

# 50 kg

## Anaphylaxis



## Resuscitation / Arrhythmia

<b>Adrenaline IV (cardiac arrest)</b>	<b>Adult dose</b>	<b>1 mg</b>	<b>One 1:10,000 (large ampoule)</b> ETT dose 2.5 mL of 1:1000 (small ampoules), diluted to 10mL	<b>10 mL</b>
DC shock	4 J/kg		Use adult/child pads	<b>200 Joules</b>
ATROpine	Adult dose	600 micrograms	Undiluted (600 micrograms in 1 mL)	<b>1 mL</b>
AmlODAROne	5 mg/kg	250 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>41.7 mL</b>
Adenosine (1st dose)	0.1 mg/kg	5 mg		<b>1.7 mL</b>
Adenosine (2nd dose)	0.2 mg/kg	10 mg	<u>Undiluted</u> (6 mg in 2 mL); use 3 mL or 5 mL syringe	<b>3.3 mL</b>
Adenosine (3rd dose)	Adult dose	12 mg		<b>4 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>250 mL</b>	10 mL/kg = <b>500 mL</b>	20 mL/kg = <b>1000 mL</b>	
<b>PUSH DOSE PRESSORS</b>	<b>Metaraminol</b>	10 micrograms/kg	500 micrograms (adult dose)	Draw up 10 mg (1 ampoule) into a 20 mL syringe <b>(OR use undiluted 3mg/6mL vial and give 0.5 mL)</b>	<b>0.5 mL</b>
	<b>Adrenaline</b>	1 micrograms/kg	50 micrograms (adult dose)	Dilute 5 mL of 1:10,000 Adrenaline ( <u>large ampoule</u> ) [or 0.5 mL of 1:1000 ( <u>small ampoule</u> )] 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>6 mg made up to 100 mL</b>		1 microgram/min	0.5 – 20 mL/h
	<b>Noradrenaline (Central / IO)</b>	<b>6 mg made up to 100 mL</b>		1 microgram/min	0.5 – 20 mL/h
	<b>Adrenaline (Peripheral)</b>	<b>6 mg made up to 1000 mL</b>		<b>mL/h = microgram/kg/min: 25=0.05; 50=0.1;</b>	25 mL/h
	<b>Noradrenaline (Peripheral)</b>	<b>6 mg made up to 1000 mL</b>		<b>75=0.15; 100=0.2; 125=0.25; 150=0.3; 200=0.4; 250=0.5; 500=1</b>	25 mL/h
	<b>Dobutamine</b>	<b>500 mg made up to 83 mL</b>		100 micrograms/min	2.5 – 10 mL/h

## Intubation

<b>EQUIPMENT</b> <i>(prepare one size above/below)</i>	ET tube size ( <u>uncuffed</u> ) (Age/4) + 4	6.5	<b>Depth:</b> 20 cm to lip 23 cm to nose <b>LMA size:</b> 3	<b>Laryngoscope:</b> 3 <b>Suction:</b> 10 -12 Fr	
	ET tube size ( <u>Microcuff™</u> )	7			
	ET tube size ( <u>cuffed</u> ) (Age/4)+3.5	6			
<b>INDUCTION AGENTS</b>	<b>Ketamine</b>	0.5-2 mg/kg	<b>25 - 100 mg</b>	Dilute 200mg in 20 mL OR dilute 100mg in 10mL	<b>2.5 - 10 mL</b>
	<b>Propofol</b>	1.5 – 2.5 mg/kg	<b>75 - 125 mg</b>	<i>Risk CVS ↓</i> Undiluted	<b>7.5 – 12.5 mL</b>
	<b>Fentanyl</b>	2-4 micrograms/kg	<b>100-200 micrograms</b>	Undiluted (100 micograms / 2 mL)	<b>2 – 4 mL</b>
	<b>Midazolam</b>	0.1 mg/kg	<b>5 mg</b>	Dilute 5 mg to 5 mL	<b>5 mL</b>
<b>PARALYTIC AGENTS</b>	<b>Suxamethonium</b>	2 mg/kg	<b>100 mg</b>	Undiluted (100 mg in 2 mL)	<b>2 mL</b>
	<b>Rocuronium</b>	1.2 mg/kg	<b>60 mg</b>	Undiluted	<b>6 mL</b>
	<b>Vecuronium</b>	0.1 mg/kg	<b>5 mg</b>	Reconstitute 10 mg in 10 mL water for injection	<b>5 mL</b>
	<b>Pancuronium</b>	0.1 mg/kg	<b>5 mg</b>	Undiluted (4 mg in 2 mL)	<b>2.5 mL</b>
	<b>Atracurium</b>	0.5 mg/kg	<b>25 mg</b>	Undiluted (10 mg/mL)	<b>2.5 mL</b>
	<b>Cisatracurium</b>	0.1 mg/kg	<b>5 mg</b>	Undiluted	<b>2.5 mL</b>
<b>INFUSIONS</b> <i>Can use either glucose 5% or sodium chloride 0.9%</i>	<b>Morphine</b>	<b>50 mg made up to 50 mL (adult dose)</b>		1 mL / h = 1 mg/hour	Starting dose: 1 – 5 mL/h
	<b>Midazolam</b>	<b>50 mg made up to 50 mL (Adult dose)</b>		1 mL / h = 1 mg/hour	Starting dose: 1 – 5 mL/h
	<b>Fentanyl</b>	<b>500 micrograms made up to 50 mL (Adult dose)</b>		1 mL / h = 10 micrograms/hour	Starting dose: 1 – 8 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) 2 – 4 units	<b>Platelets:</b> 1 unit (adult dose)	<b>Cryoprecipitate:</b> Whole blood (10 mL/kg): 10 units Apheresis (5 mL/kg): 4 units	<b>Tranexamic acid</b> <b>Loading dose: 750 mg</b> (15 mg/kg) (Dilute to 10 mg/mL, give 75 mL over 10 minutes) <b>Infusion: 100 mg/hour for 8 hrs</b> (2 mg/kg/hr) (Dilute to 10 mg/mL, give 10 mL/hour)
<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> Adult dose	Dilute 5 mL (10 mmol) of 50% MgSO <sub>4</sub> to 50 mL. Give <b>50 mL</b> (10 mmol = 2500 mg) <b>over 20 minutes</b>	<b>Corticosteroids</b> <b>Methylprednisolone:</b> 50 mg IV, 6 hourly <b>Prednisolone:</b> 50 mg daily <b>Hydrocortisone:</b> 100 mg IV, 6 hourly <b>Dexamethasone:</b> <i>Mild/moderate croup</i> (oral): 7.5 mg <i>Mild/moderate asthma</i> (oral) : 15 mg <i>Severe asthma / croup</i> (IV/IM): 16 mg
	<b>Aminophylline</b> Adult dose	<b>500 mg</b> diluted to at least 500 mL. Give over 30 minutes	
	<b>Salbutamol</b> 5 micrograms/kg	<b>250 – 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) = 7.5 mg = <b>1.5 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) = 7.5 mg = <b>7.5 mL IV</b>	<b>IV Clonazepam</b> Adult dose <b>1 mg</b>	<b>IV Diazepam</b> (0.3 mg/kg) <b>10 mg</b>
PhenyTOIN Adult dose	<b>1000 mg</b>	Undiluted (preferred). May dilute up 200 mL (max); give over 20 min	
Sodium Valproate 40 mg/kg	<b>2000 mg</b>	Dilute 1 x 400 mg vial to 10 mL (will need 5 vials). Give <b>50 mL</b> over 5 min	
Levetiracetam 40 mg/kg	<b>2000 mg</b>	Dilute 1 x 500 mg vial to 10 mL (will need 4 vials). Give <b>40 mL</b> over 5 min	
PHENobarbitone Adult dose	<b>1000 mg</b>	Dilute to at least 1:10; give over 20 min	
Mannitol 20%	0.5 g/kg (2.5 mL/kg)	<b>125 mL</b>	Over 20-30 minutes for raised ICP
Sodium chloride 3% (“Hypertonic Saline”)	3 mL/kg	<b>150 mL</b>	Over 10-20 minutes for raised ICP

Electrolyte abnormalities

<b>HYPOglycaemia:</b> 100 mL of <b>Glucose 10%</b> (2 mL/kg) – consider need for critical blood tests	
<b>HYPERkalaemia</b> - <b>Calcium gluconate 10%</b> 20 mL slow IV (peripheral / central) OR <b>Calcium chloride 10%</b> 5 – 10 mL (central) - <b>Salbutamol 5 mg</b> nebulised - <b>Glucose 10%</b> 250 mL bolus with <b>Actrapid 5 units</b> bolus followed by Actrapid 5 units/hour + <b>Glucose 10%</b> + <b>NaCl 0.9%</b> maintenance (90 mL/h) - <b>Sodium bicarbonate 8.4%</b> 50 - 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) 150 mL of <b>Sodium Chloride 3%</b> over 15-30 minutes	<b>Critical HYPOcalcaemia</b> <b>Calcium gluconate 10%</b> 20 mL slow IV (peripheral / central)  <b>HYPOmagnesaemia</b> Dilute 5 mL (10 mmol) of 50% MgSO <sub>4</sub> to 50 mL. Give <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]: 15 mmol (150 mL) <b>(Potassium Chloride 10 mmol in Sodium Chloride 0.29%)</b> Give at 100 mL/hour using infusion pump

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

<b>Aciclovir</b>	750 mg if 5-12 years 500 mg if >12 years
<b>Ampicillin, Amoxicillin, Cefotaxime, Ceftriaxone*, Flucloxacillin</b>	2000 mg
<b>Gentamicin</b>	320 mg if < 10 years 300 mg if >10 years
<b>Clindamycin or Lincomycin</b>	600 mg
<b>Metronidazole</b>	750 mg
<b>Vancomycin</b>	500 mg
<b>Piperacillin / Tazobactam</b>	4000 mg

Antidotes

<b>Sugammadex</b> 16 mg/kg	<b>800 mg</b>	Undiluted (100 mg/mL)	<b>8 mL</b>
<b>Naloxone (low dose)</b> 2 micrograms/kg	<b>100 micrograms</b>	Dilute 400 micrograms (1mL ampoule) to 10 mL	<b>2.5 mL</b> <i>repeat PRN</i>
<b>Naloxone (emergency)</b> 10 micrograms/kg	<b>500 micrograms</b>	Undiluted (400 micrograms in 1 mL)	<b>1.25 mL</b> <i>repeat PRN</i>
<b>N-Acetylcysteine (1<sup>st</sup> bag)</b>	<b>10000 mg</b> in 500 mL of glucose 5%	Over 4 hours	
<b>N-Acetylcysteine (2<sup>nd</sup> bag)</b>	<b>5000 mg</b> in 1000 mL of glucose 5%	Over 16 hours	

\* **If serious bacterial infection**, can give **ceftriaxone**  
50 mg/kg (2500 mg) **OR** 100 mg/kg (4000 mg)  
If treating meningitis, also give **dexamethasone 7.5 mg IV** (0.15 mg/kg)

# 50 kg

Gastrointestinal bleeding	
<b>Pantoprazole</b> <i>Dilute 40 mg in 10 mL</i>	Intermittent dose: 40 mg (10 mL) Bolus (pre-infusion): 80 mg (20 mL)
<b>Pantoprazole infusion</b> <i>Dilute 80 mg in 100 mL</i>	8 mg/hour (10 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 7 x 20 mg ampoule in 420 mL sterile H <sub>2</sub> O Give 375 mL (125 mg) every 5 minutes Maximum of 500 mg (4 doses)
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Sedation for procedures / treatment
<b>Midazolam</b> (5 mg/mL – small ampoule – undiluted) - *Oral: 20 mg (4 mL) - Intranasal: 10 mg (2 mL)
<b>Ketamine</b> (Undiluted – 200 mg in 2 mL) - Intramuscular: 150-200 mg (1.5-2 mL) - *Oral: 250-500 mg (2.5-5 mL)
<b>Ketamine (IV)</b> Dilute 200 mg in 20 mL Usual dose: 50 – 75 mg (5-7.5 mL) Consider 2 mL (20 mg) initial, then 1-2 mL (10-20 mg) increments +/- adding 1-2 mL (10-20 mg) increments of propofol

Other infusions	Dilution	Usual rate
Vasopressin	20 units in 20 mL Glucose 5%	1– 2.4 mL/hour
Ketamine	400 mg in 50 mL	2.5 - 15 mL/hour
Propofol	Undiluted	5 – 20 mL/hour
Milrinone	10 mg in 50 mL	2 – 11 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 – 50 mL/hour
Transducer set-up for arterial or central line	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: 100 – 200 micrograms 1 – 2 mL
<b>Clonidine</b> 150 micrograms/mL (Undiluted) - *Oral: 200 micrograms (1.33 mL) - Intranasal: 100 micrograms (0.67 mL)

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