



**UPPER AIRWAY OBSTRUCTION - (Croup)**

**Racemic epinephrine** - 0.5 ml in 3 ml NS by nebulizer  
**L - epinephrine** - 1:1000 solution 5 ml by nebulizer  
**Decadron** - 0.3 - 0.6 mg/kg PO, IM (max 8 mg)

**ANTIHYPERTENSIVES**

**Hydralazine** - 0.1-0.2 mg/kg IV  
**Diazoxide** - 2-5 mg/kg IV rapid push, may repeat every 5-15 minutes (max 100 mg)  
**Nitroprusside** - 0.3-0.5 mcg/kg/min  
**Nifedipine** - 0.25-0.5 mg/kg SL (max 30 mg)  
**Labetolol** - 0.25-5 mg/kg IV bolus over 2 minutes then 1-3 mg/kg/hr  
**Furosemide** - 1 mg/kg IV, 2 mg/kg PO

**ANALGESICS/SEDATIVES — (Consider Monitoring)**

**Morphine** - 0.05 - 0.1 mg/kg IV, IM  
**Fentanyl** - 1-2 mcg/kg IV  
**Ketorolac (Toradol)** - (>2 yr) 0.5 mg/kg/dose IM/IV max 30 mg  
**Ketamine** - 2-4 mg/kg IM or 0.5 - 1 mg/kg IV + either atropine 0.01 mg/kg IM, IV (min 0.2 mg - max 0.5 mg) or glycopyrrolate 5 mcg/kg IV, IM max 250 mcg  
**Midazolam (Versed)** - IV, IM 0.1 mg/kg  
 IN 0.3 mg/kg (max. 10 mg) - use injection solution  
 PO, PR 0.5 mg/kg (max 10 mg) - use injection solution  
**Pentobarbital** - 3-5 mg/kg IV, max 100mg  
**Chloral Hydrate** - 50-100 mg/kg/dose with max 2 gm given 30 minutes prior to procedure

**HYPERKALEMIA**

**Sodium bicarbonate** - 1-2 meq/kg IV  
**Calcium gluconate (10% solution)** - 0.5 ml/kg IV over 3 min. (max 10ml) = 50 mg/kg IV  
**Glucose and Insulin (regular)** - 0.5 -1 gm/kg glucose + 0.3 units insulin /gm glucose IV over 60 minutes  
**Kayexalate** - 1 gm/kg PO, PR

**INGESTION**

Activated charcoal 1 gm/kg PO or NG, Adult Dose 50 gm

**HYPONATREMIA**

Only for treatment of the patient with acute neurologic signs:  
 6 ml/kg of 3% NaCl IV over 1 hour raises Na by 2 meq/L/hr

**DIURETICS**

**Furosemide (Lasix)** - 1 mg/kg IV  
**Mannitol** - 0.5-1 gm/kg IV

**DIABETES**

**Insulin drip in DKA** - regular insulin - 0.1 units/kg/hr IV drip  
**Glucagon** - 0.1 mg/kg SC, IM, IV (max 1 mg)

**ADRENAL CRISIS**

**Hydrocortisone** - 50-100 mg IV

**BLOOD REPLACEMENT APPROXIMATIONS:**

**Packed RBCs:** 10 ml/kg will raise Hct 3-4%  
**Platelets:** At TCH apheresed platelets are used.  
 1 bag apheresed platelets typically contains 6-8 random donor unit equivalents ("RDE". 1 RDE unit/10 kg body weight should elevate the platelet count by 40 - 50,000/ml  
**Fresh frozen plasma:** 10 ml/kg  
**Factor VIII:** 1 unit/kg will raise plasma level 2%  
**Factor IX:** 1 unit/kg will raise level 1%

Use this card as a guide only. This is not meant to substitute for independent medical judgment. The indications and dosages of the drugs listed may vary depending on the patient's condition. This information is subject to regular revision. January 2010



Age	Weight	HR range	HR ave./min.	Resp. rate range breaths/min.	BP (sys) range (mmHg)	CPR Compressions per minute	CPB Breaths per minute	*ET Tube size (mm)	Laryngoscopy blade (Miller)	Chest tube (Fr)	NG (Fr)	Foley (Fr)
Premie or <3 kg	<3kg	120-160	140	40-60	40-60	120	40-60	2.5-3.0	0	8-10	5-8	5
Term newborn 1-7 days	3 kg	90-165	125	40-60	60-80	120	30-40	3.0	1	10-12	5-8	5
1 wk - 3 wks	3 kg	105-180	150	40-60	60-80	100	30-40	3.0	1	10-12	8	5
1 month	4 kg	120-180	150	40-60	65-95	100	30-40	3.0-3.5	1	10-12	8	5-8
6 mos.	8 kg	110-185	140	25-40	65-105	100	30-40	3.5-4.0	1	12-16	8	5-8
12 mos.	10 kg	110-170	135	20-30	70-110	100	20	4.0-4.5	1-2	14-24	10-12	8-10
2 yrs.	12 kg	90-150	120	20-30	70-110	100	20	4.5-5.0	1-2	14-24	10-14	8-10
3 yrs.	14 kg	75-135	110	20-30	80-110	100	20	4.5-5.0	2	16-28	10-14	10
4 yrs.	16 kg	75-135	110	20-30	80-110	100	20	5.0-5.5	2	16-28	10-14	10
5 yrs.	18 kg	65-135	100	20-30	80-110	100	20	5.0-5.5	2	20-32	10-14	10
6 yrs.	20 kg	60-130	90	12-25	90-115	100	20	5.5	2	20-32	12-14	10
8 yrs.	26 kg	60-120	90	12-25	90-115	100	20	6.0 (cuffed)	2-3	20-32	12-14	10
10 yrs.	32 kg	60-120	90	12-25	95-120	100	12	6.0-6.5 (cuffed)	2-3	28-38	14-16	10-12
12 yrs.	42 kg	60-120	85	12-25	95-120	100	12	6.5-7.0 (cuffed)	2-3	28-38	14-16	10-12
14 yrs.	50 kg	60-120	85	12-18	100-130	100	12	7.0-7.5 (cuffed)	3	32-42	16+	14

**DYSRHYTHMIAS**

**Adenosine** - 1st dose: 0.1mg/kg IV push. Repeat with higher dose if no response after 1-2 minutes. 2nd dose: 0.2mg/kg. max single dose - 12 mg  
**Propranolol** - 0.01-0.1 mg/kg IV (max 1 mg)  
**Procainamide** - 15 mg/kg IV loading dose then 20-80 mcg/kg/min infusion

**DRIPS**

**Dopamine** - 2-20 mcg/kg/min  
**Dobutamine** - 2-20 mcg/kg/min  
**Epinephrine** - 0.1-1 mcg/kg/min  
**Lidocaine** - 1 mg/kg bolus, then 10-50 mcg/kg/min  
**Norepinephrine** - 0.05-0.1 mcg/kg/min  
**Nitroprusside** - 0.3-0.5 mcg/kg/min  
**Prostaglandin E<sub>1</sub>** - 0.05-0.1 mcg/kg/min (risk of apnea)  
**Vasopressin (hypovolemic shock)** - 0.0003-0.004 units/kg/min, not to exceed 0.04 units/min

**INTUBATION**

**Atropine** - 0.02 mg/kg IV (min 0.1 mg - max. single dose 0.5 mg child, 1 adolescent)  
**Ketamine** - 1-2 mg/kg IV  
**Midazolam** - 0.1 to 0.2 mg/kg IV - sedation  
**Lidocaine** - 1-2 mg/kg IV - head injury  
**Etomidate** - 0.2 - 0.6 mg/kg IV

**PARALYTICS**

**Succinylcholine** - 1 mg/kg IV short acting/depolarizing  
**Rocuronium** - 0.6-1.2 mg/kg IV short acting  
**Vecuronium** - 0.1 mg/kg IV intermediate acting (>7 weeks of age)

**ASTHMA**

**Nebulizations:** **Albuterol** - 0.15 mg/kg/dose (min 2.5 mg - max 10 mg) in 2 ml NS (min .25 ml - max 2.0 ml)  
**Continuous Albuterol** - 0.5 mg/kg/HR (max 15 mg/hr)  
**Terbutaline** - 0.1 mg/kg in 2 ml NS (max 2.5 mg)  
**Ipratropium (c Albuterol)** - child: 250 mcg - adolescent: 500 mcg  
**SC: Epinephrine** - (1:1000) 0.01 ml/kg (max 0.5 ml/dose)  
**Terbutaline** - 0.01 mg/kg (max 0.5 mg)

**The Children's Hospital  
 PEDIATRIC EMERGENCY GUIDELINES  
 Emergency Department/Transport 720-777-6888  
 Hospital Operator 1-800-458-6500  
 Emergency Trauma Surgeon Consultation 1-800-559-3904**

**DRUGS**

**MISCELLANEOUS**  
**Fluids** - (NS, LR, 5% albumin) 20 ml/kg IV or IO  
**Glucose** - Newborn to 1 mo -D10W 2-4 ml/kg IV bolus;  
 >1 mo -D25W 2ml/kg IV bolus.

**REVERSAL AGENTS**

**Naloxone (Narcan)**-0.1mg/kg/dose IV, IM, ET(max 4 mg) (may repeat every 5 min)  
**Flumazenil** - 0.01 mg/kg IV, (max 0.2 mg) (may repeat every minute to max cumulative dose of 1 mg)

**CARDIAC RESUSCITATION**

**Epinephrine-**  
**Bradycardia (symptomatic)** - IV/IO: 0.01mg/kg (1:10,000) = 0.1ml/kg may repeat every 3-5 min. ET: 0.1 mg/kg (1:1,000) = 0.1 ml/kg may repeat every 3-5 min.  
**Pulseless Arrest** - IV/IO: 0.01mg/kg (1:10,000) = 0.1ml/kg may repeat every 3-5 min. ET: 0.1 mg/kg (1:1,000) = 0.1 ml/kg may repeat every 3-5 min.  
**Atropine** - 0.02 mg/kg IV, IO, ET (min. 0.1 mg, max single dose 0.5 mg child, 1 mg adolescent) may repeat once  
**Sodium Bicarbonate** - 1-2 meq/kg IV, IO  
**Calcium Chloride** - IV, IO (0.2-0.3 ml/kg of 10% solution) may repeat after 10 minutes  
**Amiodarone** - pulseless VF/VT 5 mg/kg IV over 5 minutes  
**Lidocaine** - 1 mg/kg bolus IV, IO, ET (infusion 20-50 mcg/kg/min.)  
**Vasopressin (pulseless arrest refractory to epinephrine)** - 0.5 units/kg IV push, max 20 units

**CARDIOVERSION - SYNCHRONIZED - 0.5-2 joules/kg**

**DEFIBRILLATION - 2-4 joules/kg**

**Formulas:**  
 Weight = (2 X age in yrs) + 8kg  
 Hypotension:  
 SBP < 70 + (2X age in yrs)  
 ET tube size =  
 uncuffed:  $\left(\frac{\text{age}}{4}\right) + 4$   
 cuffed:  $\left(\frac{\text{age}}{4}\right) + 3$   
 ET tube distance of insertion guide (>2 yr) = 3 x ID of tube  
**Drip Calculation:**  
 1.0 mcg/kg/min = 6.0 mg X kg wt in diluent to make 100 mlrun at 1/hr

**ASTHMA (continued)**

**Drips:** **Aminophylline** - 6-7 mg/kg load over 20 minutes, infusion: 1 mg/kg/hour. Use 0.8 mg/kg/hour. If <1 yr or >9 yrs of age.  
**Terbutaline** - 10 mcg/kg load over 20 minutes then 0.5-6 mcg/kg/min  
**Ketamine** - initial dose 0.5-1 mg/kg; then 10 mcg/kg/min  
**Solomedrol** - 2 mg/kg IV initial dose

**SEIZURES**

**Lorazepam (Ativan)** - 0.1 mg/kg IV, 0.3 mg/kg PR  
**Diazepam (Valium)**-0.1-0.3mg/kg IV, 0.5mg/kg PR (use injectable solution for pr administration)  
**Phenobarbital** - 20 mg/kg IV  
**Fosphenytoin** - 20mg PE/kg IV, PE = phenytoin equivalent, (rate 150mg PE/min)  
**Phenytoin (Dilantin)** - 20 mg/kg IV (over 20 min.)

**ANAPHYLAXIS**

**Epinephrine (1:1000)** - 0.01 ml/kg IM, SC (max 0.5 ml)  
**Diphenhydramine (Benadryl)** - 1-2 mg/kg IV, IM (max 50 mg)  
**Steroids** **Hydrocortisone (Solucortef)** - 5-10 mg/kg IV  
**Methylprednisone (Solumedrol)** - 2-4 mg/kg IV  
**Decadron** - 0.3-0.6 mg/kg PO, IM (max 8 mg)  
**Ranitidine** - 1 mg/kg/dose every 6-8 hours

