

COUNTY DURHAM AND DARLINGTON - PAEDIATRIC STABILISATION CHART 2010

ALL DRUGS ON THIS CHART CAN BE GIVEN VIA THE INTRAOSSEOUS ROUTE. DILUTE ALKALI SOLUTIONS (e.g. THIOPENTONE) BEFORE INTRAOSSEOUS ADMINISTRATION
 FLUSH ALL INTRAVENOUS (IV) AND INTRAOSSEOUS (IO) RESUSCITATION DRUGS WITH SODIUM CHLORIDE 0.9%

DRUG (refs)	INDICATION (refs)	ROUTE	DOSE (ADJUST INFUSION ACCORDING TO RESPONSE)	NOTES					
ADRENALINE ^{1 2}	CARDIAC ARREST ¹	IV / IO BOLUS 1:10000 SOLUTION	0.1 ml/kg of 1:10000 solution (= 10 micrograms/kg)	Give every 3 to 5 minutes (= 2 cycles of CPR)					
	AIRWAY OEDEMA ²	NEBULISED 1:1000 SOLUTION	0.4 ml/kg 1:1000 solution (= 400 micrograms/kg) Maximum dose 5 mg, dilute with sodium chloride 0.9%	Close clinical monitoring required Repeat dose after 30 minutes if necessary					
	ANAPHYLAXIS ²	DEEP INTRAMUSCULAR (IM) INJECTION 1:1000 SOLUTION	<table border="1"> <tr> <th>< 6 years</th> <th>6 to 12 years</th> <th>≥ 12 years</th> </tr> <tr> <td>150 micrograms = 0.15 ml</td> <td>300 micrograms = 0.3 ml</td> <td>500 micrograms = 0.5 ml</td> </tr> </table>	< 6 years	6 to 12 years	≥ 12 years	150 micrograms = 0.15 ml	300 micrograms = 0.3 ml	500 micrograms = 0.5 ml
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AMINOPHYLLINE ²	SEVERE ACUTE ASTHMA	IV BOLUS over at least 20 minutes and IV INFUSION (≥ 1 month old)	≥ 1 month and not previously treated with theophylline: 5 mg/kg (max dose 500 mg) Infusion: 1 (< 9 years), 0.8 (9 to 16 years) or 0.5 (≥ 16 years) mg/kg/hr	Calculate dose on ideal weight for height in obese children Dilute infusion to a concentration of 1 mg/ml					
AMIODARONE ^{1 2 3}	VF / PULSELESS VT	IV / IO BOLUS over 3 minutes	5 mg/kg (maximum dose 300 mg)	Consider after 3 DC shocks, dilute with glucose 5%					
ATROPINE ¹	BRADYCARDIA	IV / IO BOLUS	20 micrograms/kg (minimum dose 100 micrograms)	Maximum single dose 600 micrograms					
BICARBONATE ^{1 3}	CORRECTION OF ACIDOSIS	IV / IO BOLUS over 5 minutes	< 3 months: 2 ml/kg of 4.2% solution ≥ 3 months: 1 ml/kg of 8.4% solution	1 ml 8.4% or 2 ml 4.2% = 1 mmol sodium bicarbonate					
DEFIBRILLATION ENERGY (BIPHASIC) ^{1 3}	VF / PULSELESS VT SHOCKABLE RHYTHM	4.5 cm trans-thoracic pads or paddles for infants, 8 to 12 cm for children	4 J/kg (max 200J) every 2 minutes. See UK Resuscitation Council guidelines for further information on treatment of shockable rhythms in children	When using an AED attempt to use paediatric attenuated shock energy in children between 1 and 8 years old * In children ≥ 8 years old, adult shock energy may be used					
FLUID BOLUS ^{1 3}	SHOCK, CONSIDER IN NON-SHOCKABLE CARDIAC ARREST	IV / IO BOLUS	20 ml/kg sodium chloride 0.9% 10 ml/kg warmed blood if indicated by clinical scenario and measured haematocrit	Repeat as indicated by clinical status See haematocrit values on Normal Values Chart					
GLUCOSE ^{2 3}	HYPOGLYCAEMIA	IV / IO BOLUS	2.5 (newborn) to 5 ml/kg (older ages) of a 10% solution	Give neonatal dose over 5 minutes					
ADRENALINE AND NORADRENALINE ⁴	SHOCK	CENTRAL VENOUS INFUSION	300 micrograms/kg (= 0.3 ml/kg 1:1000) made up to 50 ml with sodium chloride 0.9%, 1 to 20 ml/hr	1 ml/hr = 0.1 micrograms/kg/minute					
DOBUTAMINE AND DOPAMINE ⁴	SHOCK	CENTRAL VENOUS INFUSION	15 mg/kg made up to 50 ml with sodium chloride 0.9%, 0.4 to 4 ml/hr	1 ml/hr = 5 micrograms/kg/minute					
		PERIPHERAL IV INFUSION (not referenced)	3 mg/kg made up to 50 ml with sodium chloride 0.9%, 2 to 20 ml/hr	1 ml/hr = 1 microgram/kg/minute					
MIDAZOLAM ^{4 5}	SEDATION WHEN VENTILATED	IV INFUSION	6 mg/kg made up to 50 ml with sodium chloride 0.9%, 0.5 to 2 ml/hr	1 ml/hr = 2 micrograms/kg/minute					
MORPHINE ^{4 5}			1 mg/kg made up to 50 ml with sodium chloride 0.9%, 1 to 3 ml/hr	3 ml/hr = 1 micrograms/kg/minute					
THIOPENTONE ²	INDUCTION OF ANAESTHESIA	IV / IO BOLUS	2 (neonate) up to 4 mg/kg (≥ 1 month) = 0.08 to 0.16 ml/kg of a 25 mg/ml solution Lower dose quoted, titrate to a maximum of 4 (neonate) to 7 mg/kg (≥ 1 month)	Alkali solution, dilute further before intraosseous use					
KETAMINE ²		See notes above regarding intraosseous administration of alkali drugs	1 to 2 mg/kg	Consider glycopyrrolate 5 (neonate) to 8 micrograms/kg (≥ 1 month), maximum dose 200 micrograms					
SUXAMETHONIUM ²	MUSCLE RELAXANT	IV / IO BOLUS	2 (infant) to 1 mg/kg (child)						
ATRACURIUM ^{2 4}		IV / IO BOLUS AND IV INFUSION	Initial dose = 500 micrograms/kg	Subsequent doses = 100 to 200 micrograms/kg PRN					
VECURONIUM ^{2 4}		IV / IO BOLUS AND IV INFUSION	Initial dose = 100 micrograms/kg	Subsequent doses = 30 micrograms/kg PRN					
VENTILATION ⁵	Use pressure controlled ventilation with starting values of PIP = 20 cm H ₂ O, PEEP ≥ 5 cm H ₂ O, inspiratory time ≥ 0.75 seconds and respiratory rate 20 per minute Nasogastric tube / endobronchial suction catheter size (FG) = 2 x endotracheal tube internal diameter (in mm), tracheo-bronchial lavage = 0.25 ml/kg sodium chloride 0.9% (not referenced)								
BENZYL PENICILLIN ²	ANTI-BACTERIAL	SLOW IV / IO BOLUS over 30 minutes	75 (neonate) to 50 mg/kg (≥ 1 month), dilute in sodium chloride 0.9%						
CEFOTAXIME ²		SLOW IV / IO BOLUS over 20 minutes	25 (neonate) to 50 mg/kg (≥ 1 month), dilute in sodium chloride 0.9%						
METRONIDAZOLE ²		IV / IO INFUSION over 20 minutes	15 (neonate) to 7.5 mg/kg (≥ 1 month)						
FLUMAZENIL ²	BENZODIAZEPINE REVERSAL	IV / IO BOLUS AND IV INFUSION	10 micrograms/kg (maximum 200 micrograms) Repeat every 1 minute to 40 micrograms/kg (maximum 1 mg) if required	Infusion: 2 to 10 micrograms/kg/hr (maximum 400 micrograms/hr)					
HYDROCORTISONE ²	HYPOTENSION RESISTANT TO FLUIDS AND INOTROPS	IV / IO BOLUS	2.5 (neonate) to 1 mg/kg (≥ 1 month) to a maximum dose of 100 mg						
NALOXONE ²	OPIOID REVERSAL	IV / IO BOLUS AND IV INFUSION	Neonate: 10 micrograms/kg repeated every 2 to 3 minutes if required 1 month to 12 years: 10 micrograms/kg then 100 micrograms/kg (maximum 2 mg) Over 12 years: 1.5 to 3 micrograms/kg then 100 micrograms every 2 minutes	Infusion: 2 mg diluted in 500 ml with sodium chloride 0.9% 5 to 20 micrograms/kg/hr = 1.25 to 5 ml/kg/hr					
SALBUTAMOL ²	BRONCHODILATION	IV / IO BOLUS over 5 minutes	1 month to 2 years: 5 micrograms/kg 2 to 18 years: 15 micrograms/kg (maximum 250 micrograms)	Dilute to a concentration of 50 micrograms/ml with sodium chloride 0.9% for bolus injection					
ALPROSTADIL ²	DUCT DEPENDENT CONGENITAL HEART DEFECTS IN NEONATES	IV INFUSION	150 micrograms/kg made up to 50 ml with sodium chloride 0.9% 0.1 to 2 ml/hr = 5 to 100 nanograms/kg/minute	IMPORTANT: 0.1 ml/hr = 5 nanograms/kg/min Risk of apnoea, cardiovascular instability or cardiac arrest Always monitor in an intensive care environment					

ADDITIONAL INFORMATION REGARDING NORMAL PHYSIOLOGICAL VALUES, EQUIPMENT SIZES AND POST-OPERATIVE FLUID THERAPY CAN BE FOUND ON THE PAEDIATRIC NORMAL VALUES CHART

* If paediatric attenuated shock energy is not available, use adult shock energy in children aged between 1 to 8 years old if there is no other option.

Whilst every care has been taken to ensure that doses and recommendations are correct, the responsibility for final checking must rest with the prescriber. The authors cannot accept any responsibility for errors in this publication.

¹ Resuscitation Council UK, ² BNFC 2009, ³ EPLS manual 2nd edition 2006, ⁴ NHS Executive Guidelines for the Intubation and Stabilisation of Critically Ill Children 2000, ⁵ Newcastle PICU recommendations.

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