

CALCULATING MED DOSES <i>mg to be Adm. ÷ mg on Hand</i> <i>x mL on hand = Dose</i>	KG AGE	2-4 NB	6 4 MO	8 6 MO	10 1 YR	12 2 YR	15-17 3-4	20-22 5-6	25-27 7-8	30-60 9-13
ACETAMINOPHEN (325 mg/10 mL) <i>Dose:</i> 10 mg/kg Elixir PO \emptyset <i>Unable to Swallow</i>	mg mL	30 mg .92 mL	60 mg 1.85 mL	80 mg 2.46 mL	100 mg 3 mL	120 mg 3.7 mL	160 mg 4.92 mL	210 mg 6.46 mL	260 mg 8 mL	450 mg 13.8 mL
ADENOSINE (6 mg/2 mL) <i>Dose:</i> .1 mg/kg IV, IO	mg mL	.2 mg .07 mL	.6 mg 2 mL	.8 mg .27 mL	1 mg .33 mL	1.2 mg .4 mL	1.5 mg .5 mL	2 mg .66 mL	2.5 mg .83 mL	3 mg 1 mL
DEXTROSE (D10) (.1 gm/1 mL) <i>Dose:</i> 2 mL/kg IV, IO <i>Add 4 mL D50 to 16 mL NS</i>	mg mL	.6 gm 6 mL	1.2 gm 12 mL	1.6 gm 16 mL	2 gm 20 mL	2.4 gm 24 mL	3.2 gm 32 mL	4.2 gm 42 mL	5.2 gm 52 mL	9 gm 90 mL
DIPHENHYDRAMINE (50 mg/1mL) <i>Dose:</i> 1 mg/kg IV, IO, IM	mg mL	3 mg .06 mL	6 mg .12 mL	8 mg .16 mL	10 mg .2 mL	12 mg .24 mL	16 mg .32 mL	21 mg .42 mL	25 mg .5 mL	25 mg .5 mL
EPINEPHRINE (1 mg/1 mL) <i>Dose:</i> .01 mg/kg IM	mg mL	.02 mg .02 mL	.06 mg .06 mL	.08 mg .08 mL	.1 mg .1 mL	.12 mg .12 mL	.15 mg .15 mL	.2 mg .2 mL	.25 mg .25 mL	.3 mg .3 mL
EPINEPHRINE (10 mcg/1 mL) <i>Dose:</i> 10 mcg/kg IV, IO	mcg=μ mL	20 μ 2 mL	60 μ 6 mL	80 μ 8 mL	100 μ 10 mL	120 μ 12 mL	150 μ 15 mL	200 μ 20 mL	250 μ 25 mL	300 μ 30 mL
FENTANYL (100 mcg/2 mL) <i>Dose:</i> 1 mcg/kg IV, IO, IM, IN	mcg=μ mL	NB	4 MO	6 MO	1 YR	2 YR	3-4	5-6	7-8	9-13
MIDAZOLAM (10 mg/2 mL) <i>Dose:</i> .1 mg/kg IV, IO, IN	mg mL	.2 mg .04 mL	.6 mg .12 mL	.8 mg .16 mL	1 mg .2 mL	1.2 mg .24 mL	1.5 mg .3 mL	2 mg .4 mL	2 mg .4 mL	2 mg .4 mL
MORPHINE (10 mg/1 mL) <i>Dose:</i> .1 mg/kg IV, IO	mg mL	—	—	—	1 mg .1 mL	1.2 mg .12 mL	1.5 mg .15 mL	2 mg .2 mL	2.5 mg .25 mL	3 mg .3 mL
ELECTRICAL THERAPY	1j/kg 2j/kg 4j/kg	3 6 12	6 12 24	8 16 32	10 20 40	12 24 48	16 32 64	20 42 84	26 52 104	45 90 180
V. FIB: Defibrillate 2 j/kg; 4 j/kg							<i>(Vitals from AHA PALS © 2016)</i>			
PULSELESS V. TACH: Synchronized 2 j/kg; 4 j/kg										
UNSTABLE SVT: Synchronized 1 j/kg; 2 j/kg; PEDIATRIC SVT: <1 year >220; 1-8 years >180										
NEONATE <96 Hours (4 days) HR: 100-205 RR: 50-60 SBP: 67-84 MAP: 45-60		INFANT <12 Months HR: 100-180 RR: 30-53 SBP: 72-104 MAP: 50-62					TODDLER 1-2 Years HR: 98-140 RR: 22-37 SBP: 86-106 MAP: 49-62			
PRESCHOOLER 3-5 Years HR: 80-120 RR: 20-28 SBP: 89-112 MAP: 58-69		SCHOOL-AGED 6-7 Years HR: 75-118 RR: 18-20 SBP: 97-115 MAP: 66-72					ADOLESCENT 12-15 Years HR: 60-100 RR: 12-20 SBP: 110-121 MAP: 73-84			

ACETAMINOPHEN (Tylenol) Adult: 650 mg PO Pediatric: 10 mg/kg PO	<i>Pain and Fever Control ∅ Severe Liver Disease</i>
ADENOSINE Adult: 6 mg IV, IO Fast-push with 20 mL NS; If no effect repeat with 12 mg Pediatric: .1 mg/kg IV, IO (max 6 mg); If no effect repeat with .2 mg/kg (max 12 mg)	<i>SVT - Supraventricular Tachycardia</i>
ALBUTEROL Adult: 2.5-5.0 mg NEB (max 15 mg) Pediatric: 2.5 mg NEB (max 7.5 mg)	<i>Respiratory Distress ∅ Adults with HR > 150</i>
AMIODARONE Adult: 300 mg IV, IO; repeat 150 mg PRN (V. Tach w/pulse 150 mg in 100 mL NS over 10 minutes) Pediatric: 5 mg/kg IV, IO over 5 minutes (V. Tach w/pulse 5 mg/kg over 5 minutes)	<i>SVT Wide Tach, V. Fib, Pulseless V. Tach ∅ Heart Block, Bradycardia</i>
ATROPINE Adult: .5-1 mg IV, IO 3-5 minutes (max 3 mg); Organophosphate 1-2 mg IV, IM Pediatric: Organophosphate .02 mg/kg IV, IO (EPINEPHRINE preferred for Pedi Bradycardia)	<i>Bradycardia, Organophosphate-WMD ∅ Heart Block</i>
CALCIUM CHLORIDE Adult: 1 gm IV, IO slowly Pediatric: 20 mg/kg IV, IO slowly	<i>Hyperkalemia, Hypermagnesemia, Calcium Channel Blocker Overdose ∅ Digoxin</i>
CARDIAC ELECTRICAL INTERVENTION Adult: Defibrillate 200 j; 300 j; 360 j Synchronized 100 j; 200 j; Pacing 80 mA at 80 BPM and titrate Pediatric: Defibrillate 2 j/kg; 4 j/kg Synchronized 1 j/kg; 2 j/kg	<i>Unstable Cardiac Dysrhythmias</i>
DEXTROSE 10% (D10) Adult: Administer IV/IO until patient is fully alert to normal and BGL is normal Pediatric: 2-10 mL/kg IV, IO starting at low dose, repeat PRN (To mix: 4 mL of D50 + 16 mL NS)	<i>Hypoglycemia, Altered Mental Status</i>
DEXTROSE 50% (D50) Adult: 25 gm IV/IO; Repeat based on BGL results Pediatric: Not Recommended	<i>Hypoglycemia, Altered Mental Status</i>
DILTIAZEM (Cardizem) Adult: .25 mg/kg IV, IO slow push (max 20 mg) Pediatric: Not recommended	<i>A. Fib with RVR ∅ Hypotension, Heart Block, WPW</i>
DIPHENHYDRAMINE (Benadryl) Adult: 25-50 mg IV, IO, IM, Elixir PO Pediatric: 1 mg/kg IV, IO, IM; Elixir PO (max 25 mg)	<i>Allergic Reaction ∅ Infants < 3 months</i>
EPINEPHRINE 1 mg/mL (1:1,000) Adult: .3 mg IM (age < 50 yrs); .15 mg IM (age > 50 yrs) Pediatric: .01 mg/kg IM (max dose .3 mg)	<i>Allergic Reactions, Respiratory Distress (Asthma/Stridor) Respiratory: 1 mg EPI and 2 mL NS in Nebulizer</i>
EPINEPHRINE 10 mcg/mL (1:100,000) Adult: Cardiac Arrest administer as needed; Hypotension 10-20 mcg IV, IO 2-5 min. MAP >65 mmHg Pediatric: 10 mcg/kg; Repeat 3-5 minutes as needed for Cardiac Arrest and Bradycardia	<i>Cardiac Arrest, Hypotension MIX: EPI 1 mg/mL with 100 mL NS</i>
ETOMIDATE (Amidate) Adult: .3 mg/kg IV, IO (max 20 mg) [In needed use in combination with Fentanyl and/or Versed] Pediatric: Not recommended	<i>Drug Assisted Intubation</i>

FENTANYL (Sublimaze)	<i>Pain Control ∅ Avoid use if SBP <110</i>
Adult: 50-100 mcg IV, IO, IM, IN; 25-50 mcg every 20-30 minutes (max 100 mcg) Pediatric: 1-2 mcg/kg IV, IO, IM single dose only (max 50 mcg), .5-2 mcg/kg IN (max 100 mcg)	
FUROSEMIDE (Lasix)	<i>Pulmonary Edema, Congestive Heart Failure</i>
Adult: 20 mg IV, IO; or equal to patients normal single home PO dose (max 160 mg) Pediatric: Not recommended	
GLUCAGON	<i>Hypoglycemia, Beta Blocker Overdose; Pediatric > 3 yrs.</i>
Adult: 1 mg IM (repeat in 15 minutes if < 60); Beta Blocker Overdose .05 mg/kg IV, IO Pediatric: .5 mg IM < 25 kg; 1 mg IM > 25 kg (repeat in 15 minutes if < 60)	
KETAMINE	<i>Pain Control: 20 mg IV, IO; 50 mg IM Pain control, Sedation ∅ Pediatric</i>
Agitated Delirium: 1 mg/kg IV, IO; 110 lbs. (50 mg); 180 lbs. (82 mg); 250 lbs. (114 mg) Agitated Delirium: 3 mg/kg IM, IN; 110 lbs. (150 mg); 180 lbs. (250 mg); 250 lbs. (350 mg)	
KETOROLAC (Toradol)	<i>Pain Control ∅ Aspirin, NSAIDs, Anticoagulants, Surgery, GI Bleed (ulcers), Renal Insufficiency</i>
Adult: 30 mg IV, IO; 60 mg IM Pediatric: Not recommended	
LABETOLOL (Trandate)	<i>HTN: SBP > 180 or DBP > 100; Pre-Eclampsia: SBP > 140 or DBP > 90</i>
Adult: 20 mg IV, IO; Contact MED CONTROL after initial dose (max 300 mg) Pediatric: .3-1 mg/kg IV, IO MED CONTROL (Consider Nitro; No Stoke or Heartblock; DBP >110 x2)	
LIDOCAINE	<i>Use if Amiodarone unavailable; Intubation with head trauma or CVA ∅ Infusion</i>
Adult: 1.5 mg/kg IV, IO (.75 mg/kg >60 yrs); Repeat 1/2 dose in 10 min; Intubation 1mg/kg IV, IO Pediatric: 1 mg/kg IV, IO; Repeat 1/2 dose in 10 min. <i>Pain relief for Adult IO: max 40 mg</i>	
MAGNESIUM SULFATE	<i>OB Emergencies, Torsade de pointes ∅ Pediatrics</i>
Eclampsia/Tocolytic: 2-6 gm IV, IO in 50 mL of NS over 10 minutes Torsade de pointes: 1-2 gm IV, IO slow push, may be repeated once in 5 minutes	
METHYLPREDNISOLONE (Solu-Medrol)	<i>Allergic Reaction, Respiratory Distress</i>
Adult: 125 mg IV, IO (Post administration blood glucose required) Pediatric: 2 mg/kg IV, IO (max 125 mg) (Post administration blood glucose required)	
MIDAZOLAM (Versed)	<i>Seizure Control, Mild Sedation ∅ Avoid use if SBP <110</i>
Adult: .5-2.5 mg IV, IO, IM over 2 minutes (max 5 mg); 2-5 mg IN via MAD (max 5 mg) Pediatric: .1-.2 mg/kg IV, IO over 2 minutes (max 2 mg); .2 mg/kg IN via MAD (max 2 mg)	
MORPHINE	<i>Pain Control, Hypertension ∅ Avoid use if SBP <110</i>
Adult: 2-5 mg IV, IO, IM; Repeat every 5-10 minutes as needed (max 10 mg) Pediatric: .1 mg/kg IV, IO single bolus only (max 5 mg)	
NALOXONE (Narcan)	<i>Altered Mental Status, Narcotic Overdose</i>
Adult: .5-2 mg IV, IO, IM, IN Pediatric: .1 mg/kg IV, IO, IN (max 2 mg)	
NITROGLYCERINE	<i>Respiratory Distress, Chest Pain, Hypertension</i>
Adult: Chest Pain 4 mg SL every 5 min. (max dose .12 mg); HTN 4 mg SL every 5 min. as needed Pediatric: Not recommended <i>∅ SBP <110, Head Trauma, CVA, ED Medications</i>	
NORMAL SALINE	<i>Volume infusion, Respiratory distress (3 mL in Nebulizer)</i>
Adult: KVO = 100 mL/hr IV, IO; Bolus = 500 mL IV, IO or volume to restore radial pulse or MAP >65 mmHg Pediatric: Bolus = 20 mL/kg IV, IO; Repeat x3 to maintain age appropriate BP	

ONDANSETRON (Zofran) *Nausea, Vomiting ∅ Prolonged QT Syndrome*

Adult: 4 mg IV, IO, IM, PO (max 4 mg)

Pediatric: .15 mg/kg IV, IO, IM (max 4 mg)

OXGEN *Respiratory Distress*

Adult: 1-6 LPM via NC; 6 LPM via NEB; 15 LPM via NRB & BVM; Direct connect for CPAP

Pediatric: 1-6 LPM via NC; 6 LPM via NEB; 15 LPM via NRB & BVM

OXYTOCIN (Pitocin) *Post-partum hemorrhage refractory to fundal massage*

Adult: 10 units IV, IO in 500 mL Normal Saline over 10 minutes.

Pediatric: Not Recommended

PROMETHAZINE (Phenergan) *Nausea, Vomiting. Preferred EMS Antiemetic is Zofran*

Adult: 12.5-25 mg IM single dose only; > 60 years 12.5 mg IM

Pediatric: Not recommended

SODIUM BICARBONATE *Agitated Delirium; Hyperkalemia; Tricyclic Overdose*Adult: 50 mEq IV, IO; 25 mEq every 10 min. as needed; **Overdose** 50 mEq IV, IO; 100 mEq in 500 mL TKO

Pediatric: 1 mEq/kg IV, IO; .5 mEq/kg every 10 minutes as needed

TERBUTALINE *OB Emergencies (stops contractions) ∅ Vaginal bleeding*

Adult: .25 mg IM; May repeat every 15 min. (max 1 mg); Also consider Magnesium infusion

Pediatric: Not recommended

THIAMINE *Altered Mental Status: To prevent Wernicke's Encephalopathy*

Adult: 100 mg IV, IO prior to the administration of D50

Pediatrics: Not recommended

TRANEXAMIC ACID (TXA) *Suspected Hypovolemic Shock; SBP <90, or RR <10 or >30, or HR >130*

Adult: 1 gm (1,000 mg) IV, IO in 100 mL NS over 10 minutes

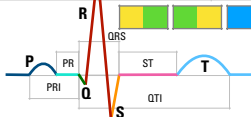
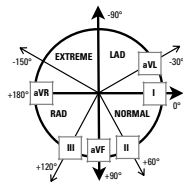
Pediatrics: Not recommended

Glasgow Coma Scale (GCS)

- | | | | | |
|-------------|------------------------|---------------|--------------------------|--------------|
| EYES | 4. Open eyes | VERBAL | 5. Oriented | MOTOR |
| | 3. Opens eyes to voice | | 4. Confused, disoriented | |
| | 2. Opens eyes to pain | | 3. Inappropriate words | |
| | 1. Eyes do not open | | 2. Incomprehensible | |
| | | | 1. Makes no sounds | |

- | |
|---------------------------------------|
| 6. Obeys commands |
| 5. Localizes to painful stimuli |
| 4. Withdraws from painful stimuli |
| 3. Extremity flexion (decorticate) |
| 2. Extremity extension; (decerebrate) |
| 1. Makes no purposeful movements |

I LATERAL	aVR	VI SEPTAL	V4 ANTERIOR
II INFERIOR	aVL LATERAL	V2 SEPTAL	V5 LATERAL
III INFERIOR	aVF INFERIOR	V3 ANTERIOR	V6 LATERAL



Prolonged QTI > .44-.46; Short QTI < .35; BBB > .12

Normal Axis 0° to 90°; Left Axis Pathological -30° to -90°**Right Axis +90° to +180°; Extreme Axis -90° to -180°**