

# 35 kg

## Anaphylaxis



## Resuscitation / Arrhythmia

<b>Adrenaline IV (cardiac arrest)</b>	<b>10 micrograms/kg</b>	<b>350 micrograms</b>	<b>of 1:10,000 (large ampoule)</b>	<b>3.5 mL</b>
ETT dose 2.5 mL of 1:1000 (small ampoules), diluted to 10mL				
DC shock	4 J/kg		Use adult/child pads	<b>150 Joules</b>
ATROpine	Adult dose	600 micrograms	Undiluted (600 micrograms in 1 mL)	<b>1 mL</b>
AmIODAROne	5 mg/kg	175 mg	Dilute 2 ampoule (150 mg in 3mL) to 50 mL in <u>Glucose 5%</u> Over 3 mins in emergency, otherwise over 20-120 mins	<b>29.2 mL</b>
Adenosine (1st dose)	0.1 mg/kg	3.5 mg		<b>1.2 mL</b>
Adenosine (2nd dose)	0.2 mg/kg	7 mg	<u>Undiluted</u> (6 mg in 2 mL); use 1 mL or 3 mL syringe	<b>2.3 mL</b>
Adenosine (3rd dose)	0.3 mg/kg	10.5 mg		<b>3.5 mL</b>
<b>Nebulised Adrenaline</b> for upper airway obstruction / croup: <b>5 mL of 1:1000</b> (small ampoule) <b>OR 0.5 mL</b> of 1% solution diluted to 4 mL				

## Management of shock

<b>FLUID BOLUS</b> (Isotonic crystalloid)		5 mL/kg = <b>175 mL</b>	10 mL/kg = <b>350 mL</b>	20 mL/kg = <b>700 mL</b>	
<b>PUSH DOSE PRESSORS</b>	<b>Metaraminol</b>	10 micrograms/kg	350 micrograms	10 mg (1 ampoule) in 100 mL bag. Draw up 10 mL. <i>(OR use undiluted 3mg/6mL vial and give 0.7 mL)</i>	<b>3.5 mL</b>
	<b>Adrenaline</b>	1 micrograms/kg	35 micrograms	Dilute 3.5 mL of 1:10,000 Adrenaline (large ampoule) to total volume of 10 mL	<b>1 mL</b>
<b>INFUSIONS</b> <i>Can use either glucose 5% or sodium chloride 0.9%, except peripheral noradrenaline use glucose 5% + sodium chloride 0.9%</i>	<b>Medication</b>	<b>Dilution</b>	<b>1 mL/h =</b>	<b>Starting Dose</b>	
	<b>Adrenaline (Central / IO)</b>	<b>5.25 mg</b> made up to 100 mL	0.025 micrograms/kg/min	0.4 – 10 mL/h	
	<b>Noradrenaline (Central / IO)</b>	<b>5.25 mg</b> made up to 100 mL	0.025 micrograms/kg/min	0.4 – 20 mL/h	
	<b>Adrenaline (Peripheral)</b>	<b>6 mg</b> made up to 1000 mL	<i>mL/h = microgram/kg/min: 17.5=0.05; 35=0.1;</i>	17.5 mL/h	
	<b>Noradrenaline (Peripheral)</b>	<b>6 mg</b> made up to 1000 mL	<i>52.5=0.15; 70=0.2; 87.5=0.25; 105=0.3; 140=0.4; 175=0.5; 350=1</i>	17.5 mL/h	
<b>Dobutamine</b>	<b>210 mg</b> made up to 50 mL	2 micrograms/kg/min	2.5 – 7.5 mL/h		

## Intubation

<b>EQUIPMENT</b> <i>(prepare one size above/below)</i>	ET tube size (uncuffed) (Age/4) + 4	6.5	<b>Depth: 17 cm</b> to lip	<b>Laryngoscope: 3</b>	
	ET tube size (Microcuff™)	6	20 cm to nose	<b>Suction: 10 - 12 Fr</b>	
	ET tube size (cuffed) (Age/4)+3.5	6	<b>LMA size: 3</b>		
<b>INDUCTION AGENTS</b>	<b>Ketamine</b>	1 - 2 mg/kg	<b>35 - 70 mg</b>	Dilute 200mg in 20 mL OR dilute 100mg in 10mL	<b>3.5 - 7 mL</b>
	<b>Propofol</b>	1.5 - 2.5 mg/kg	<b>52.5 - 87.5 mg</b>	<i>Risk CVS ↓</i>	<b>5.3 - 8.7 mL</b>
	<b>Fentanyl</b>	2-4 micrograms/kg	<b>70-140 micrograms</b>		<b>1.4 - 2.8 mL</b>
	<b>Midazolam</b>	0.1 mg/kg	<b>3.5 mg</b>	Dilute 5 mg to 5 mL	<b>3.5 mL</b>
<b>PARALYTIC AGENTS</b>	<b>Suxamethonium</b>	2 mg/kg	<b>70 mg</b>	Dilute 100 mg to 10 mL	<b>7 mL</b>
	<b>Rocuronium</b>	1.2 mg/kg	<b>42 mg</b>	Undiluted	<b>4.2 mL</b>
	<b>Vecuronium</b>	0.1 mg/kg	<b>3.5 mg</b>	Reconstitute 10 mg in 10 mL water for injection	<b>3.5 mL</b>
	<b>Pancuronium</b>	0.1 mg/kg	<b>3.5 mg</b>	Undiluted (4 mg in 2 mL)	<b>1.8 mL</b>
	<b>Atracurium</b>	0.5 mg/kg	<b>17.5 mg</b>	Undiluted (10 mg/mL)	<b>1.8 mL</b>
	<b>Cisatracurium</b>	0.1 mg/kg	<b>3.5 mg</b>	Undiluted	<b>1.8 mL</b>
<b>INFUSIONS</b> <i>Can use either glucose 5% or sodium chloride 0.9%</i>	<b>Morphine</b>	<b>35 mg</b> made up to 50 mL	1 mL / h = 20 micrograms/kg/hour	Starting dose: 1 - 4 mL/h	
	<b>Midazolam</b>	<b>50 mg</b> made up to 50 mL (Adult dose)	1 mL / h = 1 mg/hour	Starting dose: 1 - 5 mL/h	
	<b>Fentanyl</b>	<b>1,750 micrograms</b> made up to 50 mL	1 mL / h = 1 microgram/kg/hour	Starting dose: 1 - 5 mL/h	

Blood products – use WARMED fluids

<b>Packed red cells:</b> 1 unit (adult dose)	<b>Fresh frozen plasma (FFP):</b> (10-20 mL/kg) 1 – 3 units	<b>Platelets:</b> 1 unit (adult dose)	<b>Cryoprecipitate:</b> Whole blood (10 mL/kg): <b>10 units</b> Apheresis (5 mL/kg): <b>3 units</b>	<b>Tranexamic acid</b> <b>Loading dose: 525 mg</b> (15 mg/kg) <i>(Dilute to 10 mg/mL, give 52.5 mL over 10 minutes)</i> <b>Infusion: 70 mg/hour for 8 hrs</b> (2 mg/kg/hr) <i>(Dilute to 10 mg/ml, give 7 mL/hour)</i>
<b>Massive transfusion:</b> 1:1 ratio of packed red cells and FFP (e.g. alternate units of red cells / FFP)				

Acute respiratory illness (NB –all need to be given as separate infusions)

<b>ASTHMA INFUSIONS</b>	<b>Magnesium</b> 50 mg/kg (0.2 mmol/kg)	Dilute 5 mL (10 mmol) of 50% MgSO <sub>4</sub> to 50 mL. Give <b>35 mL</b> (7 mmol = 1750 mg) <b>over 20 minutes</b>	<b>Corticosteroids</b> <b>Methylprednisolone:</b> 35 mg IV, 6 hourly <b>Prednisolone:</b> 35 mg daily <b>Hydrocortisone:</b> 100 mg IV, 6 hourly <b>Dexamethasone:</b> <i>Mild/moderate croup (oral): 5.25 mg</i> <i>Mild/moderate asthma (oral) : 10.5 mg</i> <i>Severe asthma / croup (IV/IM): 16 mg</i>
	<b>Aminophylline</b> 10 mg/kg	<b>350 mg</b> diluted to at least 350 mL. Give over 30 minutes	
	<b>Salbutamol</b> 5 micrograms/kg	<b>175 – 300 micrograms</b> , diluted to at least 10 mL. Give over 10 minutes	
	<b>Life-threatening asthma:</b> Adrenaline IM or “push dose” or infusion		
<b>Life-threatening croup:</b> Nebulised Adrenaline			

Seizures / Neurology (see seizure flowchart)

<b>MIDazolam</b> (5 mg/ 1 mL – small ampoule) Intramuscular: (0.15 mg/kg) = 5.2 mg = <b>1.04 mL IM</b> Buccal / nasal: (0.3 mg/kg) = 10 mg = <b>2 mL intranasal/buccal</b>	<b>IV MIDazolam</b> (5 mg/ 5 mL – large ampoule) IV: (0.15 mg/kg) = 5.25 mg = <b>5.25 mL IV</b>	<b>IV Clonazepam</b> Child dose <b>0.5 mg</b>	<b>IV Diazepam</b> (0.3 mg/kg) <b>10 mg</b>
PhenyTOIN	20 mg/kg	<b>700 mg</b>	Undiluted (preferred). May dilute up 140 mL (max); give over 20 min
Sodium Valproate	40 mg/kg	<b>1400 mg</b>	Dilute 1 x 400 mg vial to 10 mL (will need 4 vials). Give <b>35 mL</b> over 5 min
Levetiracetam	40 mg/kg	<b>1400 mg</b>	Dilute 1 x 500 mg vial to 10 mL (will need 3 vials). Give <b>28 mL</b> over 5 min
PHENobarbitone	20 mg/kg	<b>700 mg</b>	Dilute to at least 1:10; give over 20 min
Mannitol 20%	0.5 g/kg (2.5 mL/kg)	<b>87.5 mL</b>	Over 20-30 minutes for raised ICP
Sodium chloride 3% (“Hypertonic Saline”)	3 mL/kg	<b>105 mL</b>	Over 10-20 minutes for raised ICP

Electrolyte abnormalities

<b>HYPOglycaemia:</b> 70 mL of <b>Glucose 10%</b> (2 mL/kg) – consider need for critical blood tests	
<b>HYPERkalaemia</b> - <b>Calcium gluconate 10%</b> 17.5 mL slow IV (peripheral / central) OR <b>Calcium chloride 10%</b> 3.5 - 7 mL (central) - <b>Salbutamol 5 mg</b> nebulised - <b>Glucose 10%</b> 175 mL bolus with <b>Actrapid 3.5 units</b> bolus followed by Actrapid 3.5 units/hour + <b>Glucose 10%</b> + <b>NaCl 0.9%</b> maintenance (75 mL/h) - <b>Sodium bicarbonate 8.4%</b> 35 – 100 mL (if acidosis) over 5 minutes <i>Calcium and bicarbonate should be given using different lines</i>  <b>Critical HYPOnatraemia with seizures</b> (Do NOT correct >8 mmol/L/day) 105 mL of <b>Sodium Chloride 3%</b> over 20 minutes	<b>Critical HYPOcalcaemia</b> <b>Calcium gluconate 10%</b> 17.5 mL slow IV (peripheral / central)  <b>HYPOmagnesaemia</b> Dilute 5 mL (10 mmol) of 50% MgSO <sub>4</sub> to 50 mL. Give <b>35 mL</b> (7 mmol = 1750 mg) up to <b>40 mL</b> (8 mmol = 2000 mg) over 2-4 hours  <b>Severe HYPOkalaemia needing urgent treatment</b> Use pre-mixed 100mL bag [isotonic]: 10 mmol (100 mL) <b>(Potassium Chloride 10 mmol in Sodium Chloride 0.29%)</b> Give over 1 hour using infusion pump

SEVERE Infection NB – 1<sup>st</sup> dose only

<b>Aciclovir</b>	525 mg if 5-12 years 350 mg if > 12 years
<b>Ampicillin, Amoxicillin, Cefotaxime, Ceftriaxone*, Flucloxacillin</b>	1750 mg
<b>Gentamicin</b>	262.5 mg if <10 years 210 mg if >10 years
<b>Clindamycin or Lincomycin</b>	525 mg
<b>Metronidazole</b>	525 mg
<b>Vancomycin</b>	500 mg
<b>Piperacillin / Tazobactam</b>	3500 mg

Antidotes

<b>Sugammadex</b> 16 mg/kg	<b>560 mg</b>	Undiluted (100 mg/mL)	<b>5.6 mL</b>
<b>Naloxone (low dose)</b> 2 micrograms/kg	<b>70 micrograms</b>	Dilute 400 micrograms (1mL ampoule) to 10 mL	<b>1.75 mL</b> <i>repeat PRN</i>
<b>Naloxone (emergency)</b> 10 micrograms/kg	<b>350 micrograms</b>	Undiluted (400 micrograms in 1 mL)	<b>0.88 mL</b> <i>repeat PRN</i>
<b>N-Acetylcysteine (1<sup>st</sup> bag)</b>	<b>7000 mg</b>	in 250 mL of glucose 5%	Over 4 hours
<b>N-Acetylcysteine (2<sup>nd</sup> bag)</b>	<b>3500 mg</b>	in 500 mL of glucose 5%.	Over 16 hours

\* **If serious bacterial infection**, can give ceftriaxone

50 mg/kg (1750 mg) OR 100 mg/kg (3500 mg)

If treating meningitis, also give **dexamethasone 5.25 mg IV** (0.15 mg/kg)

# 35 kg

Gastrointestinal bleeding	
<b>Pantoprazole</b> <i>Dilute 40 mg in 10 mL</i>	Intermittent dose: 35 mg (8.75 mL) Bolus (pre-infusion): 63 mg (15.75 mL)
<b>Pantoprazole infusion</b> <i>Dilute 80 mg in 100 mL</i>	6.3 mg/hour (7.88 mL/hour)
<b>Octreotide</b> <i>Dilute 500 micrograms in 100 mL</i>	<b>Loading:</b> 50 micrograms (5 mL) <b>Infusion:</b> start at 5 mL/hour ↑ by 5 mL/hour every 8 hours PRN

<b>Dantrolene for malignant hyperthermia</b>	Dilute 5 x 20 mg ampoule in 300 mL sterile H <sub>2</sub> O Give <b>262.5 mL (87.5 mg) every 5 minutes</b> Maximum of 350 mg (4 doses)
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Sedation for procedures / treatment
<b>Midazolam</b> (5 mg/mL – small ampoule - undiluted) - *Oral: 17.5 mg (3.5 mL) - Intranasal: 10 mg (2 mL)
<b>Ketamine</b> (Undiluted – 200 mg in 2 mL) - Intramuscular: 105-140 mg (1.05-1.4 mL) - *Oral: 175-350 mg (1.75-3.5 mL)
<b>Ketamine (IV)</b> Dilute 200 mg in 20 mL Usual dose: 35 – 52.5 mg (3.5-5.25 mL) Consider 2 mL (20 mg) initial, then 1 mL (10 mg) increments; +/- adding 1 mL (10 mg) increments of propofol

Other infusions	Dilution	Usual rate
Vasopressin	20 units in 20 mL Glucose 5%	0.7 – 2.1 mL/hour
Ketamine	200 mg in 50 mL	3.5 -21 mL/hour
Propofol	Undiluted	3.5 – 14 mL/hour
Milrinone	10 mg in 50 mL	1.4 – 7.7 mL/hour
Glyceryl Trinitrate	30 mg in 50 mL Glucose 5%	2 - 20 mL/hour
Sodium nitroprusside	30 mg in 50 mL Glucose 5%	1 – 35 mL/hour
<b>Transducer set-up for arterial or central line</b>	500 mL or 1000 mL 0.9% sodium chloride with appropriately sized (500 mL or 1000 mL) pressure bag	

<b>Dexmedetomidine</b> 200 micrograms / 2 mL (Undiluted) Intranasal: 70 – 140 micrograms 0.7 – 1.4 mL
<b>Clonidine</b> 150 micrograms/mL (Undiluted) - *Oral: 140 micrograms (0.93 mL) - Intranasal: 70 micrograms (0.47 mL)

\*Unpleasant taste! Consider mixing with 2-3 mL of sucrose, a dose of paracetamol and/or a few mL of juice.