

ANAPHYLAXIS

Epinephrine (1:1000) - 0.01mg/kg (0.01 mL/kg) IM. Max 0.5 mg
Diphenhydramine (Benadryl) - 1-2 mg/kg IV, IM (max 50 mg)
Steroids **Hydrocortisone (SoluCortef)** - 5-10 mg/kg IV
Methylprednisone (Solumedrol) - 2mg/kg IV (max 125mg)
Decadron - 0.3-0.6 mg/kg PO, IM (max 8 mg)
Ranitidine - 1 mg/kg/dose every 6-8 hours, max 50mg

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 mg/kg/dose given over 2 minutes; max dose: 20 mg/dose.
I.V. infusion: 0.05-0.2 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, 2mcg/kg IN
Ketorolac (Toradol) - (>2 yr) 0.5 mg/kg/dose IM/IV max 30 mg
Ketamine - 0.5 - 1 mg/kg IV or 2-4 mg/kg IM
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

HYPERTHEMIA

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

HYPONATREMIA

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

DIURETICS

Furosemide (Lasix) - 1 mg/kg IV

HYPERGLYCEMIA / HYPOGLYCEMIA

Insulin drip in DKA - regular insulin - 0.1 units/kg/hr IV drip
Glucagon - 0.1 mg/kg SC, IM, IV (max 1 mg)
Glucose - Newborn to 1 mo - D10W 2-4 ml/kg IV bolus;
>1 mo - D25W 2-4ml/kg IV bolus.

ADRENAL CRISIS

Hydrocortisone - 50-100 mg IV

BLOOD REPLACEMENT APPROXIMATIONS

Packed RBCs - 10 ml/kg will raise Hct 3-4%
Platelets - At Children's Hospital Colorado 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/mcl
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%

INCREASED ICP

Mannitol - 0.5-1 gm/kg IV
3% NaCl - 5-10 ml/kg initial dose (no max)

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.
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Children's Hospital Colorado



Affiliated with
University of Colorado
Anschutz Medical Campus

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PEDIATRIC EMERGENCY GUIDELINES 2015

EMS Bio Phone 303-363-4778 or 303-363-4779
Transfer Center/Transport 720-777-8838
Emergency Department 720-777-6888
Poison Control 800-222-1222

DRUGS

FLUID RESUSCITATION

Fluids - (NS, LR, 5% albumin) 20 ml/kg IV or IO

REVERSAL AGENTS

Naloxone (Narcan): Full reversal 0.1mg/kg/dose IV/IM/IO- max 2mg/dose. (may be repeated 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)/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 ml/kg of 10% solution). 20 mg/kg/dose. May repeat after 10 minutes
Amiodarone - pulseless VF/VT 5 mg/kg IV over 5 minutes, max 300 mg
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 40 units



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Age	Weight	HR range	HR ave./min.	Resp. rate range breaths/min.	BP (sys) range (mmHg)	CPR Compressions per minute	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

FORMULAS:

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

DEXTRROSE: RULE OF 50s:

	Rule of 50's (increase by 0.5 g/kg)	Rule of 100's (increase by 1g/kg)
D50	1mL/kg	2mL/kg
D25	2mL/kg	4mL/kg
D10	5mL/kg	10mL/kg
D50 Central Access Only D25= Discard 25mL from D50 amp and add 25mL NS (=50mLs of D25) D10= Take 2 mLs of D50 and add to 8mLs of NS (=10mLs of D10)		

CARDIOVERSION - SYNCHRONIZED - 0.5-2 JOULES/KG

DEFIBRILLATION - 2-4 JOULES/KG

DYSRHYTHMIAS

Adenosine -- 1st dose: 0.1 mg/kg IV, IO *rapid* push, max 6 mg. 2nd dose: 0.2 mg/kg IV, IO *rapid* push, max 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 - 5-20 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 - Start 0.3-0.5 mcg/kg/minute, titrate to effect; max: 10 mcg/kg/minute

Prostaglandin E₁ - 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)

Ipratropium (c Albuterol) - child: 250 mcg

- adolescent: 500 mcg

Continuous Albuterol - 0.5 mg/kg/HR (max 15 mg/hr)

PO: Prednisone - 2 mg/kg (max 80 mg)

ASTHMA (Continued)

IM: Epinephrine - (1:1000) 0.01 ml/kg (max 0.5 ml/dose)

SC: Terbutaline - 0.01 mg/kg/dose (max 0.3 mg/dose)

Drips: Solumedrol - 2 mg/kg IV initial dose

Mag Sulfate - 25-50 mg/kg infuse over 30 minutes (max 2g)

Terbutaline - 10 mcg/kg load over 10 minutes; infusion:

0.4-6 mcg/kg/minute

Aminophylline - 6mg/kg load over 30 minutes, infusion: 1mg/kg/hour.

Use 0.8mg/kg/hour if <1yr or >9 yrs of age.

SEIZURES

Lorazepam (Ativan) - 0.1 mg/kg IV, 0.3 mg/kg PR, max 4mg/dose

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.)

Midazolam (Versed) - IV, IM 0.1 mg/kg, IN 0.3 mg/kg (max. 10mg) - use

injection solution