIDE EFFECTS | Abdominal cramping, constipation, dark stools, and nausea and vomiting |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> • Online medical control orders required • 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 |

ADENOSINE

(Adenocard)

| | |
|-----------------------------------|--|
| INDICATIONS | <ul style="list-style-type: none"> • Paroxysmal Supraventricular Tachycardia • Supraventricular Tachycardia • Wolfe-Parkinson-White Syndrome |
| ADMINISTRATION | Rapid IV or IO push with immediate 10cc NS flush |
| DOSAGE | |
| ADULT | Initial dose is 12mg rapid IV or IO push followed by 20cc rapid fluid bolus. May repeat once at 12mg rapid IV or IO push |
| PEDIATRIC | 0.1mg/kg rapid IV or IO push to a max of 12mg followed by 5-20cc rapid fluid bolus. |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Slows conduction time through AV node • Interrupts reentry pathways through AV node • Restores Sinus Rhythm in patients with SVT |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> • Hypersensitivity • 2nd or 3rd degree AV blocks • Sinus node dysfunction, such as sick sinus syndrome or symptomatic bradycardia • Atrial Flutter/Atrial Fibrillation • Ventricular Tachycardia |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Transient AV block, Asystole and other Dysrhythmias • Chest pressure • Dizziness • Flushing • Nausea/Vomiting • Shortness of Breath |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> • Onset is generally within less than one minute • Adverse effects are usually short lived and easily tolerated • Effects may be more pronounced in patients on Dipyridamole • Effects may be attenuated in patients on Theophylline preparations |

AMIODARONE (Cordarone)

| | |
|-----------------------------------|--|
| INDICATIONS | Ventricular Fibrillation, Ventricular Tachycardia, SVT |
| ADMINISTRATION | IVP, IO or IV infusion |
| DOSAGE | |
| ADULT | <ul style="list-style-type: none"> • Pulseless VF/VT-Initial 300mg IVP or IO • Pulseless VF/VT- Repeat 150mg IVP or IO • Stable V-Tach-150mg over 10 minutes, may repeat every 10 minutes to a max of 450mg • SVT-150mg IV or IO over 10 minutes. May be repeated once if needed. |
| PEDIATRIC | <ul style="list-style-type: none"> • Pulseless VF/VT Initial-5mg/kg to a max of 300mg IV or IO May repeat once in 3-5 minutes at 2.5mg/kg to a max of 150mg • V-Tach with a pulse-5mg/kg, IVP or IO over 20 minutes to a max of 150mg • SVT-5mg/kg, IV or IO over 20 minutes, to a max of 150mg |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Prolongs action potential and refractory period • Reduces ventricular dysrhythmias and raises fibrillatory threshold |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> • Cardiogenic shock • Hypersensitivity to drug • 2nd or 3rd degree AV block • Severe Sinus Bradycardia • Severe sinus node dysfunction • Patients with VAD device unless in cardiac arrest |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Hypotension • Bradycardia • Asystole • PEA |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> • Serial use of calcium channel blockers, Beta blockers and other antiarrhythmics may cause additive hypotensive bradycardia and proarrhythmogenic effects • Draw up slowly to prevent bubbling |

ASPIRIN

| | |
|-----------------------------------|--|
| INDICATIONS | Myocardial Infarction, Chest Pain |
| ADMINISTRATION | Chewed PO |
| DOSAGE | |
| ADULT | 1 Adult ASA 325mg |
| PEDIATRIC | Not Indicated |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Inhibits platelet aggregation by blocking formation of Thromboxane A₂ • Reduces overall mortality of Acute MI • Reduces non-fatal re-infarction |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> • Hypersensitivity to Aspirin • Active bleeding condition or ulcer • Pregnancy • Patient's with a VAD device |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Heartburn • Indigestion • Nausea |
| SPECIAL NOTES/RESTRICTIONS | Patients on Coumadin (Warfarin) MAY take Aspirin in the acute setting |

ATROPINE

(ATROPINE, COMPONENT OF MARK-I AUTO INJECTOR)

| | |
|-----------------------------------|--|
| INDICATIONS | Symptomatic Bradycardia, Organophosphate Poisoning and prior to RSI in patients < 16 y/o |
| ADMINISTRATION | IV, IO, ETT |
| DOSAGE | |
| ADULT | <ul style="list-style-type: none"> • Symptomatic Bradycardia: 0.5mg IVP every 3-5minutes to a max of 3mg. • Organophosphate Poisoning: 2mg IVP every 5 minutes until lungs clear or BP >90 systolic and pulse > 60. |
| PEDIATRIC | <ul style="list-style-type: none"> • Symptomatic Bradycardia: 0.02mg/kg IV, minimum does 0.1mg, maximum single does 0.5mg may repeat in 3-5 minutes. Max dose for children 0-8 years old is 1mg, max dose for children 9-15 years old is 2mg. • Organophosphate Poisoning: 0.05mg/kg to a max of 2mg per dose every 10-15 minutes, or until lungs clear or BP >90 systolic and pulse >60. (Minimum does if 0.1mg) • PAI: 0.02mg/kg to a max of 1.0mg to all patients <16 years old |
| THERAPRUTIC EFFECTS | <ul style="list-style-type: none"> • Blocks acetylcholine receptor sites • Decreases vagal tone • Increases SA and AV nodal conduction • Dries Secretions |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> • Allergy • Tachycardia |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Blurred Vision • Dry Mouth • Headache • Pupillary dilation • Tachycardia |
| SPECIAL NOTES/RESTRICTIONS | Organophosphate may require larger doses |

BENADRYL

(Diphenhydramine)

| | |
|-----------------------------------|--|
| INDICATIONS | Allergic Reaction |
| ADMINISTRATION | IV, IO |
| DOSAGE | |
| ADULT | 50mg IV or IO |
| PEDIATRIC | 1.0mg/kg IV or IO to a max of 50mg |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none">• Inhibits histamine release and effects• Anticholinergic effects antagonize extra pyramidal symptoms |
| CONTRAINDICATIONS | <ul style="list-style-type: none">• Acute asthma exacerbation• Acute Glaucoma• Pregnancy• Sensitivity to drug |
| SIDE EFFECTS | <ul style="list-style-type: none">• Blurred vision• Headache• Palpitations• Sedation |
| SPECIAL NOTES/RESTRICTIONS | Contact Medical Control if patient is suspected to be having a dystonic reaction |

CALCIUM GLUCONATE 10%

| | |
|-----------------------------------|--|
| INDICATIONS | <ul style="list-style-type: none"> • Magnesium toxicity |
| ADMINISTRATION | Slow IV push |
| DOSAGE | |
| ADULT | 1 gram SLOW IV Push |
| PEDIATRIC | <ul style="list-style-type: none"> • Not used for Pediatrics |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Antidote for Magnesium Sulfate toxicity |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> • Hypersensitivity |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Nausea, constipations, GI irritation • Rapid IV may cause vasodilation, cardiac arrhythmias, hypotension, bradycardia • Infiltrated IV site may cause local necrosis and abscess formation |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> • Assure IV patency prior to administration • Give SLOWLY |

DECADRON

(Dexamethasone)

| | |
|-----------------------------------|---|
| INDICATIONS | <ul style="list-style-type: none"> • Severe respiratory distress with wheezing • Allergic reactions that are accompanied with respiratory distress • Bee Stings |
| ADMINISTRATION | IV, IO |
| DOSAGE | |
| ADULT | 20mg SIVP |
| PEDIATRIC | <ul style="list-style-type: none"> • 0.6mg/kg to a max of 20mg SIVP • Not indicated if < 2YOA |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Anti-inflammatory agent • May prevent the release of histamine |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> • Psychosis • Hypersensitivity to the drug • Fungal infections • Non-Asthmatic bronchial disease • CHILD < 2 years of age • AIDS • TB |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Tachycardia • Bradycardia • Hypertension • Increase sweating • Seizures • Headache |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> • To be used in conjunction with bronchodilators • Use caution in women who are pregnant |

DEXTROSE 10% (25G/250cc)

| | |
|-----------------------------------|---|
| INDICATIONS | Hypoglycemia |
| ADMINISTRATION | IV/IO Bolus |
| DOSAGE | |
| ADULT | Utilizing a 10 drop set (A-set), give wide open bolus, until patient becomes responsive. Once responsive, obtain BGL. If BGL \geq 90mg/dL, slow infusion to a TKO rate and monitor to maintain desired effect. May repeat X 1 if no improvement in LOC AND BGL remains $<$ 70mg/dL |
| PEDIATRIC | Utilizing a 60 drop set (mini set), give wide open bolus, until patient becomes responsive. Once responsive, obtain BGL. If BGL \geq 90mg/dL, slow infusion to a TKO rate and monitor to maintain desired effect. May repeat X 1 if no improvement in LOC AND BGL remains $<$ 70mg/dL |
| THERAPEUTIC EFFECTS | Immediate source of glucose |
| CONTRAINDICATIONS | CVA with normal serum glucose |
| SIDE EFFECTS | Local irritation |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> • Dosage is dependent on effect. Once patient regains an acceptable level of consciousness and BGL \geq 90mg/dL, the D10W infusion should be slowed to TKO • As D10W is a hypertonic solution, monitor lung sounds closely • Until current stocks of D50W (25G/50cc) are exhausted or expired, D10W can be achieved by utilizing a 250cc bag of NS and pre-filled D50W. 50cc should be withdrawn from the bag and the 50cc of D50W injected into the bag. This concentration must be well mixed (shaken) and D10W is achieved. |

DOPAMINE

(Intropin)

| | |
|-----------------------------------|--|
| INDICATIONS | Cardiogenic shock, Refractory Hypotension |
| ADMINISTRATION | IV or IO infusion |
| DOSAGE | |
| ADULT | <ul style="list-style-type: none">• 5mcg/kg/min, IV or IO, increased by 5mcg/kg/min every 2 minutes until: Max of 20mcg/kg/min given or Systolic BP 90-110mmHg |
| PEDIATRIC | <ul style="list-style-type: none">• 5mcg/kg/min, IV or IO• If perfusion not adequate after 2 minutes, increase to a max of 10mcg/kg/min |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none">• Stimulates alpha, beta, and dopamine receptors, depending on dose• Increases cardiac output and systemic arterial pressure• Dilates vessels to the brain, heart and kidneys• Increases heart rate |
| CONTRAINDICATIONS | <ul style="list-style-type: none">• Uncorrected hypovolemic shock• Uncorrected tachydysrhythmias• Allergy• Patients with a VAD device unless in cardiac arrest |
| SIDE EFFECTS | <ul style="list-style-type: none">• Angina• Ectopy• Headache• Tachydysrhythmias |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none">• Titrate to blood pressure• Hypovolemia should be corrected with volume expansion fluids prior to the administration of Dopamine. |

DUO-NEB

(Combivent)

| | |
|-----------------------------------|---|
| INDICATIONS | Acute Bronchospasm, Respiratory distress, Allergic reaction, CHF, Asthma, COPD |
| ADMINISTRATION | Hand held Nebulizer, Nebulizer Mask, Inline ETT Nebulizer |
| DOSAGE | |
| ADULT | Mixture of 3mg of Albuterol with 0.5mg of Ipratropium Bromide in 3cc |
| PEDIATRIC | Mixture of 3mg of Albuterol with 0.5mg of Ipratropium Bromide in 3cc |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none">• Decreased bronchospasm via beta receptors• Improves pulmonary function |
| CONTRAINDICATIONS | <ul style="list-style-type: none">• Hypersensitivity to any of the contents of the solution (including Atropine)• Tachydysrhythmias |
| SIDE EFFECTS | <ul style="list-style-type: none">• Cough• Dizziness or Nervousness• Nausea• Tachycardia• Tremor |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none">• May be nebulized via ETT in intubated asthmatics or COPD patients• For patients with a VAD device, limit to one dose |

EPINEPHRINE

(Epi 1:10,000 and Epi 1:1,000)

| | |
|-----------------------------------|--|
| INDICATIONS | Cardiac Arrest, Allergic reaction, and Pediatric Bradycardia |
| ADMINISTRATION | IV, IO, IM, ETT |
| DOSAGE | |
| ADULT | <ul style="list-style-type: none"> • Cardiac arrest: 1mg IV or IO every 3-5 minutes or 2mg via ETT every 3-5 minutes of 1:10,000 • Allergic Reaction Stable: 0.2mg of 1:10,000 IV • Allergic Reaction Unstable: 0.5mg of 1:10,000 IV |
| PEDIATRIC | <ul style="list-style-type: none"> • Cardiac Arrest-: 1:10,000 0.01mg/kg IV, IO or 0.1mg/kg ETT of 1:1,000 solution up to a max on 1 mg per single dose • Bradycardia-: 0.01mg/kg of 1:10,000 solution IV or IO to a max of 5cc per single dose, or 0.1mg/kg ETT 1:1,000 solution to a max of 0.5cc per single dose repeat every 3-5 minutes at same dose • Allergic Reaction: 0.01mg/kg IV or IO of 1:10,000, max dose of 0.5mg (ADMINISTER ONLY IF EVIDENCE OF SHOCK IS PRESENT) • Epinephrine 1:1,000: 0.01mg/kg to a max of 0.15mg IM |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Stimulates alpha and beta adrenergic receptors • Increases heart rate, systemic blood pressure and coronary blood flow |
| CONTRANDICATIONS | <ul style="list-style-type: none"> • Hypertension • Tachycardia • Patients with VAD device unless in cardiac arrest or severe allergic reaction |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Hypertension • Palpitations • Tachycardia • Tremors |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> • Pay special attention to the concentration either 1:1,000 or 1:10,000 • Epinephrine 1:1,000 is NEVER GIVEN IV |

EPINEPHRINE DRIP

| | |
|-----------------------------------|---|
| INDICATIONS | Bradyarrhythmias resistant to Atropine and pacing therapy |
| ADMINISTRATION | IV Drip |
| IV DRIP PREPARATION | Inject 1mg of 1:1,000 Epi in a 100cc or 250cc bag of NS |
| DOSAGE | |
| ADULT | <ul style="list-style-type: none"> • 2-10mcg/min IV drip • Mixed in 100cc bag: <ul style="list-style-type: none"> ○ 1mcg = 6gtt/min ○ 2mcg = 12gtt/min ○ 10mcg = 60gtt/min • Mixed in 250cc bag: <ul style="list-style-type: none"> ○ 1mcg = 15gtt/min ○ 2mcg = 30gtt/min ○ 10mcg = 150gtt/min |
| PEDIATRIC | <ul style="list-style-type: none"> • 2-10mcg/min IV drip • Mixed in 100cc bag: <ul style="list-style-type: none"> ○ 1mcg = 6gtt/min ○ 2mcg = 12gtt/min ○ 10mcg = 60gtt/min • Mixed in 250cc bag: <ul style="list-style-type: none"> ○ 1mcg = 15gtt/min ○ 2mcg = 30gtt/min ○ 10mcg = 150gtt/min |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Stimulates alpha and beta adrenergic receptors • Increases heart rate, systemic blood pressure and coronary blood flow |
| CONTRANDICATIONS | <ul style="list-style-type: none"> • Hypertension • Tachycardia • Patients with VAD device |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Hypertension • Palpitations • Tachycardia • Tremors |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> • Always mix with 1:1,000 concentration to mix the drip |

ETOMIDATE

(Amidate)

| | |
|-----------------------------------|---|
| INDICATIONS | Chemical Sedation, RSI |
| ADMINISTRATION | IV, IO |
| DOSAGE | |
| ADULT | 0.3mg/kg IV or IO to a max of 40mg |
| PEDIATRIC | 0.3mg/kg IV or IO to a max of 40mg |
| THERAPEUTIC EFFECTS | |
| CONTRAINDICATIONS | Hypersensitivity |
| SIDE EFFECTS | <ul style="list-style-type: none">• Pain at injection site• Respiratory depression |
| SPECIAL NOTES/RESTRICTIONS | |

FENTANYL

(Duragesic)

| | |
|-----------------------------------|--|
| INDICATIONS | Pain Management |
| ADMINISTRATION | IV, IO, IN (Intranasal) |
| DOSAGE | |
| ADULT | <ul style="list-style-type: none"> • IV/IO Dose: 5mcg/kg for single dose max of 100 mcg, (2.5mcg/kg if >60 years of age) <ul style="list-style-type: none"> ○ May repeat once at same dosage if needed in 3-5 minutes • IN Dose: 5mcg/kg for single dose with max of 100mcg <ul style="list-style-type: none"> ○ May repeat once at same dosage if needed in 3-5 minutes |
| PEDIATRIC | <ul style="list-style-type: none"> • IV/IO Dose: 2mcg/kg given slowly to a max of 100 mcg per single dose <ul style="list-style-type: none"> ○ May repeat once at same dosage if needed in 3-5 minutes • IN Dose: 2mcg/kg to a max of 100mcg per single dose <ul style="list-style-type: none"> ○ May repeat once at same dosage if needed in 3-5 minutes • Not indicated for children < 2 years of age |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Inhibits ascending pain pathways in CNS • Increases pain threshold • Alters pain perception by binding to opiate receptors |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> • Hypersensitivity • Asthma • Severe renal disease • Severe hepatic disease |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Dizziness • Bradycardia • Hypotension • Hypertension • Blurred vision • Nausea/Vomiting • Urinary Retention • Diaphoresis • Respiratory depression |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> • Light Sensitive • DO NOT use in children < 2 years of age |

GLUCAGON

| | |
|-----------------------------------|--|
| INDICATIONS | Hypoglycemia |
| ADMINISTRATION | IM |
| DOSAGE | |
| ADULT | 1mg IM |
| PEDIATRIC | 0.5mg IM |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none">• Increases blood sugar• Improves mental status |
| CONTRAINDICATIONS | <ul style="list-style-type: none">• Hypersensitivity• Hyperglycemia |
| SIDE EFFECTS | <ul style="list-style-type: none">• Hypotension• Nausea and Vomiting |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none">• Peak effect occurs within 30 minutes• Pts can be hyperglycemic for one to two hours after |

IBUPROFEN

(Motrin)

| | |
|-----------------------------------|---|
| INDICATIONS | Used for the management of fever of 100.4° F. or greater |
| ADMINISTRATION | Orally |
| DOSAGE | |
| ADULT | 10mg/kg up to 800mg. Given in 200mg tablets so medication dosage will be rounded to nearest 200mg increment |
| PEDIATRIC | 10mg/kg up to 800mg of Liquid Children's Motrin is used for pediatrics |
| THERAPEUTIC EFFECTS | As an antipyretic, Acetaminophen is used to manage fever and to treat/prevent sepsis |
| CONTRAINDICATIONS | <ul style="list-style-type: none">• Allergy• Pregnancy• Hyperglycemia |
| SIDE EFFECTS | <ul style="list-style-type: none">• Nausea• GI distress/bleeds• Dizziness• Skin rash• Fluid retention• Constipation• Hypertension |
| SPECIAL NOTES/RESTRICTIONS | May decrease the effect of aspirin |

KETAMINE (Ketalar)

| | |
|-----------------------|---|
| INDICATIONS | <ul style="list-style-type: none"> • For the chemical sedation of patients suffering from Excited Delirium Syndrome as often exhibited by abuse of stimulant drugs, synthetic marijuana, and bath salts • For pain management ONLY if: <ul style="list-style-type: none"> ○ Severe non-cardiac pain rated at a 9 or 10 by the patient AND accompanying indications of severe pain such as increased heart rate, increased blood pressure, obvious significant injury, etc, OR ○ Prolonged expected extrication time (> 10 minutes) where the patient is in severe pain due to significant injury • For sedation prior to synchronized cardioversion or pacing in conscious patients that are hypotensive (SBP < 90mmHg) |
| ADMINISTRATION | <ul style="list-style-type: none"> • For Chemical Restraint: IV, IO or IM • For Pain or Sedation for Electrical Therapy: IV Only |
| DOSAGE | |
| ADULT | <ul style="list-style-type: none"> • For Chemical Restraint: <ul style="list-style-type: none"> ○ IV/IO: 2mg/kg slow push (over 1 minute) <ul style="list-style-type: none"> ▪ May repeat once in 10 minutes if needed ○ IM: 5mg/kg in thigh. (May require multiple injections as a maximum of 5cc per injection may be given) <ul style="list-style-type: none"> ▪ May repeat once in 20-25 minutes if indicated. (IV route is preferred for repeat doses) • For Pain Management: <ul style="list-style-type: none"> ○ IV or IO Only: 0.5mg/kg to a maximum of 500mg SLOW IV/IO push ○ NO repeat dosage unless permission granted by medical direction |

Continued on Next Page

KETAMINE (continued) (Ketalar)

| | |
|----------------------------|--|
| DOSAGE (continued) | |
| ADULT (continued) | <ul style="list-style-type: none"> • For Sedation prior to cardioversion or pacing: <ul style="list-style-type: none"> ○ IV or IO only: 0.5mg/kg to a maximum of 500mg SLOW IV/IO push ○ NO repeat dosage unless permission granted by medical direction |
| PEDIATRIC | <ul style="list-style-type: none"> • For Chemical Restraint: <ul style="list-style-type: none"> ○ IV: 2mg/kg slow push (over 1 minute) <ul style="list-style-type: none"> ▪ May repeat once in 10 minutes if needed ○ IM for children <5yoa: 3mg/kg in thigh <ul style="list-style-type: none"> ▪ May repeat once in 20-25 minutes if indicated (IV route is preferred for repeat doses) ○ IM for children ≥5yoa: 5mg/kg in thigh. (May require multiple injections as a maximum of 5cc per injection may be given) <ul style="list-style-type: none"> ▪ May repeat once in 20-25 minutes if indicated (IV route is preferred for repeat doses) ○ Should NOT be administered to infants < 3 months old • For Pain Management: <ul style="list-style-type: none"> ○ IV or IO Only: 0.5mg/kg to a maximum of 500mg SLOW IV/IO push • For Sedation prior to cardioversion: IV or IO only: 0.5mg/kg to a maximum of 500mg SLOW IV/IO push |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Anesthetic medication • Amnesic • Reduces anxiety and causes sedation • Decreases perception of pain |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> • Allergic • Infants < 3 months of age |

Continued on Next Page

KETAMINE (continued) (Ketalar)

| | |
|----------------------------------|---|
| SIDE EFFECTS | <ul style="list-style-type: none"> • Increased nasal/oral secretions • Muscle tremors • Respiratory depression • Elevated BP |
| SPECIALNOTES/RESTRICTIONS | <ul style="list-style-type: none"> • Ketamine and Narcotics CANNOT be administered to the same patient without contacting medical direction for permission <ul style="list-style-type: none"> ○ If a patient has received narcotics, Ketamine CANNOT be given without contacting medical control for permission ○ If a patient has received Ketamine, narcotics CANNOT be given without contacting medical control for permission • Ketamine CANNOT be given IM for pain management • Monitor waveform capnography if available • Administration of Atropine may be indicated if significant oral/nasal secretions develop when used for chemical restraint • If given IM for chemical restraint, an IV should be established after sedation. IV route is preferred for repeat doses • All uses of Ketamine MUST be reviewed by a peer reviewer |

LABETOLOL

(Normodyne)

| | |
|----------------------------------|--|
| INDICATIONS | Hypertensive Crisis |
| ADMINISTRATION | IV, IO |
| DOSEAGE | |
| ADULT | 10-20mg IV or IO per online medical control |
| PEDIATRIC | Not indicated |
| THERAPEUTIC EFFECTS | Decreases blood pressure without reflex tachycardia or significant reduction in heart rate. |
| CONTRAINDICATIONS | <ul style="list-style-type: none">• Hypersensitivity to Beta blockers, Cardiogenic shock• 2nd or 3rd degree AV blocks, Sinus Bradycardia, CHF, or Bronchial Asthma• Patients with VAD device |
| SIDE EFFECTS | <ul style="list-style-type: none">• Orthostatic hypotension• CHF• Chest Pain• Ventricular dysrhythmias• AV Block |
| SPECIALNOTES/RESTRICTIONS | <ul style="list-style-type: none">• Use caution in patients who are pregnant, or have diabetes, or well compensated heart failure, and in the elderly• Must have online medical direction to give in EMS setting |

LACTATED RINGERS

(LR)

| | |
|-----------------------------------|---|
| INDICATIONS | Trauma and Burns. First line IV fluid of choice for all trauma patients |
| ADMINISTRATION | IV, IO |
| DOSAGE | |
| ADULT | T.K.O. to W/O IV or IO |
| PEDIATRIC | T.K.O. to W/O (20mg/kg) IV or IO |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none">• Expands circulation volume• Isotonic solution• Contains sodium chloride, potassium chloride, calcium chloride, and sodium lactate |
| CONTRAINDICATIONS | High doses in Congestive Heart Failure |
| SIDE EFFECTS | <ul style="list-style-type: none">• Edema• Fluid Overload• Electrolyte imbalance• Hypertension |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none">• Monitor vital signs and ECG continuously• Listen to breath sounds for signs of pulmonary edema• Can cause hypertension |

LIDOCAINE
(Xylocaine)

| | |
|-----------------------------------|---|
| INDICATIONS | Ventricular arrhythmias, Pre IO fluid Infusion. PAI for patients w/head injuries |
| ADMINISTRATION | IV, IO, ETT, IV infusion, IO infusion |
| DOSAGE | |
| ADULT | <ul style="list-style-type: none"> • PVCs: 1mg/kg, if not suppressed give 0.5mg/kg every five minutes until PVCs suppressed or 3mg/kg has been given • Lidocaine Drip must be started at 2mg/minute after using Lidocaine to treat Ventricular arrhythmias • PAI: 1mg/kg for patients with a head injury • Adult IO: Prior to infusion of fluids or flushes in the conscious adult patient you may administer 1mg/kg to a max of 50 mg, if no contraindications |
| PEDIATRIC | <ul style="list-style-type: none"> • 2mg/kg ETT to a max of 6mg/kg for patients with V-Tach with a pulse, and V-Fib and V-Tach without a pulse • Lidocaine Drip for post resuscitation at 30mcg/kg/min • Head Injury 0.5mg/kg • Pedi IO: Prior to infusion of fluids or flushes in the conscious pedi patient you may administer 0.5mg/kg to a max of 50mg, if no contraindications |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Suppresses Ventricular ectopy • Elevates threshold for ventricular fibrillation • Suppresses re-entry arrhythmias |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> • Idioventricular rhythms • 2nd and 3rd degree AV blocks • Allergy to local anesthetics • Sinus bradycardia • Patients with VAD device unless in cardiac arrest |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Arrhythmias • Hypotension • Irritability • Muscle twitching • Seizures |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> • Successful use of Lidocaine IVP or IO should be followed by additional boluses • Boluses should be reduced in cases of shock, CHF, or elderly patients |

MAGNESIUM SULFATE 50%

| | |
|-----------------------------------|--|
| INDICATIONS | <ul style="list-style-type: none"> Prevention and control of seizures in severe toxemia of pregnancy (Eclampsia) |
| ADMINISTRATION | Slow IV push, IV infusion |
| DOSAGE | |
| ADULT | <p>IVP: Loading dose is 4grams SLOW IV Push over 15 minutes. Should be diluted 1:1 with NS</p> <p>Maintenance Dose: 1 gram/hr IV drip</p> |
| PEDIATRIC | <ul style="list-style-type: none"> Not used for pediatrics |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> Blocks neuromuscular transmission Decreases the amount of acetylcholine liberated |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> Hypersensitivity Patients with VAD device |
| SIDE EFFECTS | <p>Side effects are a result of magnesium intoxication:</p> <ul style="list-style-type: none"> Flushing, sweating, depressed reflexes, flaccid paralysis, hypothermia Hypotension Circulatory collapse, cardiac depression, CNS depression proceeding to respiratory paralysis Hypocalcemia |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> Monitor closely for magnesium intoxication especially falling BP and respiratory paralysis Should be used with caution on patients with renal impairment Administration of Calcium Gluconate will normally reverse magnesium intoxication |
| IV DRIP PREPARATION | <p>For 250cc Bag:</p> <ul style="list-style-type: none"> Mix 5 grams in 250cc of NS Run at 50gtt/min <p>For 500cc Bag:</p> <ul style="list-style-type: none"> Mix 5 grams in 500cc of NS Run at 100gtt/min |

MORPHINE

| | |
|-----------------------------------|--|
| INDICATIONS | Pain management, Pulmonary Edema, CHF, and Cardiac Chest pain or AMI |
| ADMINISTRATION | IV, IO |
| DOSAGE | |
| ADULT | <ul style="list-style-type: none"> • Pain: 2-6mg may repeat if needed every 10 minutes or until systolic BP is <90mmHg • Pulmonary Edema/CHF: 2-6mg may repeat once in 10 minutes if systolic BP >90mmHg • Chest Pain: 2-6mg may repeat as need every 10 minutes until pain is relieved or systolic BP <90mmHg |
| PEDIATRIC | <ul style="list-style-type: none"> • Pain: 0.1mg/kg up to a max single does of 3mg • Pulmonary Edema: 0.1mg/kg to a max single does of 3mg |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Binds with opiate receptors to reduce pain • Peripheral vasodilation |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> • Use of Monoamine Oxidase Inhibitors (MAOI's) within the past 14 days • Asthma • COPD • Head Injury • Hypotension • Hypovolemia • Respiratory depression • Patients with a VAD device |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Bradycardia • Hypotension • Nausea and vomiting • Respiratory depression |
| SPECIAL NOTES/RESTRICTIONS | Naloxone (Narcan) and respiratory equipment should be immediately accessible. |

NARCAN

(Naloxone)

| | |
|-----------------------------------|--|
| INDICATIONS | Opiate Overdose, Decreased LOC |
| ADMINISTRATION | IV, IO, ETT, IN (Intranasal) |
| DOSAGE | |
| ADULT | <ul style="list-style-type: none">• IV/IO Dose: 2mg, may be repeated if no changes in patients mental status<ul style="list-style-type: none">○ Patients on chronic high dosages of Narcotics give 0.1mg every 2-3 minutes for clinical effect.• IN Dose: 2mg, may be repeated once if no increase in respirations or LOC |
| PEDIATRIC | <ul style="list-style-type: none">• IV/IO Dose: 0.1mg/kg to a max of 2mg• IN Dose: 0.1mg/kg to a max of 2mg, may be repeated once if no increase in respirations or LOC |
| THERAPEUTIC EFFECTS | Reverses effects of most narcotic agents |
| CONTRAINDICATIONS | Hypersensitivity to Naloxone |
| SIDE EFFECTS | <ul style="list-style-type: none">• Acute Narcotic withdrawal• Hypertension• Irritability• Nausea and vomiting• Tachycardia |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none">• Does not reverse benzodiazepine overdoses• May precipitate acute withdrawal symptoms• Caution should be exercised when administering Naloxone to patients addicted to narcotics |

NITROGLYCERIN

(Nitro-Bid, Nitrostat)

| | |
|-----------------------------------|--|
| INDICATIONS | Chest Pain, Pulmonary Edema, CHF |
| ADMINISTRATION | SL |
| DOSAGE | |
| ADULT | <ul style="list-style-type: none">• Chest Pain or ACS: If systolic BP is >90mmHg give 0.4mg SL or 1 metered spray of Nitro spray, every 5 minutes until symptoms relieved or Systolic blood pressure < 90mmHg• Pulmonary Edema/CHF: If systolic BP > 90mmHg give one Nitro 0.4mg SL or one metered Nitro Spray, may repeat X 1 |
| PEDIATRIC | NOT INDICATED |
| THERAPEUTIC EFFECTS | Dilates coronary and systemic arteries |
| CONTRAINDICATIONS | <ul style="list-style-type: none">• Head trauma• Hypertrophic Cardiomyopathy• Glaucoma• Hypotension• Use of Viagra, Cialis or Levitra within past 48 hours• Patients with a VAD device |
| SIDE EFFECTS | <ul style="list-style-type: none">• Dizziness• Headache• Hypotension |
| SPECIAL NOTES/RESTRICTIONS | Contact Medical Control prior to administration if taking Viagra, Cialis or Levitra |

NORCURON

(Vecuronium)

| | |
|------------------------------------|--|
| INDICATIONS | <ul style="list-style-type: none"> To facilitate emergent endotracheal intubation Provide skeletal muscle relaxation during artificial ventilations |
| ADMINISTRATION | IV, IO |
| DOSAGE | |
| ADULT | 0.15mg/kg to a max of 20mg and may repeat dosage at 0.01mg/kg if needed |
| PEDIATRIC | 0.15mg/kg to a max of 20mg and may repeat dosage at 0.01mg/kg if needed |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> The agent is a non-depolarizing skeletal muscle relaxant This agent acts by competing for cholinergic receptors, which prevents acetylcholine from binding to the receptors on the muscle end plate, thus blocking depolarization |
| CONTRAINICATIONS | Hypersensitivity to the drug |
| SIDE EFFECTS | <ul style="list-style-type: none"> Serious histamine mediated flushing Hypotension Bronchoconstriction Transient increase in heart rate Respiratory depression and Apnea Redness and itching at IV site |
| SPECIAL NOTES/ RESTRICTIONS | <ul style="list-style-type: none"> The patient will be completely paralyzed and in respiratory arrest for 20-30 minutes following the administration of norcuron-Complete airway control management will be necessary The agent has no effect on consciousness, cerebration or pain threshold Use with Anectine may enhance the neuromuscular blocking effect of Norcuron |

NORMAL SALINE
(0.9% Sodium Chloride)

| | |
|-----------------------------------|--|
| INDICATIONS | Non-traumatic hypovolemic status, as a flushing agent, D.K.A. and as an irrigation solution for eyes. First line IV fluid of choice for medical conditions |
| ADMINISTRATION | IV, IO |
| DOSAGE | |
| ADULT | T.K.O. to W/O IV or IO |
| PEDIATRIC | T.K.O. to W/O (20mg/kg) IV or IO |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Expands circulation volume • Isotonic solution |
| CONTRAINDICATIONS | High doses in Congestive Heart Failure |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Edema • Fluid Overload • Electrolyte imbalance • Hypertension |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> • Monitor vital signs and ECG continuously • Listen to breath sounds for signs of pulmonary edema • Can cause hypertension |

ORAL GLUCOSE

| | |
|-----------------------------------|--|
| INDICATIONS | Low blood sugar |
| ADMINISTRATION | PO (by mouth) |
| DOSAGE | |
| ADULT | 15g between cheek and gum, may repeat to desired effect |
| PEDIATRIC | 15g between cheek and gum, may repeat to desired effect |
| THERAPEUTIC EFFECTS | Increases blood sugar in patients that are alert and able to swallow |
| CONTRAINDICATIONS | <ul style="list-style-type: none">• Unconscious patients• Hyperglycemia |
| SIDE EFFECTS | None |
| SPECIAL NOTES/RESTRICTIONS | Only administer to patients that are alert and able to swallow |

OXYGEN

| | |
|-----------------------------------|--|
| INDICATIONS | <ul style="list-style-type: none"> • Treat Hypoxemia • Help decrease work of breathing • Decreases myocardial work |
| ADMINISTRATION | Inhalation |
| DOSAGE | |
| ADULT | <ul style="list-style-type: none"> • 1-6lpm via Nasal cannula • 8-15lpm via Non-Rebreather Mask • 3-6lpm via Hand Held Nebulizer • 15lpm via ETT |
| PEDIATRIC | <ul style="list-style-type: none"> • 1-6lpm via Nasal cannula • 8-15lpm via Non-Rebreather Mask • 3-6lpm via Hand Held Nebulizer • 15lpm via ETT |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Supplemental Oxygen increases alveolar oxygen tension • Reduces both the magnitude and extent of ST changes during an AMI |
| CONTRAINDICATIONS | DO NOT GIVE SUPPLEMENTAL OXYGEN IN A PARAQUAT POISONING |
| SIDE EFFECTS | None for short term emergency use |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> • Do NOT withhold Oxygen from a COPD patient if he/she needs it • Monitor SPO2 continuously |

RACEMIC EPINEPHRINE

(Micronefrin, Vapo Nefrin)

| | |
|-----------------------------------|---|
| INDICATIONS | Croup |
| ADMINISTRATION | Inhalation |
| DOSAGE | |
| ADULT | DO NOT GIVE TO ADULT PATIENTS |
| PEDIATRIC | <40KG: 11.25mg Racemic Epinephrine in 2mL 2.25% saline solution via nebulizer |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Bronchodilator • Vasoconstrictor |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> • Hypersensitivity • Epiglottitis • Significant underlying cardiovascular disease |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Anxiety • Palpitations • Headache • Tremors • Tachycardia • Nausea/Vomiting |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> • Monitor vital signs closely • Should be used only once prehospital (contact medical control if another is needed) • Excessive use may cause bronchospasms • May develop “rebound worsening” within 30-60 minutes • Effects last from 90-120 minutes • PATIENT MUST BE TRANSPORTED AFTER RECEIVING RACEMIC EPINEPHRINE • Heat and Light sensitive should be stored in a dark cool place |

ROCURONIUM

(Zemuron)

| | |
|------------------------------------|---|
| INDICATIONS | <ul style="list-style-type: none"> • To facilitate emergent endotracheal intubation • Provide skeletal muscle relaxation during artificial ventilations |
| ADMINISTRATION | IV, IO |
| DOSAGE | |
| ADULT | 1mg/kg. May repeat dosage at 0.1mg/kg if needed after 12 minutes |
| PEDIATRIC | <ul style="list-style-type: none"> • Preferred Paralytic for Pediatrics • 1mg/kg. May repeat dosage at 0.1mg/kg if needed after 12 minutes |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • The agent is a non-depolarizing skeletal muscle relaxant • This agent acts by competing for cholinergic receptors, which prevents acetylcholine from binding to the receptors on the muscle end plate, thus blocking depolarization |
| CONTRAINICATIONS | Hypersensitivity to the drug |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Serious histamine mediated flushing • Hypotension • Bronchoconstriction • Transient increase in heart rate • Myopathy • Respiratory depression and Apnea • Redness and itching at IV site |
| SPECIAL NOTES/ RESTRICTIONS | <ul style="list-style-type: none"> • The patient will be completely paralyzed and in respiratory arrest for 20-60 minutes following the administration of Rocuronium- Complete airway control management will be necessary • The agent has no effect on consciousness, cerebation or pain threshold • Use with Succinylcholine may enhance the neuromuscular blocking effect of Rocuronium |

SODIUM BICARBONATE

| | |
|-----------------------------------|--|
| INDICATIONS | Cardiac Arrest, May also be given for KNOWN Tricyclic Antidepressant O.D., Hyperkalemia or Acidosis |
| ADMINISTRATION | IV, IO |
| DOSAGE | |
| ADULT | <ul style="list-style-type: none"> • 1mEq/kg up to 100mEq. May be repeated at 0.5mEq/kg every 10 minutes to a max of 50 mEq. • Paramedics may give in prolonged cardiac arrest (>20 minutes) without online medical direction |
| PEDIATRIC | NOT INDICATED |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Buffers strong acids in the blood • Antagonizes sodium channel blockade in TCA overdose • Prevents resorption of salicylates in renal tubes |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> • Hypokalemia • Pulmonary Edema |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Dysrhythmias secondary to potassium effects • Metabolic alkalosis • Pulmonary edema |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> • MUST CONTACT ON-LINE MEDICAL CONTROL for any usage other than prolonged cardiac arrest (>20 minutes) • Not to be used in place of proper ventilation to prevent acidosis • In patients less than 2 year of age you must dilute 1:1 with NS |

SUCCINYLCHOLINE

(Anectine)

| | |
|------------------------------------|---|
| INDICATIONS | Chemical Sedation |
| ADMINISTRATION | IV, IO |
| DOSAGE | |
| ADULT | 2mg/kg rapid IV or IO push, to a max of 200mg. Do not repeat without medical control authorization. |
| PEDIATRIC | 2mg/kg rapid IV or IO push, to a max of 200mg. Do not repeat without medical control authorization |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none">• Inhibits transmission of nerve impulses by binding with cholinergic receptors sites, antagonizing action of acetylcholine causes release of histamine |
| CONTRAINDICATIONS | <ul style="list-style-type: none">• Burns greater than 48 hours old• Kidney Dialysis• Chronic neuromuscular disease or any chronic paralysis• Hypersensitivity |
| SIDE EFFECTS | <ul style="list-style-type: none">• Bradycardia• Tachycardia• Hypertension• Dysrhythmias• Apnea• Respiratory depression |
| SPECIAL NOTES/ RESTRICTIONS | Monitor vital signs closely |

VALIUM (Diazepam)

| | |
|-----------------------------------|--|
| INDICATIONS | Major motor seizures, Status Epilepticus |
| ADMINISTRATION | IV, IO, and Rectal |
| DOSAGE | |
| ADULT | Seizures: 5mg IV, if no changes repeat 5 mg every 5 minutes until seizures controlled. Rectally one dose 10mg |
| PEDIATRIC | <ul style="list-style-type: none"> • Seizures: 0.1mg/kg, IV to a max of 5mg per dose, may repeat dose every 5 minutes until seizures controlled. • Rectal: 0.5mg/kg, rectal to a max of 10 mg per dose |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Suppresses spread of seizure activity through the motor cortex • Skeletal muscle relaxant • Reduces anxiety and causes sedation |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> • Respiratory depression • Hypotension • Allergy |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Hypotension • Respiratory depression • Use caution in the elderly patients |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> • Intramuscularly administration leads to widely variable absorption and should be avoided if possible. • For patients with VAD device, only use for continuous seizures, and use the lowest effective dose |

VERSED

(Midazolam)

| | |
|-----------------------------------|---|
| INDICATIONS | Premedication for cardioversion, Seizures , Chemical Sedation and Restraint, and for Induced Hypothermia |
| ADMINISTRATION | IV, IO, IM, IN (Intranasal) |
| DOSAGE | |
| ADULT | <p>Cardioversion:</p> <ul style="list-style-type: none"> IV/IO: 5mg IV or IO if BP>90mmHg (2.5mg if patient is >60 years of age) IN: 0.2mg/kg to a max of 5mg, repeated every 5-10 minutes as needed as long as SBP > 90mmHg <p>Chemical Sedation:</p> <ul style="list-style-type: none"> IV/IO,IM: 1-5mg IV, IO or IM 0.5mg/kg to a max of 5mg per dose IN: 0.2mg/kg to a max of 5mg, repeated every 5-10 minutes as needed as long as SBP > 90mmHg <p>Seizure:</p> <ul style="list-style-type: none"> IM: 5mg IM, may be repeated at 2.5mg every 10 minutes as needed to control seizure activity. IN: 0.2mg/kg to a max of 5mg, May repeat every 5-10 minutes at 0.1mg/kg to a max of 2.5 |
| PEDIATRIC | <p>Cardioversion:</p> <ul style="list-style-type: none"> IV/IO: 0.1mg/kg IV or IO to a max of 2.5mg <p>Chemical Sedation:</p> <ul style="list-style-type: none"> IV/IO,IM: 0.1mg/kg IV or IO to a max of 10mg IN: 0.2mg/kg to a max of 5mg, repeated every 5-10 minutes as needed as long as SBP > 90mmHg <p>Seizures:</p> <ul style="list-style-type: none"> IM: 0.2mg/kg IM to a max of 5mg, may repeat 0.1mg/kg every 10 minutes as needed. IN: 0.2mg/kg to a max of 5mg, May repeat every 5-10 minutes at 0.1mg/kg to a max of 2.5 |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> C.N.S. depressant The agent causes amnesia by unknown mechanism |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> Hypersensitivity Pre-existing respiratory depression due to drugs or C.N.S. dysfunction Use with caution, if at all, for shock states, head injury patients and comatose patients |
| SIDE EFFECTS | <ul style="list-style-type: none"> Amnesia, Tonic-clonic activity, drowsiness, and lethargy Tachycardia and Hypotension Photophobia, blurred vision and nystagmus Nausea, vomiting, depressed gag reflex Pain and phlebitis at injection site |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> This agent is 3-4 times as potent as diazepam on a milligram to milligram basis. Its has a more rapid onset and shorter half-life than Valium Monitor ECG, V/S, and SPO2 continuously For patients with VAD device, only use for continuous seizures, and use the lowest effective dose |

XOPENEX
(Levalbuterol)

| | |
|-----------------------------------|---|
| INDICATIONS | Respiratory distress with patients that have Asthma or COPD |
| ADMINISTRATION | Nebulized via supplemental oxygen |
| DOSAGE | |
| ADULT | 1.25mg/3ml nebulized, may repeat once if no relief |
| PEDIATRIC | 1.25mg/3ml nebulized, may repeat once if no relief |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Relaxes soft muscles • Causes bronchodilation • Causes cardiac stimulation |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> • Hypersensitivity to drug • Tachydysrhythmias • Severe cardiac disease |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Dizziness • Migraine • Nervousness • Anxiety • Tachycardia • Increased cough |
| SPECIAL NOTES/RESTRICTIONS | <ul style="list-style-type: none"> • Use with caution in patients with Cardio Vascular disorders • Use caution in patients with Diabetes and seizure disorders • For patients with a VAD device, limit to one dose |

ZOFRAN
(Ondansetron)

| | |
|-----------------------------------|---|
| INDICATIONS | Nausea and Vomiting |
| ADMINISTRATION | IV, IO |
| DOSAGE | |
| ADULT | <ul style="list-style-type: none"> • 4mg IVP |
| PEDIATRIC | <ul style="list-style-type: none"> • <i>NOT INDICATED FOR CHILDREN < 2 YEARS OF AGE</i> • Over 2 years of age: 0.1mg/kg to a max of 4mg |
| THERAPEUTIC EFFECTS | <ul style="list-style-type: none"> • Helps reverse the effects of nausea • May potentate the effects of CNS depressants |
| CONTRAINDICATIONS | <ul style="list-style-type: none"> • Hypersensitivity to drug • Intestinal obstruction • Seizure disorder |
| SIDE EFFECTS | <ul style="list-style-type: none"> • Dizziness • Drowsiness • Blurred Vision • Hypotension • Constipation • Diarrhea • Fatigue |
| SPECIAL NOTES/RESTRICTIONS | Do NOT administer to children < 2 YOA |

ADULT MEDICATIONS FOR WEIGHTS UP TO 100KG Page 1 of 2

| Weight (lbs) | 110lbs | 132lbs | 154lbs | 176lbs | 198lbs | 220lbs |
|--|----------------------|----------------------|----------------------|------------------------|------------------------|------------------------|
| Weight (kg) | 50kg | 60kg | 70kg | 80kg | 90kg | 100kg |
| Acetaminophen, 10mg/kg up to 1,000mg (500mg tablets) | 500mg (1 tablet) | 500mg (1 tablet) | 500mg (1 tablet) | 1,000mg (2 tablets) | 1,000mg (2 tablets) | 1,000mg (2 tablets) |
| Activated Charcoal 1g/kg up to 50g | 50g PO | 50g PO | 50g PO | 50g PO | 50g PO | 50g PO |
| Adenosine 12mg Rapid IV push, may be repeated once at 12mg rapid IV push | 12mg | 12mg | 12mg | 12mg | 12mg | 12mg |
| Amiodarone 150mg IV over 10 minutes for VT with a pulse | 150mg | 150mg | 150mg | 150mg | 150mg | 150mg |
| Amiodarone 300mg rapid IV for VF/VT without a pulse may repeat once at 150mg | 300mg | 300mg | 300mg | 300mg | 300mg | 300mg |
| Aspirin (ASA) 325mg PO | 325mg | 325mg | 325mg | 325mg | 325mg | 325mg |
| Atropine for Bradycardia 0.5mg may be repeated to a max of 3mg | 0.5mg | 0.5mg | 0.5mg | 0.5mg | 0.5mg | 0.5mg |
| Benadryl 50mg IVP | 50mg | 50mg | 50mg | 50mg | 50mg | 50mg |
| Calcium Gluconate 1 gram SLOW IV Push | 1 gram | 1 gram | 1 gram | 1 gram | 1 gram | 1 gram |
| Decadron 20mg SIVP | 20mg | 20mg | 20mg | 20mg | 20mg | 20mg |
| Dextrose 10% (D10W): Administer IV bolus using a 10-Drop set. Titrate to LOC. | Titrate to Effect | Titrate to Effect | Titrate to Effect | Titrate to Effect | Titrate to Effect | Titrate to Effect |
| Dopamine 5mcg/kg/min 200mg/250mL | 18gtts/min | 23gtts/min | 26gtts/min | 30gtts/min | 34gtts/min | 38gtts/min |
| Dopamine 10mcg/kg/min 200mg/250mL | 38gtts/min | 45gtts/min | 53gtts/min | 60gtts/min | 68gtts/min | 75gtts/min |
| Dopamine 15mcg/kg/min 200mg/250mL | 56gtts/min | 68gtts/min | 79gtts/min | 90gtts/min | 101gtts/min | 113gtts/min |
| Dopamine 20mcg/kg/min 200mg/250mL | 75gtts/min | 90gtts/min | 105gtts/min | 120gtts/min | 135gtts/min | 150gtts/min |
| Duo-Neb, 3mg of Albuterol with 0.5mg of Ipratropium in 3cc, Nebulized (Albuterol/Ipratropium) | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc |
| Epi 1:1,000 0.3mg IM | 0.3mg | 0.3mg | 0.3mg | 0.3mg | 0.3mg | 0.3mg |
| Epi 1:10,000 1mg IVP or 2mg ETT | 1mg/2mg | 1mg/2mg | 1mg/2mg | 1mg/2mg | 1mg/2mg | 1mg/2mg |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 100cc of NS at 2mcg/min | 12gtt/min | 12gtt/min | 12gtt/min | 12gtt/min | 12gtt/min | 12gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 100cc of NS at 4mcg/min | 24gtt/min | 24gtt/min | 24gtt/min | 24gtt/min | 24gtt/min | 24gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 100cc of NS at 6mcg/min | 36gtt/min | 36gtt/min | 36gtt/min | 36gtt/min | 36gtt/min | 36gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 100cc of NS at 8mcg/min | 48gtt/min | 48gtt/min | 48gtt/min | 48gtt/min | 48gtt/min | 48gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 100cc of NS at 10mcg/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 250cc of NS at 2mcg/min | 30gtt/min | 30gtt/min | 30gtt/min | 30gtt/min | 30gtt/min | 30gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 250cc of NS at 4mcg/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 250cc of NS at 6mcg/min | 90gtt/min | 90gtt/min | 90gtt/min | 90gtt/min | 90gtt/min | 90gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 250cc of NS at 8mcg/min | 120gtt/min | 120gtt/min | 120gtt/min | 120gtt/min | 120gtt/min | 120gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 250cc of NS at 10mcg/min | 150gtt/min | 150gtt/min | 150gtt/min | 150gtt/min | 150gtt/min | 150gtt/min |
| Etomidate 0.3mg/kg IV to a max of 40mg | 15mg | 18mg | 21mg | 24mg | 27mg | 30mg |
| Fentanyl, IV: 5mcg/kg to a max of 100mcg single does. May repeat once | 100mcg | 100mcg | 100mcg | 100mcg | 100mcg | 100mcg |
| Fentanyl, Intranasal (MAD): 2mcg/kg to a max of 100mcg per dose | 100mcg | 100mcg | 100mcg | 100mcg | 100mcg | 100mcg |
| Glucagon 1mg IM | 1mg | 1mg | 1mg | 1mg | 1mg | 1mg |
| Ibuprofen, 10mg/kg up to 800mg (200mg tablets) | 400mg (2 tablets) | 600mg (3 tablets) | 600mg (3 tablets) | 800mg (4 tablets) | 800mg (4 tablets) | 800mg (4 tablets) |
| Ketamine IV Push For Chemical Restraint: 2mg/kg (Administer slowly over 1 minute) | 100mg | 120mg | 140mg | 160mg | 180mg | 200mg |
| Ketamine IM For Chemical Restraint: 5mg/kg (In Thigh) May require multiple injections as maximum of 5cc per injection may be given | 250mg | 300mg | 350mg | 400mg | 450mg | 500mg |

ADULT MEDICATIONS FOR WEIGHTS UP TO 100KG Page 2 of 2

| Weight (lbs) | 110lbs | 132lbs | 154lbs | 176lbs | 198lbs | 220lbs |
|---|---------------|---------------|---------------|---------------|---------------|---------------|
| Weight (kg) | 50kg | 60kg | 70kg | 80kg | 90kg | 100kg |
| Ketamine for Pain Management: 0.5mg/kg SLOW IV or IO push to a maximum of 500mg | 25mg | 30mg | 35mg | 40mg | 45mg | 50mg |
| Ketamine for Sedation prior to Cardioversion or Pacing: 0.5mg/kg SLOW IV or IO push to a maximum of 500mg | 25mg | 30mg | 35mg | 40mg | 45mg | 50mg |
| Labetalol 10-20mg IVP (MUST CONTACT MEDICAL CONTROL BEFORE ADMINISTERING) | 10-20mg | 10-20mg | 10-20mg | 10-20mg | 10-20mg | 10-20mg |
| Lidocaine for PVCs 1mg/kg IV may be repeated at 0.5mg/kg to a max of 3mg/kg | 50mg/25mg | 60mg/30mg | 70mg/35mg | 80mg/40mg | 90mg/45mg | 100mg/50mg |
| Lidocaine for VF/VT given via ETT 2mg/kg may repeat at 2mg/kg to a max of 6mg/kg | 100mg | 120mg | 140mg | 160mg | 180mg | 200mg |
| Lidocaine Drip 2-4mg/minute | 30-60gtt/min | 30-60gtt/min | 30-60gtt/min | 30-60gtt/min | 30-60gtt/min | 30-60gtt/min |
| Magnesium Sulfate 4 grams Loading Dose (diluted 1:1 and given SLOWLY over 15 minutes) | 4 grams | 4 grams | 4 grams | 4 grams | 4 grams | 4 grams |
| Magnesium Sulfate Maintenance Drip, 1g/hr. 5 grams in 250cc of NS | 50gtt/min | 50gtt/min | 50gtt/min | 50gtt/min | 50gtt/min | 50gtt/min |
| Magnesium Sulfate Maintenance Drip, 1g/hr. 5 grams in 500cc of NS | 100gtt/min | 100gtt/min | 100gtt/min | 100gtt/min | 100gtt/min | 100gtt/min |
| Morphine 2-6mg every 10 minutes (half dosage in pts >60y/o) | 2-6mg | 2-6mg | 2-6mg | 2-6mg | 2-6mg | 2-6mg |
| Narcan, IV: 2mg may repeat once if no change in mental status | 2mg | 2mg | 2mg | 2mg | 2mg | 2mg |
| Narcan, Intranasal: 2mg, IN may repeat once if no respiratory improvement | 2mg | 2mg | 2mg | 2mg | 2mg | 2mg |
| Nitro Spray 0.4mg SL max of 3 if BP>90 systolic | 0.4mg | 0.4mg | 0.4mg | 0.4mg | 0.4mg | 0.4mg |
| Norcuron 0.15mg/kg to a max of 20mg may repeat at 0.01mg/kg if needed | 7.5mg | 9mg | 10.5mg | 12mg | 13.5mg | 15mg |
| Oral Glucose 15g between check and gum may repeat to desired effect | 15g | 15g | 15g | 15g | 15g | 15g |
| Racemic Epi | Not indicated | Not indicated | Not indicated | Not indicated | Not indicated | Not indicated |
| Rocuronium (INITIAL DOSE) 1mg/kg | 50mg | 60mg | 70mg | 80mg | 90mg | 100mg |
| Rocuronium (REPEAT DOSE) repeated X1 in 12 minutes if needed 0.1mg/kg | 5mg | 6mg | 7mg | 8mg | 9mg | 10mg |
| Sodium Bicarbonate 1meq/kg to a max of 100meq, may repeat at 0.5meq every 10 minutes up to 50meq | 50meq | 60meq | 70meq | 80meq | 90meq | 100meq |
| Succinylcholine 2mg/kg rapid IVP | 100mg | 120mg | 140mg | 160mg | 180mg | 200mg |
| Valium 5mg IV for active seizures may repeat as needed at 5mg every 5 minutes | 5mg | 5mg | 5mg | 5mg | 5mg | 5mg |
| Versed 5mg IVP if BP>90 systolic (2.5mg if pt >60) | 5mg | 5mg | 5mg | 5mg | 5mg | 5mg |
| Versed, Intranasal for SEIZURE activity (0.2mg/kg to a max of 5mg) | 5mg | 5mg | 5mg | 5mg | 5mg | 5mg |
| Versed, Intranasal, for SEIZURE activity, REPEAT DOSAGE at 0.1mg/kg to a max of 2.5mg | 2.5mg | 2.5mg | 2.5mg | 2.5mg | 2.5mg | 2.5mg |
| Versed, Intranasal, for SEDATION: 0.2mg/kg to a max of 5mg. May repeat every 5-10 minutes as needed as long as SBP>90mmHg | 5mg | 5mg | 5mg | 5mg | 5mg | 5mg |
| Xopenex 1.25mg/3cc NS Nebulized may be repeated at same dose if needed | 1.25mg/3cc | 1.25mg/3cc | 1.25mg/3cc | 1.25mg/3cc | 1.25mg/3cc | 1.25mg/3cc |
| Zofran 4mg IVP | 4mg | 4mg | 4mg | 4mg | 4mg | 4mg |

ADULT MEDICATIONS FOR WEIGHTS OF 110KG AND OVER Page 1 of 2

| Weight (lbs) | 242lbs | 264lbs | 286lbs | 308lbs | 330lbs |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|
| Weight (kg) | 110kg | 120kg | 130kg | 140kg | 150kg |
| Acetaminophen, 10mg/kg up to 1,000mg (500mg tablets) | 1,000mg (2 tablets) | 1,000mg (2 tablets) | 1,000mg (2 tablets) | 1,000mg (2 tablets) | 1,000mg (2 tablets) |
| Activated Charcoal 1g/kg up to 50g | 50g PO | 50g PO | 50g PO | 50g PO | 50g PO |
| Adenosine 12mg Rapid IV push, may be repeated once at 12mg rapid IV push | 12mg | 12mg | 12mg | 12mg | 12mg |
| Amiodarone 150mg IV over 10 minutes for VT with a pulse | 150mg | 150mg | 150mg | 150mg | 150mg |
| Amiodarone 300mg rapid IV for VF/VT without a pulse may repeat once at 150mg | 300mg | 300mg | 300mg | 300mg | 300mg |
| Aspirin (ASA) 325mg PO | 325mg | 325mg | 325mg | 325mg | 325mg |
| Atropine for Bradycardia 0.5mg may be repeated to a max of 3mg | 0.5mg | 0.5mg | 0.5mg | 0.5mg | 0.5mg |
| Benadryl 50mg IVP | 50mg | 50mg | 50mg | 50mg | 50mg |
| Calcium Gluconate 1 gram SLOW IV Push | 1gram | 1gram | 1gram | 1gram | 1gram |
| Decadron 20mg SIVP | 20mg | 20mg | 20mg | 20mg | 20mg |
| Dextrose 10% (D10W): Administer IV bolus using a 10-Drop set. Titrate to LOC. | Titrate to Effect | Titrate to Effect | Titrate to Effect | Titrate to Effect | Titrate to Effect |
| Dopamine 5mcg/kg/min 200mg/250mL | 40gtts/min | 45gtts/min | 49gtts/min | 53gtts/min | 56gtts/min |
| Dopamine 10mcg/kg/min 200mg/250mL | 84gtts/min | 90gtts/min | 98gtts/min | 105gtts/min | 113gtts/min |
| Dopamine 15mcg/kg/min 200mg/250mL | 124gtts/min | 135gtts/min | 146gtts/min | 158gtts/min | 169gtts/min |
| Dopamine 20mcg/kg/min 200mg/250mL | 165gtts/min | 180gtts/min | 195gtts/min | 210gtts/min | 225gtts/min |
| Duo-Neb, 3mg of Albuterol with 0.5mg of Ipratropium in 3cc, Nebulized (Albuterol/Ipratropium) | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc |
| Epi 1:1,000 0.3mg IM | 0.3mg | 0.3mg | 0.3mg | 0.3mg | 0.3mg |
| Epi 1:10,000 1mg IVP or 2mg ETT | 1mg/2mg | 1mg/2mg | 1mg/2mg | 1mg/2mg | 1mg/2mg |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 100cc of NS at 2mcg/min | 12gtt/min | 12gtt/min | 12gtt/min | 12gtt/min | 12gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 100cc of NS at 4mcg/min | 24gtt/min | 24gtt/min | 24gtt/min | 24gtt/min | 24gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 100cc of NS at 6mcg/min | 36gtt/min | 36gtt/min | 36gtt/min | 36gtt/min | 36gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 100cc of NS at 8mcg/min | 48gtt/min | 48gtt/min | 48gtt/min | 48gtt/min | 48gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 100cc of NS at 10mcg/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 250cc of NS at 2mcg/min | 30gttmin | 30gttmin | 30gttmin | 30gttmin | 30gttmin |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 250cc of NS at 4mcg/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 250cc of NS at 6mcg/min | 90gtt/min | 90gtt/min | 90gtt/min | 90gtt/min | 90gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 250cc of NS at 8mcg/min | 120gtt/min | 120gtt/min | 120gtt/min | 120gtt/min | 120gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 250cc of NS at 10mcg/min | 150gtt/min | 150gtt/min | 150gtt/min | 150gtt/min | 150gtt/min |
| Etomidate 0.3mg/ kg IV to a max of 40mg | 33mg | 36mg | 39mg | 40mg | 40mg |
| Fentanyl, IV: 5mcg/kg to a max of 100mcg single does. May repeat once | 100mcg | 100mcg | 100mcg | 100mcg | 100mcg |
| Fentanyl, Intranasal (MAD): 2mcg/kg to a max of 100mcg per dose | 100mcg | 100mcg | 100mcg | 100mcg | 100mcg |
| Glucagon 1mg IM | 1mg | 1mg | 1mg | 1mg | 1mg |
| Ibuprofen, 10mg/kg up to 800mg (200mg tablets) | 800mg (4 tablets) | 800mg (4 tablets) | 800mg (4 tablets) | 800mg (4 tablets) | 800mg (4 tablets) |
| Ketamine IV Push For Chemical Restraint: 2mg/kg (Administer slowly over 1 minute) | 220mg | 240mg | 260mg | 280mg | 300mg |
| Ketamine IM For Chemical Restraint: 5mg/kg (In Thigh) May require multiple injections as maximum of 5cc per injection may be given | 550mg | 600mg | 650mg | 700mg | 750mg |

ADULT MEDICATIONS FOR WEIGHTS OF 110KG AND OVER Page 2 of 2

| Weight (lbs) | 242lbs | 264lbs | 286lbs | 308lbs | 330lbs |
|---|---------------|---------------|---------------|---------------|---------------|
| Weight (kg) | 110kg | 120kg | 130kg | 140kg | 150kg |
| Ketamine for Pain Management: 0.5mg/kg SLOW IV or IO push to a maximum of 500mg | 55mg | 60mg | 65mg | 70mg | 75mg |
| Ketamine for Sedation prior to Cardioversion or Pacing: 0.5mg/kg SLOW IV or IO push to a maximum of 500mg | 55mg | 60mg | 65mg | 70mg | 75mg |
| Labetalol 10-20mg IVP (MUST CONTACT MEDICAL CONTROL BEFORE ADMINISTERING) | 10-20mg | 10-20mg | 10-20mg | 10-20mg | 10-20mg |
| Lidocaine for PVCs 1mg/kg IV may be repeated at 0.5mg/kg to a max of 3mg/kg | 110mg/55mg | 120mg/60mg | 130mg/65mg | 140mg/70mg | 150mg/75mg |
| Lidocaine for VF/VT given via ETT 2mg/kg may repeat at 2mg/kg to a max of 6mg/kg | 220mg | 240mg | 260mg | 280mg | 300mg |
| Lidocaine Drip 2-4mg/minute | 30-60gtt/min | 30-60gtt/min | 30-60gtt/min | 30-60gtt/min | 30-60gtt/min |
| Magnesium Sulfate 4 grams Loading Dose (diluted 1:1 and given SLOWLY over 15 minutes) | 4 grams | 4 grams | 4 grams | 4 grams | 4 grams |
| Magnesium Sulfate Maintenance Drip, 1g/hr. 5 grams in 250cc of NS | 50gtt/min | 50gtt/min | 50gtt/min | 50gtt/min | 50gtt/min |
| Magnesium Sulfate Maintenance Drip, 1g/hr. 5 grams in 500cc of NS | 100gtt/min | 100gtt/min | 100gtt/min | 100gtt/min | 100gtt/min |
| Morphine 2-6mg every 10 minutes (half dosage in pts >60y/o) | 2-6mg | 2-6mg | 2-6mg | 2-6mg | 2-6mg |
| Narcan, IV: 2mg may repeat once if no change in mental status | 2mg | 2mg | 2mg | 2mg | 2mg |
| Narcan, Intranasal: 2mg, IN may repeat once if no respiratory improvement | 2mg | 2mg | 2mg | 2mg | 2mg |
| Nitro Spray 0.4mg SL max of 3 if BP>90 systolic | 0.4mg | 0.4mg | 0.4mg | 0.4mg | 0.4mg |
| Norcuron 0.15mg/kg to a max of 20mg may repeat at 0.01mg/kg if needed | 16.5mg | 18mg | 19.5mg | 20mg | 20mg |
| Oral Glucose 15g between check and gum may repeat to desired effect | 15g | 15g | 15g | 15g | 15g |
| Racemic Epi | Not Indicated | Not indicated | Not indicated | Not indicated | Not indicated |
| Rocuronium (INITIAL DOSE) 1mg/kg | 110mg | 120mg | 130mg | 140mg | 150mg |
| Rocuronium (REPEAT DOSE) repeated X1 in 12 minutes if needed 0.1mg/kg | 11mg | 12mg | 13mg | 14mg | 15mg |
| Sodium Bicarb 1meq/kg to a max of 100meq, may repeat at 0.5meq every 10 minutes up to 50meq | 100meq | 100meq | 100meq | 100meq | 100meq |
| Succinylcholine 2mg/kg rapid IVP | 200mg | 200mg | 200mg | 200mg | 200mg |
| Valium 5mg IV for active seizures may repeat as needed at 5mg every 5 minutes | 5mg | 5mg | 5mg | 5mg | 5mg |
| Versed 5mg IVP if BP >90 systolic (give half dosage if pt >60y/o) | 5mg | 5mg | 5mg | 5mg | 5mg |
| Versed, Intranasal for SEIZURE activity (0.2mg/kg to a max of 5mg) | 5mg | 5mg | 5mg | 5mg | 5mg |
| Versed, Intranasal, for SEIZURE activity, REPEAT DOSAGE at 0.1mg/kg to a max of 2.5mg | 2.5mg | 2.5mg | 2.5mg | 2.5mg | 2.5mg |
| Versed, Intranasal, for SEDATION: 0.2mg/kg to a max of 5mg. May repeat every 5-10 minutes as needed as long as SBP>90mmHg | 5mg | 5mg | 5mg | 5mg | 5mg |
| Xopenex 1.25mg/3cc NS Nebulized may be repeated at same dose if needed | 1.25mg in 3cc | 1.25mg in 3cc | 1.25mg in 3cc | 1.25mg in 3cc | 1.25mg in 3cc |
| Zofran 4mg IVP | 4mg | 4mg | 4mg | 4mg | 4mg |

PEDIATRIC MEDICATIONS Page 1 of 3

| Weight (lbs) | 7.5lbs | 15lbs | 22lbs | 33lbs | 44lbs | 55lbs | 66lbs | 77lbs | 88lbs | 99lbs |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Weight (kg) | 3.5kg | 7kg | 10kg | 15kg | 20kg | 25kg | 30kg | 35kg | 40kg | 45kg |
| Acetaminophen NOT INDICATED FOR PEDIATRICS | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated |
| Activated Charcoal 1g/kg up to 50g | 3.5g | 7g | 10g | 15g | 20g | 25g | 30g | 35g | 40g | 45g |
| Adenosine 0.1mg/kg to a max of 12mg | 0.4mg | 0.7mg | 1mg | 1.5mg | 2mg | 2.5mg | 3mg | 3.5mg | 4mg | 4.5mg |
| Amiodarone 5mg/kg rapid IV for VF/VT without a pulse may repeat once in 3-5 minutes at 2.5mg/kg to a max of 150mg | 17.5mg | 35mg | 50mg | 75mg | 100mg | 125mg | 150mg | 150mg | 150mg | 150mg |
| Amiodarone 5mg/kg IV or IO over 20 minutes for SVT and VT with a pulse to a max single dose of 150mg May repeat X 2 PRN | 17.5mg | 35mg | 50mg | 75mg | 100mg | 125mg | 150mg | 150mg | 150mg | 150mg |
| Aspirin (ASA) | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated |
| Atropine for Bradycardia 0.02mg/kg, minimum dose 0.1mg, max single dose 0.5mg may repeat in 3-5 minutes | 0.1mg | 0.14mg | 0.2mg | 0.3mg | 0.4mg | 0.5mg | 0.5mg | 0.5mg | 0.5mg | 0.5mg |
| Atropine for PAI (using Succinylcholine) 0.02mg/kg to a max of 1mg to all pts less than 16 years old | 0.1mg | 0.14mg | 0.2mg | 0.3mg | 0.4mg | 0.5mg | 0.6mg | 0.7mg | 0.8mg | 0.9mg |
| Atropine for Organophosphate Poisoning 0.05mg/kg to a max of 2mg single dose may repeat in 10-15 minutes (minimum dose 0.1mg) | 0.2mg | 0.4mg | 0.5mg | 0.8mg | 1mg | 1.3mg | 15.mg | 1.8mg | 2mg | 2mg |
| Benadryl 1mg/kg to a max of 50mg | 3.5mg | 7mg | 10mg | 15mg | 20mg | 25mg | 30mg | 35mg | 40mg | 45mg |
| Calcium Gluconate NOT INDICATED FOR PEDIATRICS | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated |
| Decadron 0.6mg/kg to a max of 20mg NOT INDICATED for children <2 years of age | 2mg | 4mg | 6mg | 9mg | 12mg | 15mg | 18mg | 20mg | 20mg | 20mg |
| Dextrose 10% (D10W): Administer IV bolus using a 60-Drop set. Titrate to LOC. | Titrate to Effect | Titrate to Effect | Titrate to Effect | Titrate to Effect | Titrate to Effect | Titrate to Effect | Titrate to Effect | Titrate to Effect | Titrate to Effect | Titrate to Effect |
| Dopamine 5mcg/kg/min 200mg/250mL | 1gtt/min | 3gtts/min | 4gtts/min | 6gtts/min | 8gtts/min | 9gtts/min | 11gtts/min | 13gtts/min | 15gtts/min | 17gtts/min |
| Dopamine 10mcg/kg/min 200mg/250mL | 3gtts/min | 5gtts/min | 8gtts/min | 11gtts/min | 15gtts/min | 19gtts/min | 23gtts/min | 26gtts/min | 30gtts/min | 34gtts/min |
| Duo-Neb, 3mg of Albuterol with 0.5mg of Ipratropium in 3cc, Nebulized (Albuterol/Ipratropium) | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc | 3mg/0.5mg in 3cc |
| Epi 1:1,000 for cardiac arrest ETT 0.1mg/kg to a max of 1mg per single dose | 0.35mg | 0.7mg | 1mg | 1mg | 1mg | 1mg | 1mg | 1mg | 1mg | 1mg |
| Epi 1:10,000 for cardiac arrest 0.01mg/kg IV or IO to a max of 1mg per single dose | 0.03mg | 0.07mg | 0.1mg | 0.15mg | 0.2mg | 0.25mg | 0.3mg | 0.35mg | 0.4mg | 0.45mg |
| Epi for Bradycardia 0.01mg/kg of 1:10,000 solution to a max of 5cc per single dose | 0.03mg | 0.07mg | 0.1mg | 0.15mg | 0.2mg | 0.25mg | 0.3mg | 0.35mg | 0.4mg | 0.45mg |
| Epi for Bradycardia via ETT 0.1mg/kg of 1:1,000 solution to a max of 0.5cc per single dose may repeat at same dose every 3-5minutes | 0.35mg | 0.7mg | 1mg | 1mg | 1mg | 1mg | 1mg | 1mg | 1mg | 1mg |
| Epi for Allergic Reactions 0.01mg/kg IV or IO of 1:10,000 solution to a max of 0.5mg | 0.03mg | 0.07mg | 0.1mg | 0.15mg | 0.2mg | 0.25mg | 0.3mg | 0.35mg | 0.4mg | 0.45mg |
| Epi IM for Allergic Reactions 1:1,000 solution 0.01mg/kg to a max of 0.15mg IM | 0.03mg | 0.7mg | 0.1mg | 0.15mg | 0.15mg | 0.15mg | 0.15mg | 0.15mg | 0.15mg | 0.15mg |

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| Weight (lbs) | 7.5lbs | 15lbs | 22lbs | 33lbs | 44lbs | 55lbs | 66lbs | 77lbs | 88lbs | 99lbs |
|--|---------------|---------------|---------------|------------|------------|------------|------------|------------|------------|------------|
| Weight (kg) | 3.5kg | 7kg | 10kg | 15kg | 20kg | 25kg | 30kg | 35kg | 40kg | 45kg |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 100cc of NS at 2mcg/min | 12gtt/min | 12gtt/min | 12gtt/min | 12gtt/min | 12gtt/min | 12gtt/min | 12gtt/min | 12gtt/min | 12gtt/min | 12gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 100cc of NS at 4mcg/min | 24gtt/min | 24gtt/min | 24gtt/min | 24gtt/min | 24gtt/min | 24gtt/min | 24gtt/min | 24gtt/min | 24gtt/min | 24gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 100cc of NS at 6mcg/min | 36gtt/min | 36gtt/min | 36gtt/min | 36gtt/min | 36gtt/min | 36gtt/min | 36gtt/min | 36gtt/min | 36gtt/min | 36gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 100cc of NS at 8mcg/min | 48gtt/min | 48gtt/min | 48gtt/min | 48gtt/min | 48gtt/min | 48gtt/min | 48gtt/min | 48gtt/min | 48gtt/min | 48gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 100cc of NS at 10mcg/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 250cc of NS at 2mcg/min | 30gtt/min | 30gtt/min | 30gtt/min | 30gtt/min | 30gtt/min | 30gtt/min | 30gtt/min | 30gtt/min | 30gtt/min | 30gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 250cc of NS at 4mcg/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min | 60gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 250cc of NS at 6mcg/min | 90gtt/min | 90gtt/min | 90gtt/min | 90gtt/min | 90gtt/min | 90gtt/min | 90gtt/min | 90gtt/min | 90gtt/min | 90gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 250cc of NS at 8mcg/min | 120gtt/min | 120gtt/min | 120gtt/min | 120gtt/min | 120gtt/min | 120gtt/min | 120gtt/min | 120gtt/min | 120gtt/min | 120gtt/min |
| Epinephrine DRIP, 1mg of 1:1,000 mixed in 250cc of NS at 10mcg/min | 150gtt/min | 150gtt/min | 150gtt/min | 150gtt/min | 150gtt/min | 150gtt/min | 150gtt/min | 150gtt/min | 150gtt/min | 150gtt/min |
| Etomidate 0.3mg/ kg IV to a max of 40mg | 1mg | 2.1mg | 3mg | 4.5mg | 6mg | 7.5mg | 9mg | 10.5mg | 12mg | 13.5mg |
| Fentanyl, IV/IO: 2mcg/kg slow IVP to a max of 100mcg per single dose. May repeat once (NOT indicated for children < 2 years of age) | Not Indicated | Not Indicated | Not Indicated | 30mcg | 40mcg | 50mcg | 60mcg | 70mcg | 80mcg | 90mcg |
| Fentanyl, IN (MAD): 2mcg/kg to a max of 100mcg per dose. Do NOT administer to patients < 2 years of age | Not Indicated | Not Indicated | Not Indicated | 30mcg | 40mcg | 50mcg | 60mcg | 70mcg | 80mcg | 90mcg |
| Glucagon 0.5mg IM NOT INDICATED for children <2 years of age | Not Indicated | Not Indicated | Not Indicated | 0.5mg | 0.5mg | 0.5mg | 0.5mg | 0.5mg | 0.5mg | 0.5mg |
| Ibuprofen (Liquid Children's Motrin) 10mg/kg up to 800mg | 35mg | 70mg | 100mg | 150mg | 200mg | 250mg | 300mg | 350mg | 400mg | 450mg |
| Ketamine IV Push, for Chemical Restraint: 2mg/kg (Administer slowly over 1 minute). Do NOT administer to patients < 2 years of age | Not Indicated | 14mg | 20mg | 30mg | 40mg | 50mg | 60mg | 70mg | 80mg | 90mg |
| Ketamine IM, For Chemical Restraint for children < 5yoa: 3mg/kg in thigh. May require multiple injections as maximum of 5cc per injection may be given. Do NOT administer to an infant < 3 months old | N/A | N/A | N/A | N/A | 60mg | 75mg | 90mg | 105mg | 120mg | 135mg |
| Ketamine IM, For Chemical Restraint for children ≥ 5yoa: 5mg/kg in thigh. May require multiple injections as maximum of 5cc per injection may be given. Do NOT administer to an infant < 3 months old | Not Indicated | 35mg | 50mg | 75mg | 100mg | 125mg | 150mg | 175mg | 200mg | 225mg |
| Ketamine for Pain Management: 0.5mg/kg SLOW IV or IO push to a maximum of 500mg | Not Indicated | 3.5mg | 5mg | 7.5mg | 10mg | 12.5mg | 15mg | 17.5mg | 20mg | 22.5mg |
| Ketamine for Sedation prior to Cardioversion: 0.5mg/kg SLOW IV or IO push to a maximum of 500mg | Not Indicated | 3.5mg | 5mg | 7.5mg | 10mg | 12.5mg | 15mg | 17.5mg | 20mg | 22.5mg |

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| Weight (lbs) | 7.5lbs | 15lbs | 22lbs | 33lbs | 44lbs | 55lbs | 66lbs | 77lbs | 88lbs | 99lbs |
|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Weight (kg) | 3.5kg | 7kg | 10kg | 15kg | 20kg | 25kg | 30kg | 35kg | 40kg | 45kg |
| Magnesium Sulfate Loading Dose NOT INDICATED FOR PEDIATRICS | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated |
| Labetalol | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated |
| Lidocaine for Head Injury 0.5mg/kg | 2mg | 4mg | 5mg | 8mg | 10mg | 13mg | 15mg | 18mg | 20mg | 23mg |
| Lidocaine for VT and VF with or without a pulse 2mg/kg ETT to a max of 6mg/kg | 7mg | 14mg | 20mg | 30mg | 40mg | 50mg | 60mg | 70mg | 80mg | 90mg |
| Lidocaine Drip 30mcg/kg/min for Post Resuscitation | 2gtt/min | 3gtt/min | 5gtt/min | 7gtt/min | 9gtt/min | 11gtt/min | 14gtt/min | 16gtt/min | 18gtt/min | 20gtt/min |
| Magnesium Sulfate Maintenance Dose: NOT INDICATED FOR PEDIATRICS | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated |
| Morphine 0.1mg/kg to a max of 3mg single dose | 0.4mg | 0.7mg | 1mg | 1.5mg | 2mg | 2.5mg | 3mg | 3mg | 3mg | 3mg |
| Narcan, IV: 0.1mg/kg to a max of 2mg single dose | 0.35mg | 0.7mg | 1mg | 1.5mg | 2mg | 2mg | 2mg | 2mg | 2mg | 2mg |
| Narcan, Intranasal: 0.1mg/kg to a max of 2mg single dose may repeat once if no respiratory improvement | 0.35mg | 0.7mg | 1mg | 1.5mg | 2mg | 2mg | 2mg | 2mg | 2mg | 2mg |
| Nitro Spray | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated |
| Norcuron 0.15mg/kg to a max of 20mg may repeat at 0.01mg/kg if needed | 0.5mg | 1mg | 1.5mg | 2.25mg | 3mg | 3.75mg | 4.5mg | 5.25mg | 6mg | 6.75mg |
| Oral Glucose 15g between check and gum may repeat to desired effect | 15g | 15g | 15g | 15g | 15g | 15g | 15g | 15g | 15g | 15g |
| Racemic Epi 11.25mg in 2 cc saline solution nebulized. DO NOT give to pts >40kg | 11.25mg | 11.25mg | 11.25mg | 11.25mg | 11.25mg | 11.25mg | 11.25mg | 11.25mg | 11.25mg | 11.25mg |
| Rocuronium for PAI Initial Dose 1mg/kg | 3.5mg | 7mg | 10mg | 15mg | 20mg | 25mg | 30mg | 35mg | 40mg | 45mg |
| Rocuronium for PAI Repeat Dose 0.1mg/kg if needed in 12 min. | 0.35mg | 0.7mg | 1mg | 1.5mg | 2mg | 2.5mg | 3mg | 3.5mg | 4mg | 4.5mg |
| Sodium Bicarb | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated | Not Indicated |
| Succinylcholine 2mg/kg rapid IVP | 7mg | 14mg | 20mg | 30mg | 40mg | 50mg | 60mg | 70mg | 80mg | 90mg |
| Valium 0.1mg/kg IV to a max of 5mg per dose may repeat every 5 minutes | 0.4mg | 0.7mg | 1mg | 1.5mg | 2mg | 2.5mg | 3mg | 3.5mg | 4mg | 4.5mg |
| Valium 0.5mg/kg Rectal to a max of 10mg per dose | 1.8mg | 3.5mg | 5mg | 7.5mg | 10mg | 10mg | 10mg | 10mg | 10mg | 10mg |
| Versed, IV, for Cardioversion 0.1mg/kg to a max of 2.5mg | 0.4mg | 0.7mg | 1mg | 1.5mg | 2mg | 2.5mg | 2.5mg | 2.5mg | 2.5mg | 2.5mg |
| Versed, IV, for Chemical Sedation 0.1mg/kg to a max of 10mg | 0.4mg | 0.7mg | 1mg | 1.5mg | 2mg | 2.5mg | 3mg | 3.5mg | 4mg | 4.5mg |
| Versed, IV, for Seizures 0.2mg/kg to a max of 5mg single dose, may repeat at 0.1mg/kg every 10 minutes as needed. | 0.7mg | 1.4mg | 2mg | 3mg | 4mg | 5mg | 5mg | 5mg | 5mg | 5mg |
| Versed, Intranasal for SEIZURE activity (0.2mg/kg to a max of 5mg) | 0.7mg | 1.4mg | 2mg | 3mg | 4mg | 5mg | 5mg | 5mg | 5mg | 5mg |
| Versed, Intranasal, for SEIZURE activity, REPEAT DOSAGE at 0.1mg/kg to a max of 2.5mg | 0.35mg | 0.7mg | 1mg | 1.5mg | 2mg | 2.5mg | 2.5mg | 2.5mg | 2.5mg | 2.5mg |
| Versed, Intranasal, for SEDATION: 0.2mg/kg to a max of 5mg. May repeat every 5-10 minutes as needed as long as SBP>90mmHg | 0.7mg | 1.4mg | 2mg | 3mg | 4mg | 5mg | 5mg | 5mg | 5mg | 5mg |
| Xopenex 1.25mg/3cc NS Nebulized may be repeated at same dose if needed | 1.25mg | 1.25mg | 1.25mg | 1.25mg | 1.25mg | 1.25mg | 1.25mg | 1.25mg | 1.25mg | 1.25mg |

DRIP RATE FORMULAS

- **Adult Lidocaine** (mg/min)

Formula:

$$\frac{\text{Required dose} * \text{Volume in bag} * \text{Drip set}}{\text{Amount of drug in bag}} = \text{Flow rate in gtts/min}$$

Example:

$$\frac{2 \text{ mg/min} * 250 \text{ mL} * 60 \text{ gtts/min}}{1000 \text{ mg}} = 30 \text{ gtts/min}$$

- **Pediatric Lidocaine** (mcg/kg/min)

Formula:

$$\frac{\text{Required dose} * \text{Volume in bag} * \text{Drip set} * \text{Patient weight in kg}}{\text{Amount of drug in bag in mcg (mg} * 1000 = \text{mcg)}} = \text{Flow rate in gtts/min}$$

Pediatric Lidocaine example: (using a 10kg patient)

$$\frac{30 \text{ mcg/min} * 250 \text{ mL} * 60 \text{ gtts/min} * 10 \text{ kg}}{1,000,000 \text{ mcg}} = 5 \text{ gtts/min}$$

- **Dopamine** (mcg/kg/min)

Formula:

$$\frac{\text{Required dose} * \text{Volume in bag} * \text{Drip set} * \text{Patient weight in kg}}{\text{Amount of drug in bag in mcg (mg} * 1000 = \text{mcg)}} = \text{Flow rate in gtts/min}$$

Example: (using a 100kg patient)

$$\frac{5 \text{ mcg/min} * 250 \text{ mL} * 60 \text{ gtts/min} * 100 \text{ kg}}{200,000 \text{ mcg}} = 38 \text{ gtts/min}$$

- **Adult Amiodarone** (volume/time)
(Mix 150mg of Amiodarone into 100mL of D5W)

Formula:

$$\frac{\text{Volume to be infused} * \text{Drip set}}{\text{Time in Minutes}} = \text{Flow rate in gtts/min}$$

Example:

$$\frac{100 \text{ mL} * 10 \text{ gtts/min}}{10 \text{ min}} = 100 \text{ gtts/min}$$

- **Magnesium Sulfate (5 grams in 250cc of NS)** (gram/hr)
(Mix 5 grams of Magnesium Sulfate in 250cc of NS)

Formula:

$$\frac{\text{Required dose} * \text{Volume in bag} * \text{Drip set}}{\text{Amount of drug in bag}} = \text{Flow rate in gtts/min}$$

Example:

$$\frac{1\text{gm/hr} (.0167\text{gm/min}) * 250 \text{ mL} * 60 \text{ gtts/min}}{5\text{gm}} = 50\text{gtts/min}$$

- **Magnesium Sulfate (5 grams in 500cc of NS)** (gram/hr)
(Mix 5 grams of Magnesium Sulfate in 500cc of NS)

Formula:

$$\frac{\text{Required dose} * \text{Volume in bag} * \text{Drip set}}{\text{Amount of drug in bag}} = \text{Flow rate in gtts/min}$$

Example:

$$\frac{1\text{gm/hr} (.0167 \text{ gm/min}) * 500 \text{ mL} * 60 \text{ gtts/min}}{5\text{gm}} = 100\text{gtts/min}$$

- **Epinephrine Drip (1mg in 100cc of NS)** (2mcg/min)
(Mix 1mg of Epinephrine 1:1,000 in 100cc of NS)

Formula:

$$\frac{\text{Required dose} * \text{Volume in bag} * \text{Drip set}}{\text{Amount of drug in bag}} = \text{Flow rate in gtts/min}$$

Example:

$$\frac{0.002\text{mg} (2\text{mcg/min}) * 100\text{mL} * 60 \text{ gtts/min}}{1\text{mg}} = 12\text{gtts/min}$$

- **Epinephrine Drip (1mg in 250cc of NS)** (2mcg/min)
(Mix 1mg of Epinephrine 1:1,000 in 100cc of NS)

Formula:

$$\frac{\text{Required dose} * \text{Volume in bag} * \text{Drip set}}{\text{Amount of drug in bag}} = \text{Flow rate in gtts/min}$$

Example:

$$\frac{0.002\text{mg} (2\text{mcg/min}) * 250\text{mL} * 60 \text{ gtts/min}}{1\text{mg}} = 30\text{gtts/min}$$