

McLean County Area EMS System Medication Reference Guide

Medication Name (Generic)	Medication Name (Trade)	Indication	Contraindication	Mechanism of Action	Route	Dose	Protocols
Adenosine	Adenocard	Supraventricular Tachycardia	- Second- or third- degree AV block -Sinus node disease (ie sick sinus syndrome)	Slows impulse formation in the SA node, slows conduction time through AV node	IV/IO	6mg – initial 12mg – follow up <i>Peds</i> 0.1mg/kg (6mg max) with MCO – initial 0.2mg/kg (12mg max) with MCO - follow up	Narrow Complex Tachycardia - Stable
Albuterol	Proventil	-Bronchoconstriction -Asthma/COPD -Crush Injury	Non in emergency setting	Beta-adrenergic agonist. Causes bronchodilation	Inhaled	2.5mg/3mL	-Asthma/COPD -Anaphylaxis - Crush/Suspension
Aspirin		-Cardiac related chest pain	-Asthma -Ulcers/Bleeding disorder	-Platelet inhibitor	Oral	324mg (4x 81mg tablets) <i>Peds</i> Not indicated	Chest Pain
Amiodarone	Cordarone	Ventricular Arrhythmia	-Cardiogenic shock -sick sinus syndrome -2 nd /3 rd degree heart block -Severe sinus brady	Antiarrhythmic drug, lengthens cardiac action potential, blocks myocardial potassium channels leading to slowed conduction and prolonged refractoriness	IV/IO	<i>V-Fib/Tach</i> <i>Arrest</i> 300mg – Initial 150mg – 2 nd dose <i>Wide complex</i> <i>Tachycardia</i> 150mg/10 mins 1mg/min infusion <i>Peds</i> 5mg/kg(max 300mg)	-V-Fib/V-Tach Arrest -Wide Complex Tachycardia - Unstable

Medication Name (Generic)	Medication Name (Trade)	Indication	Contraindication	Mechanism of Action	Route	Dose	Protocols
Atropine		-Bradycardia -Organophosphate overdose	-Primary glaucoma -Narrow anterior chamber angle glaucoma	Anticholinergic drug	IV/IO	0.5 mg – Bradycardia 2mg- Organophosphate poisoning <i>Peds</i> 0.02mg/kg (max dose 1mg, minimum dose 0.1mg) for children 6 months and older with MCO	-Bradycardia – Unstable -Organophosphate Poisoning
Calcium Chloride		-Hyperkalemia -Calcium channel blocker overdose -Cardiac Arrest -Crush Injury	-none when used appropriately	-normal constituents of the body, help restore the normal gradient between threshold potential and resting potential	IV/IO	1g slow push <i>Peds</i> 20mg/kg (max 1g)	-Cardiac Arrest -Suspected poisoning/ overdose -Crush/ suspension -Eclampsia (mag sulfate overdose)
Dextrose 10%		-Hypoglycemia	Non-patent IV line	Provides a source of carbohydrate to increase glucose	IV/IO	Titrate to effect <i>Peds</i> 5mL/kg (250ml max)	-Diabetic emergency
Diphenhydramine	Benadryl	-Anaphylaxis -Allergic reaction	-unable to swallow -glaucoma	Reverses the effect of histamine	PO – BLS IV/IM/ IO- ALS	50mg <i>Peds</i> – ILS/ALS only 1mg/kg – 50mg max	-Anaphylaxis -Allergic Reaction
Epinephrine (1:1,000)	Adrenalin	-Anaphylaxis	-none when used appropriately	Sympathomimetic drug, acts on both alpha and beta receptors. Causes	IM	0.3mg – Adult 0.15mg – Pediatric (under 30kg)	-Anaphylaxis

Epinephrine (1:1,000)				vasoconstriction and bronchodilation			
Epinephrine (1:10,000)	Adrenalin	-Cardiac Arrest	-none when used appropriately	Sympathomimetic drug, acts on both alpha and beta receptors. Causes vasoconstriction and bronchodilation	IV/IO	1mg <i>Peds</i> 0.01mg/kg (max dose 1mg, minimum 0.1mg)	-Cardiac Arrest
Medication Name (Generic)	Medication Name (Trade)	Indication	Contraindication	Mechanism of Action	Route	Dose	Protocols
Glucagon		Hypoglycemia	-none when used appropriately	Activates hepatic glucagon receptors, stimulating glycogen breakdown of glucose from the liver	IN/IM	IN – 2mg IM – 1mg <i>Peds</i> 9 years and older 1mg IN 8 years and younger 0.5mg IN ILS/ALS 0.1mg/kg	-Diabetic Emergency
Ipratropium	Atrovent	Asthma/COPD	-none when used appropriately	Cholinergic antagonist, blocks the effects of bronchoconstriction	Inhaled	.5mg/2.5mL	-Asthma/COPD -Anaphylaxis
Ibuprofen	Advil, Motrin	Minor traumatic pain	-Asthma, urticaria	NSAID that exhibits analgesic effects	Oral	400mg	-Pain
Lidocaine	Xylocaine	Pain with IO infusion	-none when used appropriately	Blocks both initiation and conduction of nerve impulses	IO	1mL, titrated to effect <i>Peds</i> 0.5mg/kg (max 1ml)	-Pain for IO infusion
Magnesium Sulfate		-V-Fib/V-tach arrest -Asthma/COPD -Pre/Eclampsia	-none when used appropriately	Smooth muscle relaxer	IV/IO	2-4g Slow IV Push – Eclampsia	-Eclampsia -Asthma/COPD -V-fib/V-tach cardiac arrest

Magnesium Sulfate						2g infusion over 10 minutes – Asthma/COPD 2g IVP over 2 minutes – V-fib/V-tach arrest <i>Peds</i> 25mg/kg (max 2g) – Wide Complex Tachycardia unstable	
Medication Name (Generic)	Medication Name (Trade)	Indication	Contraindication	Mechanism of Action	Route	Dose	Protocols
Methylprednisolone	Solumedrol	-Anaphylaxis -Asthma/COPD	-none when used appropriately	Glucocorticoid with anti-inflammatory capabilities	IV/IO	125mg <i>Peds</i> 2mg/kg (125mg max dose)	-Anaphylaxis -Asthma/COPD
Naloxone	Narcan	Narcotic overdose	-none when used appropriately	Binds with narcotic receptors to inhibit narcotic effects	IN - EMR/BIS IO/IV – ILS/ALS	EMR/BLS 1mg (0.5mg per nare) IN, followed by 2mg (1mg per nare) ILS/ALS 0.4mg-2.0 mg (1/2 per nare) <i>Peds</i> EMR/BLS Under 8 y/o 0.5mg IN (half per nare)	-Overdose

						Over 8 y/o 1mg IN (have per nare) ILS/ALS 0.1mg/kg (max 2mg)	
Medication Name (Generic)	Medication Name (Trade)	Indication	Contraindication	Mechanism of Action	Route	Dose	Protocols
Nitroglycerin	Nitro-Bid, Nitrostat	-Cardiac Related Chest Pain -Congestive Heart Failure	-Hypotension -Erectile dysfunction medication use in the last 48 hours	Relieves tension on vascular smooth muscle, dilates peripheral veins and arteries	Oral, paste, IV	Sublingual – 0.4mg Paste – 1 inch IV -10 – 50mcg/min	-Chest Pain -CHF
Norepinephrine	Levophed	-Septic/Cardiogenic Shock	-Hypotension from blood loss	Stimulates peripheral vasoconstriction	IV/IO	2mcg- 12mcg/min titrate to SBP>90	-Sepsis -Cardiogenic Shock -Anaphylaxis
Ondansetron	Zofran	Nausea	Oral – unable to swallow	Blocks receptors on peripheral nerves to inhibit nausea	Oral, IV	4 mg – ODT 4 mg – IV	-Pain -Nausea/ Vomiting
Oral Glucose		Hypoglycemia	Unable to swallow	Glucose absorbed through GI tract to increase sugar	Oral	1 tube – Adult/ped, titrate to effect	-Diabetic
Racemic Epinephrine		Croup	-none when used appropriately	Causes increased bronchodilation	Inhaled	0.5mL – pediatric only	-Peds Resp. Distress
Sodium Bicarb		-Crush Injury -Cardiac Arrest -Suspected Overdose	-none when used appropriately	Deactivates catecholamines	IV/IO	50mEq <i>Peds</i> 1mEq/kg (Max 50 mEq)	-Cardiac Arrest -Crush Injury -Suspected Overdose
Tranexamic Acid		Hemorrhagic Shock	-hemorrhagic stroke	Synthetic amino acid, plasminogen inhibitor	IV	1gm/10 minutes	-Hemorrhagic Shock -Postpartum Hemorrhage
Fentanyl	Sublimaze	Pain	Significant resp. depression	Pure opioid agonist	IV/ IO/ IN	<i>Adult</i>	-Pain Protocl

						1mcg/kg (max 100mcg) 1 st dose 1mcg/kg (max 50mcg) 2 nd /3 rd dose <i>Pediatric</i> 1mcg/kg (max 50mcg) 1 st dose, repeat until max 100mcg Peds IN dose is 2mcg/kg max 100mcg 1 st dose	
Medication Name (Generic)	Medication Name (Trade)	Indication	Contraindication	Mechanism of Action	Route	Dose	Protocols
Lorazepam	Ativan	-Seizure -Anti-anxiety	-Narrow-angle glaucoma -Respiratory depression	Benzodiazepine, binds with GABA receptors	IV, IM, IO, IN	<i>Adult</i> 1mg IV for anxiety or 2mg IN 2mg for seizure/delirium <i>Pediatric</i> 0.1mg/kg (max 2mg)	-Seizure -Asthma/COPD -CHF -Chemical Restraint
Midazolam	Versed	-Seizure -Intubation sedation -Procedural sedation	-Narrow angle glaucoma	Short acting benzodiazepine, interacts with GABA receptors	IV, IM, IV, IO	<i>Adult</i> 2mg IM, 4mg IN, 2mg IV - seizures 0.05mg/kg (max 5mg) IN for procedural sedation 0.05mg/kg every 3-5mins (max 10mg) for DAI <i>Pediatric</i>	-Seizures -Cardioversion/Pacing -DAI

