

Reference I: MEDICATION LIST version 02/03/20202

| | |
|---|----|
| Adenosine (Adenocard) | 2 |
| Albuterol (Ventolin or Proventil) | 3 |
| Amiodarone | 4 |
| Aspirin (ASA) | 5 |
| Atropine Sulfate | 6 |
| Calcium Chloride 10% (CaCl) | 7 |
| Charcoal (ACTIVATED) [Actidose with Sorbitol] | 8 |
| Dextrose 10% (D10W) | 9 |
| Diphenhydramine (Benadryl) | 10 |
| Dopamine (with Epinephrine Infusion Alternative per Memo 2018-01) | 11 |
| Epinephrine (Adrenaline) | 14 |
| Fentanyl | 15 |
| Glucagon | 17 |
| Glucose | 18 |
| Hydroxycobalamin | 19 |
| Ibuprofen | 20 |
| Ketorolac | 21 |
| Lidocaine | 22 |
| Magnesium Sulfate 10% | 23 |
| Midazolam (Versed) | 24 |
| Morphine Sulfate | 25 |
| Naloxone (Narcan) | 26 |
| Nitroglycerine (NTG) [Nitrolingual] | 27 |
| Normal Saline | 28 |
| Ondansetron (Zofran) | 29 |
| Oxygen (O ₂) | 30 |
| Pralidoxime (2 PAM) | 31 |
| Sodium Bicarbonate | 32 |

ADENOSINE (Adenocard)

ACTION: Antiarrhythmic

- Decreases conduction through the atrioventricular (AV) node interrupting re-entry pathways.
- Interrupts and may convert paroxysmal supraventricular tachycardia (PSVT).

INDICATIONS:

- Hemodynamically stable PSVT.
- Narrow and wide-complex, regular, monomorphic tachycardia.

CONTRAINDICATIONS:

- 2nd or 3rd degree AV block
- Sick sinus syndrome.
- Polymorphic wide complex tachycardia
- Do not use **Adenosine** on a patient with a known history of Wolff-Parkinson-White (WPW) syndrome.

POTENTIAL SIDE EFFECTS:

- | | |
|---|---------------------------------|
| • Transient asystole (up to 20 to 30 secs.) | • Hypotension |
| • Dyspnea and bronchospasms | • Facial flushing and headaches |
| • Chest pressure | • Nausea |

ADULT DOSE/ROUTE:

- ⇒ **First dose:** 6 mg rapid IVP/IO* followed with 20 ml Normal Saline flush.
- ⇒ If first dose ineffective, repeat with 12 mg rapid IVP/IO.* May repeat 12mg x 1 if still ineffective.

**IV preferred route*

PEDIATRIC DOSE/ROUTE:

- ⇒ **First dose:** 0.1 mg/kg rapid IVP/IO* followed by 10ml NS flush (max first dose 6 mg).
- ⇒ If first dose ineffective, repeat with 0.2 mg/kg rapid IVP/IO* (max second dose 12 mg). May repeat 0.2 mg/kg x 1 if still ineffective.

**IV preferred route*

NOTES:

- Clinically evaluate patients—adult and pediatric—to distinguish primary tachyarrhythmias such as PSVT—from patient conditions leading to sinus tachycardias.
- Adenosine is blocked by methylxanthines (caffeine) and potentiated by dipyridamole and carbamazepine.

*Effective: 11/01/17
Supersedes: 03/01/15*

ALBUTEROL (Ventolin or Proventil)

ACTION: Bronchodilator (beta2 adrenergic agonist)

- Albuterol is a sympathomimetic that is selective for beta-2 adrenergic receptors resulting in prompt bronchodilation.
- Albuterol also reduces serum potassium levels through stimulation of beta-2 adrenergic receptors.

INDICATIONS:

- Reversible bronchospasm due to asthma or COPD

CONTRAINDICATIONS:

- Tachydysrhythmias.
- Known hypersensitivity to the drug.
- Use cautiously in elderly patients and patients with cardiovascular disease.

POTENTIAL SIDE EFFECTS:

- Tachydysrhythmias and palpitations
- Anxiety and nervousness
- Nausea and vomiting
- Dizziness
- Headache

ADULT DOSE/ROUTE:

- ⇒ Metered Dose Inhaler (MDI)
 - Mild Distress: 4 puffs (wait 1 minute between puffs), then 2 puffs (wait 1 minute between puffs) every 5 minutes as needed.
 - Moderate Distress: 6 puffs (wait 1 minute between puffs), then 2 puffs (wait 1 minute between puffs) every 5 minutes as needed.
- ⇒ 5 mg/6 ml NS via nebulizer over 5 to 15 min. May repeat x 1 if no relief from symptoms.

PEDIATRIC DOSE/ROUTE:

- ⇒ Metered Dose Inhaler (MDI)
 - Mild to Moderate Distress: 2-3 puffs (wait 1 minute between puffs), may repeat every 5 minutes as needed.
- ⇒ 2.5 mg/3 ml NS via nebulizer over 5 to 15 min. May repeat x 1 if no relief from symptoms.

NOTES:

- When using an MDI, a spacer should be utilized when available to increase efficacy.
- Use mask nebulizer if patient is unable to use hand-held nebulizer.
- Use in line bag valve mask to deliver albuterol if inadequate tidal volume to ensure good administration with a nebulizer.
- Albuterol may be administered as indicated during the use of CPAP.

*Effective: 04/08/20
Supersedes: 11/01/17*

AMIODARONE

ACTION: Antiarrhythmic

- Antiarrhythmic that slows conduction and lengthens the cardiac action potential resulting in suppression of ventricular and supraventricular tachycardias.

INDICATIONS:

- Hemodynamically unstable ventricular tachycardia
- Ventricular fibrillation and ventricular tachycardia without a pulse

CONTRAINDICATIONS:

- Sinus node dysfunction or sinus bradycardia
- 2nd or 3rd degree block
- Known hypersensitivity from past exposure

POTENTIAL SIDE EFFECTS:

- May prolong QT interval
- May cause hypotension

ADULT DOSE/ROUTE:

- ⇒ **VF or pulseless VT:** 300 mg slow IVP or IO bolus. Repeat 150 mg slow IVP or IO bolus if rhythm persists.
- ⇒ **Stable / Unstable VT with pulse:** Inject 150 mg of Amiodarone into 100ml of D5W. Run with target goal of infusing 100 ml over 10 minutes.

PEDIATRIC DOSE/ROUTE:

- ⇒ **VF or pulseless VT only:** 5 mg/kg IVP or IO bolus. Maximum dose 300 mg.

NOTES:

- Flush tubing with NS between dosages.
- Signs of **Amiodarone** toxicity include hypotension, 3rd degree AV block and prolonged QT interval.
- Do not use **Amiodarone** in the presence of underlying atrial fibrillation, atrial flutter, bradycardia with ventricular escape beats, or other conduction defect (2nd or 3rd degree AV block).
- Do not administer if patient with pulse is hypotensive. Do synchronized cardioversion.
- Stop administration if patient becomes hypotensive during treatment.
- Do not administer with bicarbonate in the same IV line (will precipitate).
- When creating infusion, careful mixing is needed to avoid foaming of the medication.
- Reconstitute Amiodarone per manufacturer's directions.

*Effective: 11/01/17
Supersedes: 03/01/15*

ASPIRIN (ASA)

ACTION: Antithromboembolic

- Irreversibly blocks formation of thromboxane A₂ resulting in decreased platelet aggregation (antiplatelet effect).

INDICATIONS:

- New chest pain suggesting an active acute myocardial infarction.

CONTRAINDICATIONS:

- Hypersensitivity to ASA
- Relative contraindication in patients with active ulcers or asthma

POTENTIAL SIDE EFFECTS:

- Gastrointestinal bleeding
- Tinnitus.
- Gastroesophageal reflux

ADULT DOSE/ROUTE:

- ⇒ 4 baby ASA tablets (81 mg each for a total of 324 mg) PO chewed and swallowed.
- ⇒ Note: one 324 mg adult ASA tablet could also be chewed by patient.

PEDIATRIC DOSE/ROUTE:

- ⇒ Not applicable.

NOTES:

- Oral absorption occurs within 20 to 60 minutes and is dependent on dosage, gastric motility or pH, dissolution rate and whether the drug is taken with antacids or meals.
- Should be given within minutes of arrival in patients with new onset chest pain suggesting of an acute myocardial infarction.

*Effective: 11/01/17
Supersedes: 03/01/15*

ATROPINE SULFATE

ACTION: Anticholinergic (Vagolytic)

- Blocks acetylcholine receptors resulting in reduction of parasympathetic tone and increased conduction through the AV node.
- Increases sinus node automaticity and AV conduction when suppressed by abnormal parasympathetic or vagal discharges.
- Antagonizes action of organophosphate agents.

INDICATIONS:

- Symptomatic bradycardia.
- Organophosphate or carbamate insecticide or nerve agent exposure.

CONTRAINDICATIONS:

- Atrial fibrillation or atrial flutter
- Glaucoma

POTENTIAL SIDE EFFECTS:

- Increase heart rate causing tachycardias.
- Post-atropine tachycardias can precipitate V-Fib or V-Tach.
- Can worsen patient's ischemia or extend size of infarct.
- Dry mouth.
- Doses lower than 0.5 mg can produce slowing of the heart.
- Dilated pupils.
- Decreased salivation.
- Flushed, hot skin.

ADULT DOSE/ROUTE:

- ⇒ **Symptomatic Bradycardia:** 0.5mg IVP or IO. May repeat every 5min up to 3 mg if no resolution of bradycardia.
- ⇒ **Organophosphate Poisoning/Nerve agent Exposure:** 2 – 5mg IVP or IO. May repeat in 5 minutes. No max dose.

PEDIATRIC DOSE/ROUTE:

- ⇒ **Symptomatic Bradycardia:** 0.02 mg/kg IVP or IO (min dose 0.1mg, max dose 0.5mg)
- ⇒ **Organophosphate Poisoning:** 0.02 mg/kg IVP or IO (min dose 0.1mg, no max dose)

NOTES:

- External pacing is the treatment of choice for symptomatic bradycardia if there is suspected myocardial ischemia, or 2nd or 3rd degree AV blocks are present.
- Can be given IM in thigh for suspected organophosphate poisoning /nerve agent exposure.
- Note: the primary cause of bradycardia in pediatric patients is hypoxia.

Atropine is no longer recommended for adult or pediatric asystole.

*Effective: 11/01/17
Supersedes: 03/01/15*

CALCIUM CHLORIDE (CaCl)

ACTION: Electrolyte

- Increases calcium levels necessary for cardiac contractility.
- Stabilizes the myocardium in hyperkalemia or hypocalcemia associated cardiac arrhythmias.

INDICATIONS:

- Hyperkalemia.
- Hypocalcemia with tetany.
- Calcium channel blocker overdose/toxicity.
- Hypermagnesemia.

CONTRAINDICATIONS:

- Use with extreme caution in patients taking digitalis compounds.

POTENTIAL SIDE EFFECTS:

- | | |
|-----------------------------|------------------------|
| • Bradycardia and asystole. | • Hypotension. |
| • V-Fib. | • Nausea and vomiting. |

ADULT DOSE/ROUTE:

- ⇒ **Hyperkalemia and calcium channel blocker overdose:** 500 mg – 1,000 mg (1 gm) IVP or IO over 5 min. May repeat in 10 min.

PEDIATRIC DOSE/ROUTE:

- ⇒ 20 mg/kg IVP or IO over 5 min.

NOTES:

- Ensure that you have patent IV line as calcium extravasation will cause tissue necrosis.
- Calcium precipitates in IV bag or tubing if mixed with sodium bicarbonate.

*Effective: 11/01/17
Supersedes: 03/01/15*

CHARCOAL (ACTIVATED) [Actidose with Sorbitol]

ACTION: Absorbent

- Activated charcoal binds and adsorbs ingested toxins present in the GI tract. It has a large surface area. Once it binds and adsorbs the ingested toxins, the combined complex is excreted from the body.
- Particularly useful if administered early in the management of acute poisoning.

INDICATIONS:

- Activated charcoal is a general-purpose antidote recommended for the treatment of all oral poisonings/overdose **except those caused by corrosive agents, cyanide, iron, toxic alcohols, or organic solvents.**

CONTRAINDICATIONS:

- Active vomiting.
- Patients with altered mental status unless administered by nasogastric tube and the patient has an ETT in place.

POTENTIAL SIDE EFFECTS:

- Nausea and vomiting.
- Abdominal cramping and bloating.
- Constipation/ diarrhea

ADULT DOSE/ROUTE:

- ⇒ 50 G Activated Charcoal. Have patient drink entire bottle.
- ⇒ **Note:** Shake bottle vigorously before taking cap off.

PEDIATRIC DOSE/ROUTE:

- ⇒ 1 G/kg mixed in water to form slurry.
- ⇒ **Note:** patient must be at least one year of age.

NOTES:

- Do not administer to patients with altered mental status without a nasogastric tube.
- Do not administer after ingestion of a corrosive substance (lye, gasoline, acids).
- Charcoal is not effective in cases of lithium, cyanide, iron, toxic alcohols ingestion or in absorbing toxins with a heavy molecular weight.

*Effective: 11/01/17
Supersedes: 03/01/15*

DEXTROSE 10% (D₁₀W)

ACTION: Glucose Replacement/Nutrient

- Elevates blood glucose levels.

INDICATIONS:

- Blood glucose levels less than 60 mg/dl or high-index of suspicion of hypoglycemia.

CONTRAINDICATIONS:

- No major contraindications for administration.
- Dextrose containing fluids should be used cautiously in patients with suspected increased intracranial pressure.

POTENTIAL SIDE EFFECTS:

- Hyperglycemia.
- Tissue necrosis if extravasation occurs.

ADULT DOSE/ROUTE:

- ⇒ Up to 25 G of D₁₀W = Up to 250ml IV or IO bolus. May repeat q5min based on patient response (max dose 50 grams).
- ⇒ Obtain blood glucose reading PRIOR to administration of Dextrose.

PEDIATRIC DOSE/ROUTE:

- ⇒ **Neonates < 1 month: D10W**, 2 ml/kg IV/IO (0.2 g/kg)
- ⇒ **Children > 1 month: D10W**, 5 ml/kg IV/IO (0.5 g/kg, max 25 grams)

NOTES:

- Concentrated dextrose can have a sclerosing effect on veins. Make sure that IV sites are patent by aspirating blood before and during administration of dextrose. Use largest available vein.

*Effective: 11/01/17
Supersedes: 03/01/15*

DIPHENHYDRAMINE (Benadryl)

ACTION: Antihistamine

- Antagonizes effects of histamine in allergy.
- Decreases itching, edema, bronchoconstriction and vasodilation.
- Antagonizes acetylcholine receptors resulting in resolution of dystonia caused by antipsychotic medications.

INDICATIONS:

- Anaphylaxis.
- Allergic reactions.
- Dystonic (extrapyramidal) neuromuscular reactions.

CONTRAINDICATIONS:

- Diphenhydramine can potentiate other CNS depressants
- Relative contraindication in pregnant or lactating females

POTENTIAL SIDE EFFECTS:

- | | |
|---------------------------|------------------------------|
| • Drowsiness and sedation | • Tachycardia |
| • Hypotension | • Headache or blurred vision |
| • Palpitations | • Anticholinergic effects |

ADULT DOSE/ROUTE:

⇒ 25 - 50 mg IVP, IM or IO (up to max. 50 mg).

PEDIATRIC DOSE/ROUTE:

⇒ 1 mg/kg IVP, IO or IM (up to max. 25 mg).

NOTES:

- Consider IM administration of Diphenhydramine in patients who are perfusing well.
- Consider IV administration of Diphenhydramine with severe allergic reactions/anaphylaxis.

*Effective: 11/01/17
Supersedes: 03/01/15*

DOPAMINE (Intropin)

ACTION: Inotropic, Chronotropic

- Catecholamine (sympathomimetic)
- Dose depend stimulation of alpha, beta and dopaminergic receptors.
- At low doses (2 to 5 mcg/kg/min) stimulates dopaminergic receptors (renal and mesenteric artery dilation).
- At medium doses (5 to 10 mcg/kg/min) stimulates beta receptors (increased heart rate and contractility resulting in increased cardiac output).
- At high doses (greater than 10 mcg/kg/min) stimulates alpha-adrenergic receptors (peripheral vasoconstriction, increased blood pressure).

INDICATIONS:

Hypotension due to:

- **Cardiogenic shock.**
- **Distributive shock:** Neurogenic and anaphylactic shock.
- **Symptomatic bradycardias** unresponsive to other treatments such as atropine and pacing.

CONTRAINDICATIONS:

- Tachydysrhythmias.
- Use only 1/10 the normal dose in patients on Monoamine Oxidase Inhibitors (MAOI's) such as: Eutonyl, Parnate, Nardil as they potentiate the effects of Dopamine.

POTENTIAL SIDE EFFECTS:

- Tachydysrhythmias including V-Tach and V-Fib.
- Hypertension.
- Nausea and vomiting.
- Chest pain, ischemia and acute MI exacerbation.
- Extravasation causes tissue necrosis.

ADULT DOSE/ROUTE:

⇒ **Cardiogenic or distributive shock:** 5-20 mcg/kg/min IV/IO infusion. Titrate to SBP >90 mmHg.

PEDIATRIC DOSE/ROUTE:

⇒ **Cardiogenic or distributive shock:** 5-20 mcg/kg/min IV/IO infusion. Initiate only per instructions from Base Hospital MD.

NOTES:

- Do not infuse in same line with sodium bicarbonate
- Ensure that the patient is not hypovolemic before infusing dopamine.

*Effective: 11/01/17
Supersedes: 03/01/15*

EPINEPHRINE 1MG/1000ML (1MCG/ML) INFUSION FOR USE ONLY WHEN DOPAMINE ON SHORTAGE

ACTION: Inotropic, Chronotropic

- Catecholamine (sympathomimetic).
- Dose dependent stimulation of alpha, beta and dopaminergic receptors.

INDICATIONS Hypotension due to:

- **Cardiogenic shock.**
- **Distributive shock:** Neurogenic and anaphylactic shock.
- **Symptomatic bradycardias** unresponsive to other treatments such as atropine and pacing.

CONTRAINDICATIONS:

- None in life threatening situation

POTENTIAL SIDE EFFECTS:

- Tachydysrhythmias including V-Tach and V-Fib
- Hypertension
- Nausea and vomiting
- Chest pain, ischemia and acute MI exacerbation
- Extravasation causes tissue necrosis

ADULT DOSE/ROUTE:

⇒ **Cardiogenic or distributive shock:** Inject 1mg (1:1000 OR 1:10,000) epinephrine into 1000ml of 0.9% sodium chloride. DO NOT USE PRESSURE BAG, run it at ~10-20ml/min using the drip chamber. If SBP>90mm Hg, use roller clamp to slow rate.

PEDIATRIC DOSE/ROUTE:

⇒ **NOT FOR PEDIATRIC USE. Contact Base Hospital MD.**

NOTES:

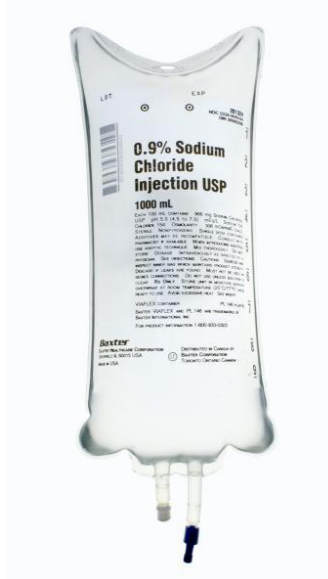
- Do not infuse in same line with sodium bicarbonate
- Ensure that the patient is not hypovolemic before infusing
- Label bag clearly to prevent rapid infusion

*Effective: 01/30/18
New*

Epinephrine 1mcg/ml infusion preparation



Add 1ml of 1:1000 = 1mg **OR** 10ml of 1:10,000 = 1mg
to 1000ml 0.9% sodium chloride



Effective: 01/30/18
New

EPINEPHRINE (Adrenaline)

ACTION: Sympathomimetic

- Catecholamine (sympathomimetic) with alpha and beta adrenergic action.
- Results in increased heart rate, systemic vascular resistance, and blood pressure. It also causes bronchodilation due to its effects of beta-2 adrenergic receptors.

INDICATIONS:

- All cardiac arrest patients, including V-Fib, pulseless V-Tach, asystole and PEA.
- Anaphylaxis.
- Severe bronchospasm.
- Refractory symptomatic bradycardia.

CONTRAINDICATIONS:

- None in cardiac arrest.
- Tachydysrhythmias.
- Use with extreme caution for severe asthma or allergic reactions in patients >age 40 or in patients with coronary artery disease since myocardial ischemia may be precipitated.
- Intravenous Epinephrine should **only** be used in extreme emergencies or cardiac arrest. Use intramuscular initially for patients with anaphylaxis.

POTENTIAL SIDE EFFECTS:

- Increased myocardial O₂ demand leading to chest pain and myocardial ischemia.
- Headache and dizziness.
- Nausea and vomiting.
- Tachydysrhythmias including V-Tach and V-Fib.

ADULT DOSE/ROUTE:

- ⇒ **For indications other than cardiac arrest including anaphylaxis:** (1:1,000) 0.3mg IM. May repeat x1. If hypotension not responding to IM Epinephrine x2 or IV fluid boluses, give Epinephrine (1:10,000) IV 0.1mg slow IV/IO over 5 minutes. Max IV dose 0.3mg.
- ⇒ **Cardiac Arrest:** (1:10,000) 1mg IVP/IO at the time intervals specified in Protocol 2.04 Cardiac Arrest - VF/pulseless VT and asystole/PEA.

PEDIATRIC DOSE/ROUTE:

- ⇒ **For indications other than cardiac arrest including anaphylaxis:** (1:1,000) 0.01 mg/kg IM in anterolateral thigh. May repeat x1 in 5 minutes.
- ⇒ **Cardiac Arrest:** 0.01 mg/kg IVP/IO (1:10,000) at the time intervals specified in Protocol 2.04 Cardiac Arrest – VF/pulseless VT and asystole/PEA.

*Effective: 02/03/20
Supersedes: 05/22/19*

FENTANYL CITRATE (Sublimaze)

ACTION: Opioid Analgesic

- Centrally acting opiate analgesic effective for acute pain.
- For cardiac patients: fentanyl reduces the pain of ischemia and reduces anxiety, reducing oxygen demands on the heart, improving perfusion.

INDICATIONS:

- Chest pain of suspected ischemic origin.
- Management of acute pain according to ALS Treatment Protocols.

CONTRAINDICATIONS:

- Hypersensitivity or prior allergic reaction
- Respiratory Insufficiency
- Asthma or exacerbated COPD
- Head injury
- Hypotension
- Decreased LOC

POTENTIAL SIDE EFFECTS:

- | | |
|--------------------------|--------------------------|
| • Respiratory depression | • Nausea and vomiting |
| • Hypotension | • Bradycardia |
| • Decreased LOC | • Muscle rigidity (rare) |

ADULT DOSE/ROUTE:

- ⇒ 50 mcg IV/IO slow IV push (over 1 minute). May repeat every 5 minutes if SBP > 90 mm Hg. The maximum dose is 200 mcg without base contact.
- ⇒ If no IV/IO, 100 mcg IN or IM (IN preferred). May repeat every 10 minutes if SBP > 90 mm Hg. The maximum dose is 200 mcg without base contact.

PEDIATRIC DOSE/ROUTE:

- ⇒ If IV/IO, 1 mcg/kg/dose IV/IO up to 50mcg slow IV push (over 1 minute). Subsequent dose up to 25 mcg may be repeated every 10 minutes up to the maximum dose of 100 mcg without Base Hospital contact.
- ⇒ If **no** IV/IO, 2 mcg/kg/dose IN or IM (IN preferred) up to 50 mcg. Subsequent dose up to 25 mcg may be repeated every 10 minutes up to the maximum dose of 100 mcg without Base Hospital contact.

NOTES:

- Rapid infusions of Fentanyl have been associated with chest wall rigidity and respiratory depression, particularly in pediatrics. Administer doses over 1-2 min to prevent occurrence.

- Fentanyl is 100x stronger than Morphine and is dosed in micrograms. It is faster acting than Morphine (peak effect 5-10 minutes) and has a shorter duration of effect (approximately 30 minutes). 100 mcg of Fentanyl is approximately equivalent to 10 mg of Morphine.
- Fentanyl can cause depressed respiratory status. Be prepared to assist ventilations in patients receiving Fentanyl.
- Respiratory depression from Fentanyl can be reversed with Naloxone.
- Fentanyl's effects can be potentiated by Midazolam. Contact the Base Hospital Physician before administering both Fentanyl and Midazolam.
- Contact the Base Hospital Physician if higher doses of Fentanyl are required for adequate pain control.

*Effective: 10/29/18
Supersedes: New*

GLUCAGON

ACTION: Hormone/Antihypoglycemic

- Glucagon is a hormone secreted by the pancreas that causes a breakdown of stored glycogen into glucose and stops glucose conversion into glycogen resulting in increased circulating blood glucose.
- Glucagon is only effective if there are sufficient stores of glycogen in the liver.
- Used in treatment of beta blocker overdose; likely mechanism of action is the increase of cAMP in the myocardium.

INDICATIONS:

- Hypoglycemia when an IV cannot be established to administer D₅₀W.
- Patients given Glucagon usually take from 5 to 20 min. to return to consciousness.
- Bradycardia and Hypotension secondary to Beta Blocker Overdose (with Base Hospital Contact).

CONTRAINDICATIONS:

- Hypersensitivity to Glucagon.

POTENTIAL SIDE EFFECTS:

- Hypotension.
- Dizziness and headache.
- Nausea and vomiting.

ADULT DOSE/ROUTE:

⇒ **Hypoglycemia / Beta Blocker Overdose:** 1 mg IM/IV

PEDIATRIC DOSE/ROUTE:

⇒ **Hypoglycemia/Beta Blocker Overdose:**

Less than 20kg: 0.5 mg IM/IV

Greater than 20kg: 1 mg IM/IV

NOTES:

- Vomiting is very common following glucagon administration
- As soon as patient is awake, give carbohydrates such as orange juice or a meal.

*Effective: 11/01/17
Supersedes: 03/01/15*

GLUCOSE (Glucose)

ACTION: Oral Hyperglycemic Agent (Concentrated Sugar)

Reverses hypoglycemia. Good for conscious insulin overdose/hypoglycemic patients with an intact gag reflex.

INDICATIONS:

- Hypoglycemic patients who are conscious and who have a gag reflex.

CONTRAINDICATIONS:

- Patient with altered mental status that cannot self-administer glucose tube.

POTENTIAL SIDE EFFECTS:

- Aspiration of glucose if patient has no gag reflex.

ADULT DOSE/ROUTE:

⇒ Give 1-2 tubes to patient (30grams or more glucose).

PEDIATRIC DOSE/ROUTE:

⇒ Same as adult dose or as tolerated by patient.

NOTES:

- Check blood glucose level PRIOR to giving oral Glucose.
- Response (increasing LOC) should occur within 10 min.
- After patient is fully alert and oriented, ensure that patient consumes additional carbohydrates, such as orange juice or a meal.

*Effective: 11/01/17
Supersedes: 03/01/15*

HYDROXOCOBALAMIN

ACTIONS: Cyanide Antidote

- Directly binds to cyanide to form the nontoxic compound cyanocobalamin, which is then excreted in the urine.

INDICATIONS

- Symptomatic cyanide exposure, known or suspected.

CONTRAINDICATIONS

- None.

PRECAUTIONS

⇒ The most common adverse reactions are development of reddish skin, mucous membranes, and urine up to three days after infusion.

PREPARATION

- Using double-side spike and 5 G vial included in CYANOKIT box, fill the vial to the fill-line (200ml) with a bag of normal saline (dextrose may be used). The resulting concentration will be 25mg/ml.

ADULT DOSE/ROUTE:

- 5 grams IV infused over 15 minutes

PEDIATRIC DOSE/ROUTE:

- 70 mg/kg IV infused over 15 minutes

| Pt. Weight | Dose 70 mg/kg | Volume of drug to withdraw & administer |
|------------|------------------------|--|
| 3-5 kg | 275 mg | 11 ml |
| 6-7 kg | 420 mg | 18 ml |
| 8-9 kg | 600 mg | 24 ml |
| 10-11 kg | 700 mg | 28 ml |
| 12-14 kg | 900 mg | 36 ml |
| 15-18 kg | 1150 mg | 46 ml |
| 19-22 kg | 1450 mg | 58 ml |
| 23-28 kg | 1750 mg | 70 ml |
| 29-36 kg | 2200 mg | 88 ml |
| 36-39 kg | 2650 mg | 106 ml |
| >40kg | Administer entire vial | |

NOTES

- Hydroxocobalamin has replaced Sodium Thiosulfate.
- Hydroxocobalamin has limited toxicity and may be used when cyanide exposure is suspected, but not confirmed.
- Hydroxocobalamin is not routinely stocked on the ambulances, but is available in the pharmaceutical disaster and hazmat caches.

Effective: 10/29/18
Supersedes: New

IBUPROFEN

ACTION: Non-Selective COX Inhibitor

- Analgesic effective for mild to moderate pain.
- Additionally has anti-pyretic and anti-inflammatory properties.

INDICATIONS:

- Management of acute mild to moderate pain as described by patients as a pain score of 6 or less.

CONTRAINDICATIONS:

- Known allergy or hypersensitivity to NSAIDS
- Acute significant trauma (see notes)
- Acute neurologic symptoms (including focal weakness, paresthesias or other stroke symptoms)
- Hemophilia
- Pregnant or high possibility of pregnancy as reported by patient
- History of GI bleeding or ulcers
- Current aspirin or anticoagulation therapy
- History of renal disease, or kidney transplant
- Age < 6 months

POTENTIAL SIDE EFFECTS:

- Nausea
- Upset stomach
- Rash
- Headache
- Hypertension
- GI bleed

ADULT DOSE/ROUTE:

⇒ 400 mg PO x 1 dose.

PEDIATRIC DOSE/ROUTE:

⇒ 10 mg/kg PO up to 400 mg total dose.

NOTES:

- The median onset of pain relief with ibuprofen is approximately 25 minutes.
- Ibuprofen will not interact with IV/IO/IN opiate analgesics such as fentanyl if additional pain control is needed.
- Ibuprofen administration in combination with alcohol use may increase risk of GI bleeding.
- Significant trauma consists of injuries that would require trauma center destination criteria, or those as a result of which the paramedic is concerned for internal/difficult to control hemorrhage.

*Effective: 10/29/18
Supersedes: New*

KETOROLAC INJECTION

ACTION: Analgesic/antipyretic

- Non-selective COX inhibitor, which slows the production of prostaglandins (mediators of the inflammatory response causing pain and fever) by competitively blocking the enzyme cyclooxygenase (COX).

INDICATIONS:

- Mild to moderate pain as described by patients with a pain scale score of 6 or less.

CONTRAINDICATIONS:

- Known allergy or hypersensitivity to NSAIDs
- Acute significant trauma (see notes)
- Acute neurologic symptoms (including focal weakness, paresthesias or other stroke symptoms)
- Hemophilia
- Pregnant or high possibility of pregnancy as reported by patient
- History of GI bleeding or ulcers
- Current aspirin or anticoagulation therapy
- History of renal disease, or kidney transplant
- Age < 18 years old or > 65 years old
- Hypotension
- Current steroid use
- History of asthma

POTENTIAL SIDE EFFECTS:

- | | |
|---------------------------------|----------------------------------|
| • Diarrhea | • Nausea / Vomiting |
| • Abdominal pain | • Drowsiness |
| • Increased risk of GI bleeding | • Tinnitus (ringing in the ears) |

ADULT DOSE/ROUTE:

⇒ Dose: 15 mg IV/IO* bolus or 30 mg IM.

**IV preferred route*

PEDIATRIC DOSE/ROUTE:

⇒ **Do Not Use in Patients Under Age 18**

NOTES:

- Clinically evaluate patients to determine if pain score can be administered. If pain score cannot be administered due to patient condition (severe pain) consider alternates to ketorolac.
- Significant trauma consists of injuries requiring trauma center destination criteria, or those as a result of which the paramedic is concerned for internal/difficult to control hemorrhage.

*Effective: 10/29/18
Supersedes: New*

LIDOCAINE (Xylocaine)

ACTION: Local Anesthetic

- Lidocaine decreases sensory nerve transmission of pain impulses.

INDICATIONS:

- Pain relief in IO insertion in conscious patients.

CONTRAINDICATIONS:

- Not indicated in unconscious, unresponsive patients for IO placement.

POTENTIAL SIDE EFFECTS:

Signs of Lidocaine toxicity may include:

- | | |
|------------------|----------------------|
| • Drowsiness | • Altered LOC |
| • Dizziness | • Seizures |
| • Slurred speech | • Respiratory arrest |

ADULT DOSE/ROUTE:

⇒ Adult patients: 50 mg IO (2.5ml of 2% lidocaine).

PEDIATRIC DOSE/ROUTE:

⇒ Pediatric patients: 0.5 mg/kg to a max dose of 50 mg IO.

NOTES:

Lidocaine is no longer used for cardiac indications in the prehospital setting.

*Effective: 11/01/17
Supersedes: 03/01/15*

MAGNESIUM SULFATE

ACTION: Electrolyte/Antiarrhythmic

- Magnesium provides electrical stability in the myocardium.
- Affects impulse formation and conduction time in myocardium reducing incidence of dysrhythmias associated with hypomagnesemia or prolonged QT interval.
- Magnesium is also effective in the prevention and management of seizures associated with eclampsia in pregnant women.

INDICATIONS:

- Drug of choice for treatment of Torsades de Pointes (polymorphic V-Tach).
- V-Fib/V-Tach cardiac arrest patients with poor dietary intake or chronic diseases (i.e. alcoholism, renal failure and use of diuretics).
- Refractory V-Fib/V-Tach after use of cardioversion and Amiodarone.
- Suspected ischemic chest pain patients presenting with significant ventricular ectopy AND who have poor dietary intake and habits or chronic diseases such as alcoholism and renal failure.
- Seizures secondary to eclampsia in pregnant women.

CONTRAINDICATIONS:

- In renal patients, use caution if giving additional doses of Magnesium sulfate.

POTENTIAL SIDE EFFECTS:

- | | |
|--------------------------|-----------------------------------|
| • Flushing and sweating. | • Mild hypotension. |
| • Mild bradycardia. | • Respiratory and CNS depression. |

ADULT DOSE/ROUTE:

⇒ **Arrest due to Torsades de Pointes / Eclampsia:** 2 grams in 100 ml D5W slowly IV/IO. Run with target goal of infusing 100 ml over 10 minutes.

PEDIATRIC DOSE/ROUTE:

⇒ Not indicated

NOTES:

- In Torsades de Pointes (polymorphic V-Tach), give Magnesium Sulfate as the first-line antiarrhythmic. Doses higher than 2 G may be required in Torsades. Contact Base Hospital Physician for additional orders.

*Effective: 11/01/17
Supersedes: 03/01/15*

MIDAZOLAM (Versed)

ACTION: Hypnotic, Sedative, Anti-Seizure

- Midazolam is a potent, short-acting benzodiazepine with hypnotic and amnestic effects. It has no effect on pain.

INDICATIONS:

- Premedication before cardioversion, external pacing and other painful procedures.
- Seizures (status epilepticus).
- Agitated patient who may be a danger to self or others.

CONTRAINDICATIONS:

- Hypersensitivity
- Shock, with depressed vital signs
- Narrow-angle glaucoma
- Alcoholic coma

POTENTIAL SIDE EFFECTS:

- Laryngospasm
- AMS
- Bronchospasm
- Bradycardia
- Dyspnea
- Tachycardia
- Respiratory depression and arrest
- PVC's
- Drowsiness
- Nausea
- Amnesia
- Vomiting

ADULT DOSE/ROUTE:

- ⇒ **Sedation/Agitation:** 2 - 5mg IM x1 or 1 – 2mg slow push IV/IO. May repeat IV/IO dose in 5 minutes for continued agitation. Maximum total dose 5mg IV/IO.
- ⇒ **Seizure:** 10 mg IM x1 or intranasally (5mg each nostril) or 5mg slow push IV/IO. May repeat IV/IO dose in 5 minutes. Maximum total dose 10mg IV/IO.

PEDIATRIC DOSE/ROUTE:

- ⇒ **Agitation/Sedation/Seizure:** 0.2 mg/kg IV/IM/IO or 0.4 mg/kg intranasally. Maximum total dose 4mg.

NOTES:

- Do not use intranasal route in agitation because amount of absorption in an actively resisting, agitated patients is unknown.
- Midazolam is more potent than diazepam.
- Effects of midazolam may be potentiated if administered with morphine. Contact Base Hospital if considering administering both medications.
- Always be prepared to protect airway and ventilate patients who are given benzodiazepines. Continuous monitoring of vital signs before and after administration is required.

*Effective: 02/03/20
Supersedes: 11/01/17*

MORPHINE SULFATE

ACTION: Analgesic

- Centrally acting opiate analgesic effective for acute pain.
- For cardiac patients: morphine reduces the pain of ischemia and reduces anxiety, reducing oxygen demands on the heart, improving ischemia.

INDICATIONS:

- Chest pain of suspected ischemic origin.
- Management of acute pain according to ALS Treatment Protocols.

CONTRAINDICATIONS:

- | | |
|------------------------------|-----------------|
| • Hypersensitivity | • Head injury |
| • Respiratory Insufficiency | • Hypotension |
| • Asthma or exacerbated COPD | • Decreased LOC |

POTENTIAL SIDE EFFECTS:

- | | |
|--------------------------|------------------------|
| • Respiratory depression | • Nausea and vomiting |
| • Hypotension | • Decreased heart rate |
| • Decreased LOC | |

ADULT DOSE/ROUTE:

- ⇒ 2 - 4 mg slow IVP/IO or 5mg IM. May repeat in 10min for continued pain if SBP > 90 mmHg to total dose of 20 mg.

PEDIATRIC DOSE/ROUTE:

- ⇒ **Less than 6 months:** 0.05mg/kg slow IVP/IM/IO. May repeat in 10min at half the initial dose. Max dose 4mg without Base Contact.
- ⇒ **Greater than 6 months:** 0.1 mg/kg slow IVP/IM/IO. May repeat in 10min at half the initial dose x1. Max dose 4mg without Base Contact.

NOTES:

- Closely monitor respiratory status and systolic blood pressure. Be prepared to assist ventilations of any patient who is administered Morphine.
- Morphine effects may be potentiated if administered with midazolam. Contact Base Hospital Physician if considering administering both medications.
- Contact Base Hospital Physician if higher doses of Morphine are required.

*Effective: 11/01/17
Supersedes: 03/01/15*

NALOXONE (Narcan)

ACTION: Narcotic Antagonist

- Antagonizes effects of opiate narcotic agents by competing at the receptor site resulting in reversal of respiratory depression associated with opiate overdoses.

INDICATIONS:

- Altered Mental Status in the presence of suspected narcotic overdose, or coma of unknown etiology.

CONTRAINDICATIONS:

- Patients with hypersensitivity to the drug.
- Neonate in the setting of opiate dependence.

POTENTIAL SIDE EFFECTS:

- Rapid administration can cause projectile vomiting.
- May precipitate withdrawal in chronic narcotic users.
- Patients may become agitated or violent after drug is administered.

ADULT DOSE/ROUTE:

- ⇒ **IVP/IM/IO:** 0.4 mg, may repeat in 5 min for continued respiratory depression up to 2mg.
- ⇒ **Intranasal:** 2 mg via mucosal atomizer device (MAD), may repeat in 5 min for continued respiratory depression.

PEDIATRIC DOSE/ROUTE:

- ⇒ DO NOT GIVE to NEONATES
- ⇒ **Less than 20 kg:** 0.1 mg/kg IV/IM/IO.
- ⇒ **Greater than 20 kg:** 2 mg IN via MAD or IVP/ IM/ IO.

NOTES:

- Doses of Naloxone smaller than 2 mg may be given if it is suspected that the patient may have taken a combination of heroin and cocaine ("speedball").
- Because Naloxone is a short-acting narcotic antagonist, repeat doses may have to be given if the patient's LOC and respiratory status start to diminish again.
- Higher doses of Naloxone may be indicated for some opiate overdoses (Buprenorphine, Suboxone, and Darvocet).

*Effective: 02/03/20
Supersedes: 11/01/17*

NITROGLYCERIN (Nitrolingual)

ACTION: Nitrate/Vasodilator

- Dilates venous capacitance vessels, reducing blood return to the heart (reduced preload).
- Decreases systemic vascular resistance and facilitates cardiac emptying (reduced afterload).
- Decreases myocardial oxygen demand.
- Dilates coronary arteries.

INDICATIONS:

- Chest pain of suspected cardiac origin.
- Acute pulmonary edema and congestive heart failure.

CONTRAINDICATIONS:

- Hypersensitivity
- Hypotension and shock
- Recent use of phosphodiesterase inhibitors (all erectile dysfunction drugs).

POTENTIAL SIDE EFFECTS:

- | | |
|-------------------------|---------------|
| • Hypotension | • Syncope |
| • Headache and flushing | • Tachycardia |

ADULT DOSE/ROUTE:

⇒ **Cardiac Chest Pain or Pulmonary Edema:** 0.4 mg sublingual spray or tablet. Repeat q5 min for continued chest pain if SBP >90 mmHg, max of 3 doses.

PEDIATRIC DOSE/ROUTE:

⇒ Not indicated.

NOTES:

- Elderly patients and / or dehydrated patients are more vulnerable to hypotension caused by the vasodilation.
- Nitrolingual spray can be administered either on top of the tongue, or underneath the tongue. Have patients open their mouths. Instruct them to hold their breath. Spray the NTG lingually or sublingually, and then tell the patients that they can close their mouths and resume normal breathing.

*Effective: 11/01/17
Supersedes: 03/01/15*

NORMAL SALINE

ACTION: Isotonic volume expander. Electrolyte replacement.

- Normal Saline is a sterile, nonpyrogenic solution for fluid and electrolyte replacement.

INDICATIONS:

- | | | |
|------------------|---------------------------|---------|
| • Hypotension | • Therapeutic Hypothermia | • AMS |
| • Crush Syndrome | • Suspected Sepsis | • Burns |
| • Cardiac Arrest | • Allergic Reaction | • Shock |

CONTRAINDICATIONS:

- Severe hypertension.
- Pulmonary edema.

POTENTIAL SIDE EFFECTS:

- Pulmonary edema.
- Febrile response.
- Hypervolemia.

ADULT DOSE/ROUTE:

- ⇒ IV/IO of Normal Saline TKO.
- ⇒ If SBP < 90 or signs of poor perfusion, fluid bolus 500 mL if lungs are clear. Reassess and repeat if indicated.
- ⇒ **Burns:** If partial thickness or total thickness burns > 10% BSA, fluid bolus 500 mL if lungs are clear. Reassess and repeat if indicated.
- ⇒ **Crush Syndrome:** Bolus of 2 L followed by 500 mL/hr.
- ⇒ **Cardiac Arrest in Pregnancy:** If SBP < 90 or signs of poor perfusion, fluid bolus 500 mL. Reassess and repeat if indicated.
- ⇒ **Post Cardiac Arrest or Return of Spontaneous Circulation (ROSC):** If SBP < 90 or signs of poor perfusion, fluid bolus 1000 mL if lungs are clear. Reassess and repeat if indicated.
- ⇒ **Therapeutic Hypothermia:** Infuse 30 mL/Kg of Normal Saline chilled to 3° C (66 Kg = 2 L using 300 mmHg pressure infusion sleeve(s) or BP cuff.
- ⇒ **Suspected Sepsis:** For signs of hypoperfusion and HR > 100 or BP < 90, fluid bolus 1000 mL if lungs are clear. Reassess and repeat if indicated.

PEDIATRIC DOSE/ROUTE:

- ⇒ IV/IO of Normal Saline TKO.
- ⇒ **Pediatric hypovolemic shock:** IV/IO bolus of 20 mL/Kg. Repeat up to 60 mL/Kg if indicated.
- ⇒ **Neonatal hypovolemic shock:** 10 mL/Kg. Repeat up to 30 mL/Kg.
- ⇒ **AMS of Unknown Cause:** IV/IO bolus of 10 mL/Kg.

NOTES:

- Use cautiously in patients with congestive heart failure, severe renal insufficiency, and in clinical states in which there exists edema with sodium retention (e.g., patients with diminished renal function.)
- Discontinue bolus if pulmonary edema develops.

*Effective: 02/03/20
Supersedes: 11/.1/17*

ONDANSETRON (Zofran)

ACTION: Anti-Emetic

- Selective antagonism of the serotonin 5-HT₃ receptor resulting in decreased nausea and vomiting

INDICATIONS:

- Severe Nausea and Vomiting

CONTRAINDICATIONS:

- History of hypersensitivity to similar drugs: Dolasetron (Anzemet), Granisetron (Kytril), or Palonosetron (Aloxi) or to ondansetron (Zofran).
- Taking Apomorphine (Apokyn, Ixense, Spontane, Uprima), an injectable drug for Parkinson's Disease, or rarely used for erectile dysfunction.
- Do not give oral tablet or solution to known phenylketonurics (contains phenylalanine).

POTENTIAL SIDE EFFECTS

- | | |
|-------------------|---------------|
| • Hypotension | • Dizziness |
| • Syncope | • Anaphylaxis |
| • QT prolongation | • Flushing |
| • Headache | • Rash |
| • Diarrhea | |

ADULT DOSE/ROUTE:

- ⇒ 4 mg slow IVP/IM or 8mg tablet ODT (dissolved on the tongue).
- ⇒ May repeat in 20min for continued nausea up to 12 mg.

PEDIATRIC DOSE/ROUTE:

- ⇒ **Less than 6 months:** DON'T USE
- ⇒ **6 months – 12 years old or <40kg:** 0.1mg/kg slow IVP/IO (max 4mg)
- ⇒ **Greater than 12 years or >40kg:** 4mg slow IVP/IO. May repeat in 20min for continued nausea up to 12mg.

NOTES:

- Should be administered IV over 2-5 minutes. Rapid administration has been associated with increased incidence of side effects including syncope.
- Oral disintegrating tablets (ODT's) can be placed on tongue and do not need to be chewed. Medication will dissolve and be swallowed with saliva.
- Ondansetron can be used in pregnancy and breast-feeding mothers (pregnancy class B).

*Effective: 11/01/17
Supersedes: 03/01/15*

OXYGEN (O₂)

ACTION: Medical Gas

- Essential for cellular metabolism and survival.
- First drug used for respiratory compromise or any time hypoxia is possible.

INDICATIONS:

- All patients with cardiopulmonary emergencies.
- Respiratory emergencies, including any patient who complains of shortness of breath.
- Chest pain.
- Suspected hypoxemia.

CONTRAINDICATIONS:

- Do NOT withhold oxygen from anyone who might need it.

ADULT DOSE/ROUTE:

- ⇒ **Nasal Cannula:** 2 to 6 liters/min (delivers 24 to 44% oxygen).
- ⇒ **Nonrebreather Mask:** 10 to 15 liters/min (delivers 85 to 95% oxygen).
- ⇒ **BVM with O₂ Reservoir:** 15 to 25 liters/min (delivers 85 to 95% oxygen).

PEDIATRIC DOSE/ROUTE:

- ⇒ **Nasal Cannula:** 2 to 4 liters/min (delivers 24 to 38% oxygen).
- ⇒ **Nonrebreather Mask:** 10 to 12 liters/min (delivers 85 to 95% oxygen).
- ⇒ **BVM with O₂ Reservoir:** 10 to 15 liters/min (delivers 60 to 95% oxygen).

NOTES:

- Target oxygen saturation levels when administering O₂ is 94 – 95%.
- Never withhold oxygen from anyone who might need it.
- Observe COPD patients closely and be prepared to ventilate them with BVM if necessary (development of apnea or increasing signs of respiratory failure).

*Effective: 11/01/17
Supersedes: 03/01/15*

PRALIDOXIME (2-PAM Chloride)

ACTIONS: Nerve agent antidote

- Restores cholinesterase activity.
- Administer as soon as possible after symptomatic nerve agent exposure.

INDICATIONS

- Potential or confirmed nerve agent exposure with SLUDGE symptoms and signs.

CONTRAINDICATIONS

- No signs of life.
- Non-resuscitation group due to other concomitant injury.

ADULT DOSE/ROUTE:

- ⇒ **Exhibiting 1 or more SLUDGE signs and Elderly or requiring prolonged extrication:**
 - 1-3 Autoinjectors IM
- ⇒ **Exhibiting 2 or more SLUDGE signs or Non-ambulatory:**
 - 3 Autoinjectors IM

PEDIATRIC DOSE/ROUTE:

- ⇒ **Exhibiting 1 or more SLUDGE signs and appearing less than 14 years old or requiring prolonged extrication:**
 - 1-3 Autoinjectors IM.
- ⇒ **Exhibiting 2 or more SLUDGE signs and Non-ambulatory:**
 - 3 Autoinjectors IM.

NOTES:

- Large amounts of Atropine/2-PAM may be needed to adequately treat symptoms of nerve agent poisoning.
- Each injector carries 2.1mg Atropine and 600mg Pralidoxime.
- Titrate dose to effect.
- Give atropine first.
- Do not administer to asymptomatic patients.
- Medication effects start within 1-5min following administration.
- Most effective if given early before irreversible binding of nerve agent with acetylcholinesterase ("aging") occurs, but may be administered up to 48 hours post exposure in symptomatic patients.
- Bronchospasm and respiratory secretions are the best acute symptoms to monitor response to Atropine/2-PAM therapy:
 - Decreased bronchospasm and respiratory secretions = Getting Better.
 - No change or increased bronchospasm and respiratory secretions = Needs more 2-PAM

*Effective: 11/01/17
Supersedes: 03/01/15*

SODIUM BICARBONATE

ACTION: Alkalinizing Agent

- Acts as a buffering agent when administered to neutralize hydrogen ions resulting in carbon dioxide as a byproduct.
- Alkalinization of blood results in shifting of potassium into the intracellular space, lowering serum potassium levels.

INDICATIONS:

- Known or suspected hyperkalemia or in patients with known renal failure.
- Cardiac arrests associated with tricyclic antidepressants or phenobarbital overdose.

CONTRAINDICATIONS:

- When used for situations above—none

POTENTIAL SIDE EFFECTS:

- | | |
|-------------------------|------------------|
| • Hypotension | • Tachycardia |
| • Headache and flushing | • Alkalosis |
| • Syncope | • Fluid overload |

ADULT DOSE/ROUTE:

- ⇒ **Suspected Hyperkalemia / QRS widening from Tricyclic Antidepressant Overdose:**
1mEq/kg IV/IO. May repeat 0.5mEq/kg q 10 min to total of 2mEq/kg.

PEDIATRIC DOSE/ROUTE:

- ⇒ **Suspected Hyperkalemia or QRS widening from Tricyclic Antidepressant:** 1mEq/kg IV/IO.
May repeat 0.5mEq/kg q 10 min to total of 2mEq/kg.
- ⇒ **If <2 years**, dilute bicarb 1:1 with sterile water.

NOTES:

- IV lines should be flushed thoroughly before administration of other medications to avoid precipitation.

*Effective: 11/01/17
Supersedes: 03/01/15*