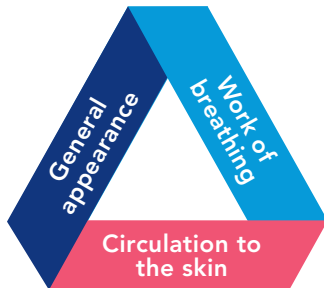


# PEDIATRIC EMERGENCY REFERENCE

These medication dosages are recommendations for initial emergency care of patients over one month of age. They do not preclude use of alternative dosages based on provider clinical assessment.

## PEDIATRIC ASSESSMENT TRIANGLE



	Appearance	Breathing	Circulation
<b>Normal</b>	appropriate cry/speech, responds to stimuli, moves well	easy, quiet, rate consistent with age (see pediatric normals chart)	warm, dry, capillary refill time ≤ 2 seconds
<b>Abnormal</b>	inconsolable or absent cry/speech, decreased responsiveness, floppy/rigid body	retractions, stridor, grunting, wheezing, gasping, rate <12 or >30 breaths/minute	mottled, cyanotic, absent peripheral pulses, capillary refill time > 2 seconds

Any abnormal signs during initial assessment require prompt airway management, oxygen, warmth and more help.

Key			
ET	Endotracheal tube	PO	By mouth
IM	Intramuscular	PR	Rectal
IN	Intranasal	VF	Ventricular fibrillation
IV-IO	Intravenous-Intraosseous	VT	Ventricular tachycardia
NG	Nasogastric		

Pediatric normals						
Age	Wt (kg)	HR	RR	Sys BP	Hypotension	ET ID mm
1 month	4	85–205	30–60	<60		3.5 (cuffed)
6 months	7	100–190	30–60	<60		3.5 (cuffed)
1 year	10–11	100–190	30–60	<70		3.5 (cuffed)
2–3 years	12–14	60–140	24–40	<74–76		4.0 (cuffed)
4–5 years	15–18	60–140	22–34	<78–80		4.5–5.0 (cuffed)
6–8 years	20–25	60–140	18–30	<82–86		5.0–5.5 (cuffed)
9–13 years	30–40	60–100	18–30	<90		6.0–6.5 (cuffed)
14 and over	50	60–100	12–16	<90		7.0 (cuffed)

## BREATHING

Acute asthma/anaphylaxis				
Generic	Trade	Dose/Route	Notes	
Albuterol	Ventolin, Proventil	<10 kg: 1.25 mg (1.5 mL) >10 kg, <30 kg: 2.5 mg (3 mL) > 30 kg: 5 mg (6 mL)	} Nebulize together with NS as needed x3	
Ipratropium	Atrovent	250–500 mcg		
EPI	nephrine (1mg/ml)	Adrenalin	0.01 mL/kg IM	Max dose 0.3 mL, q 20 min PRN x3
DiphenhydrAMINE	Benadryl	1 mg/kg IM, IV-IO, PO	Max dose 50 mg	
methylPREDNISolone,	SoluMEDrol	1 mg/kg IV-IO or	Max 60 mg/day	
PredniSONE or PREDNISolone		1 mg/kg PO	Max 60 mg/day	

Croup			
Generic	Trade	Dose/Route	Notes
Dexamethasone	Decadron	0.6 mg/kg IV-IO, IM, PO	Max dose 10 mg
Racemic Epinephrine (2.25%)	Vaponephrine	0.25–0.5 mL Neb	Nebulize with NS

## AIRWAY

Rapid sequence intubation			
Have appropriate size mask, ET tubes, O <sub>2</sub> and suction ready. Monitor with pulse oximeter and ECTO <sub>2</sub> . Use cricoid pressure only if needed for positioning.			
Generic	Trade	Dose/Route	Notes
<b>Premedication</b>			
• Atropine		0.02 mg/kg IV-IO	Up to age 8, Max 1 mg
<b>Sedation options</b>			
• Etomidate	Amidate	0.2–0.3 mg/kg IV-IO	} Given simultaneously
• Ketamine	Ketalar	1–2 mg/kg IV-IO	
• Midazolam	Versed	0.1–0.3 mg/kg IV-IO	
• Fentanyl	Sublimaze	2 mcg/kg Max dose 10 mg	
<b>Muscle relaxant options</b>			
<b>Induction</b>			
• ROCuronium	Zemuron	1.2 mg/kg IV-IO	
<b>Maintenance</b> Dose as needed when movement is observed.			
• ROCuronium	Zemuron	0.1–0.2 mg/kg IV-IO	
• VECuronium	Norcuron	0.1 mg/kg IV-IO	

## CIRCULATION

Shock				
Generic	Trade	Dose/Route	Notes	
Crystalloid (NS, LR)		20 mL/kg IV-IO repeat PRN up to 3 times.	Give in 10 mL/kg IV-IO increments for heart history or cardiogenic shock	
Vasoactive infusions (use pump)				
Generic	Trade	Dose/Route	Notes	
DOBU	Tamine	Dobutrex	2–20 mcg/kg/min IV-IO	Titrate to effect
DOP	amine	Intropin	2–20 mcg/kg/min IV-IO	Titrate to effect
EPI	nephrine		0.1–1 mcg/kg/min IV-IO	Consider higher dose if needed
NOR	epinephrine	Levophed	0.1–1 mcg/kg/min IV-IO	

Reconstitute vasoactive infusions according to infusion guidelines. See Children's Medication Manual for infusion concentration and dosing.

## CIRCULATION continued

### Cardiac arrest

Generic	Trade	Dose/Route	Notes
EPInephrine (1 mg/10 mL)		0.01 mg/kg IV-IO	Max single dose 1mg
After airway and breathing are managed, rule out reversible causes (Hs and Ts):			
• Hypovolemia		• Tamponade, cardiac	
• Hypoxia		• Tension pneumothorax	
• Hypothermia		• Thrombosis: lungs	
• Hypo-/Hyperkalemia		• Thrombosis: heart	
• Hydrogen ion (acidosis)		• Toxins: drug overdose	
• Hypomagnesia			
• Hypoglycemia			

### Electrical therapy

Type of therapy	Dose	Notes
Cardioversion (synchronized)	0.5–2 j/kg	0.5 to 1 j/kg 1st dose 2 j/kg for 2nd and subsequent doses
Defibrillation	2–4 or more j/kg	2 j/kg 1st dose, 4 j/kg 2nd may increase subsequent doses to max of 10j/kg

## DISABILITY

### Seizures

Generic	Trade	Dose/Route	Notes
Diazepam	Valium	0.2 mg/kg IV-IO 0.5 mg/kg PR	Max dose 10 mg up to 30 mg for adults*
LoraZEPAM	Ativan	0.1 mg/kg IV-IO	Max dose 4 mg*
Midazolam	Versed	0.2 mg/kg IM, IN	Max dose 10 mg*
FOSphenytoin	Cerebyx	20 mgPE/kg load IV-IO or IM	If IV-IO, infuse over 10 min, monitor for ↓HR and ↓BP for 30 min*
PHENObarbital	Luminal	15–20 mg/kg load IV-IO	Infuse over 30 min, monitor for ↓HR and ↓BP*

\*Monitor respiratory status with administration of all anticonvulsants

### Ingestions Poison control 1-800-222-1222

Generic	Trade	Dose/Route	Notes
Activated Charcoal		<12 years of age: 0.5–1 g/kg PO  Adolescents/adults: 25–100 g PO	Dilute in water if needed
Naloxone	Narcan	0.1 mg/kg IM, IN, IV-IO, ET	Max dose 2 mg

### Sepsis/Meningitis

Generic	Trade	Dose/Route	Notes
Ampicillin	Omnipen	50 mg/kg IV-IO	Give q 6 hrs, Max dose 3 g/dose, 12 g/day
CEFOTaxime	Claforan	50 mg/kg IV-IO	Give q 6–8 hrs, Max dose 300 mg/kg/day has been used to treat pneumococcal meningitis
CefTRIAxone	Rocephin	50 mg/kg IV-IO, IM	Give q 12 hrs, Max 4 g/day. Loading dose of 100 mg/kg may be given at the start of therapy. For IM doses, reconstitute with 1% Lidocaine
Gentamicin	Garamycin	2.5 mg/kg IV-IO, IM	Give q 8 hrs
Vancomycin	Vancocin	15 mg/kg IV-IO	Infuse over 1 hr, Give q 6 hrs
<b>Adjunct</b> Dexamethasone	Decadron	0.15 mg/kg	Before or at the time of the first antibiotic dose

### Dysrhythmias

Generic	Trade	Dose/Route	Notes
Adenosine	Adenocard	0.1 mg/kg rapid IV-IO push, if no response, increase 0.2 mg/kg	Max 1st dose 6 mg, Max 2nd dose 12 mg
AMIODARone	Cordarone	5 mg/kg IV-IO	In cardiac arrest states, bolus max 300 mg For tachycardias with pulses, dilute in D5W to 2mg/mL (prevents precipitate) and give over 1 hour, max 150mg
Lidocaine	Xylocaine	1mg/kg IV-IO load, then 20–50 mcg/kg/ min IV-IO infusion	May repeat bolus if delay until infusion is >15 minutes
Procainamide	Pronestyl	15 mg/kg in D5W IV-IO, then 20–80 mcg/kg/min IV-IO infusion	Over 30 min, may cause hypotension, bradycardia, widening QRS — stop infusion

### Hypertensive crisis

Generic	Trade	Dose/Route	Notes
NIFEdipine	Procardia	0.1–0.25 mg/kg PO	Max dose 10 mg
Labetalol	Trandate, Normodyne	0.25 mg/kg IV-IO, over 2 min	Repeat in 10 min with 0.5 mg/kg IV-IO if BP still elevated Max dose 40 mg

### Metabolic

Generic	Trade	Dose/Route	Notes
<b>Hyperkalemia</b> Calcium Chloride 10%		10 mg/kg IV-IO	} Administer together. Use dextrose to flush insulin in line.
Calcium Gluconate		30 mg/kg IV-IO	
Dextrose 25%		0.5 g/kg IV-IO	
Regular Insulin		0.1 units/kg IV-IO	
Sodium Bicarbonate		1 mEq/kg IV-IO	
Sodium Polystyrene Sulfonate	Kayexalate	1 g/kg PO or PR	
<b>Diabetic Ketoacidosis</b> Normal Saline		10 mL/kg IV-IO over 1 hr unless hypotensive shock, then 20 mL/kg IV-IO bolus	
Regular Insulin		0.05–0.1 units/kg/hr IV-IO	
<b>Hypoglycemia</b> Dextrose 50%		1 mL/kg	Patient >40 kg
Dextrose 25%		2 mL/kg	Patient 10–40 kg
Dextrose 10%		2 mL/kg	Patient <10 kg

### Increased intracranial pressure (↑ICP)

Fluid resuscitation to maintain cerebral perfusion pressure			
Generic	Trade	Dose/Route	Notes
Mannitol		0.5 g/kg IV-IO	5 micron filter. Use only if perfusion adequate.
Furosemide	Lasix	1 mg/kg IV-IO	Use only if perfusion adequate.
Dexamethasone	Decadron	1 mg/kg IV-IO as a single dose	Max dose 10 mg

## CHILDREN'S PHYSICIAN ACCESS

24/7 assistance: referrals, consultations, admissions, transport

**612-343-2121 • 866-755-2121**