



Ambulance Victoria

ARV

Adult Retrieval Victoria

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Key

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 § based on total (actual) body weight

Adult Doses

Medication	Presentation	Indication	Preparation & Dose	Notes
Adrenaline	1mg/1ml (1:1,000)	Cardiac arrest	Neat, 1mg IV, repeat q2 nd cycle (4min)	
		Shock	Dilute to 1mg in 10ml with NS (1:10,000), take 2ml of this and dilute to 20ml with NS (1:100,000) start 10-20mcg (1-2mL) IV boluses, repeat q2-3min, increase as necessary	Infusion preferred (see infusions table)
		Anaphylaxis	Neat, 0.5mg (0.5ml) IM, repeat q5-10min; or IV as per 'Shock' indication	0.3mg in elderly/frail/<60kg/MAOI
		Stridor	5mg nebulized, repeat q5-10min	
Alteplase*	50mg/50ml 10mg/10ml	PE Stroke thrombolysis	See infusions chart	
Amiodarone	150mg/3ml	VF or pulseless VT refractory to defibrillation	Neat, 300mg IV, after 3 rd shock, may repeat 150mg after 5 th shock; max dose 450mg	Other indications see infusions table
Atropine	1200mcg/1ml	Bradycardia	Neat, 600mcg IV, if no effect, consider 1200mcg IV x2; max dose 3mg	
		Organophosphate poisoning	Neat, 1.2mg IV, then double dose q3min until drying of secretions, repeat maximum bolus dose as necessary or infusion	Very large quantities required Pralidoxime also required
Calcium chloride 10%	1g/10ml	Hypocalaemia Hyperkalaemia Calcium channel blocker OD	Neat, or dilute in NS/D5W, 1g, slow push over 10min; repeat q10min as necessary	Preferably via a central line (if present) Contains 6.8mmol Ca ⁺⁺ (equivalent 30ml calcium gluconate)
Calcium gluconate 10%*	1g/10ml	Hypocalaemia Hyperkalaemia Calcium channel blocker toxicity	Neat, 1g, slow push over 2-5min, repeat x3 q10min	Less potent, less irritating to veins than gluconate Contains 2.2mmol Ca ⁺⁺
Ceftriaxone	1g dry powder	Infection	10-20ml H ₂ O, 1-2g IV, slow push over 3-5min; or IM (dilute 1g in 4ml 1% lignocaine)	
Dexamethasone*	8mg/2ml	Cerebral oedema	Neat, 8-16mg IV, slow push, then 4-8mg q4hr	
		Nausea	Neat, 4-8mg IV	
		Airway oedema	Neat, 8-16mg IV	
		Asthma/COPD	Neat, 8mg IV	
Frusemide	40mg/4ml	Fluid overload, hyperkalaemia	Neat, 20-80mg IV, slow push over 2-3min	
Fentanyl	100mcg/2ml	RSI	Dilute to 10ml with NS (10mcg/ml), 2-3mcg/kg† IV, in divided doses 2-3 mins pre-induction	Consider dose reduction in the elderly Omit in haemodynamic compromise
		Analgesia	Dilute to 10ml with NS (10mcg/ml), 25-50mcg IV, repeat q5min; or neat, 200mcg IN (100mcg in elderly/frail/weight<60kg), repeat 50mcg q5min	
Glucose 50%	25g/50ml	Hypoglycaemia	Neat, 50mls IV, slow push, repeat as necessary	If > 100ml, preferably via CVC
GTN patch	50mg 0.4mg/hr	ACS LVF	Patch x1 or max 2 to lateral chest wall, or infusion (see infusions table)	
Hydralazine	20mg powder	Hypertension/Afterload reduction	Mix with 1ml H ₂ O then dilute to 20ml with NS (1mg/ml), 5-10mg IV, slow push over 3min, then 5mg q15-20min as necessary (usu max 20mg) +/- infusion (see infusions table)	May need over 20mg initially in severe hypertension Infusion usually required if initial dose ≥20mg Max effect after 15-20min
Hydrocortisone	100mg/2ml	Asthma	Neat, 200mg IV, slow push	
		Severe sepsis & most other indications	Neat, 50mg IV, slow push, repeat q4hr	
Insulin*	Actrapid/NovoRapid 300U/3ml 1000U/10ml	Hyperkalaemia	10U (0.1ml) in 50ml glucose 50%, slow push, repeat q2-4hr	Monitor glucose and K+ May cause hypoglycaemia
Ipratropium	500mcg/2ml	Asthma Bronchospasm	Dilute to 3ml with NS, 500mcg nebulized, via T-piece if necessary, repeat x2 q20min as necessary	Can give ipratropium & salbutamol concurrently (both undiluted)
Isoprenaline*	200mcg/1ml 1mg/5ml	Bradycardia	Dilute to 20ml in NS/5%DW (10mcg/ml), 10-50mcg IV, slow push 10mcg/min (1ml/min), whilst infusion being prepared (see infusions table)	
Ketamine	200mg/2ml	RSI	Dilute to 20ml in NS (10mg/ml), 1.5mg/kg‡ IV	Decrease dose to 0.5-1mg/kg if haemodynamic compromise (or less if profoundly shocked/poor reserve) Slow push if delayed sequence intubation (DSI)
		Analgesia	Dilute to 20ml in NS (10mg/ml), 10-20mg IV, slow push, repeat q5-10min, or infusion (see infusions table)	Titrate to effect Less psychotropic SEs with infusion
		Extreme agitation	Neat, 4mg/kg IM; or 1.5mg/kg‡ IV (diluted as above), slow push over 2-3min	= full dissociative dose

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Medication	Presentation	Indication	Preparation & Dose	Notes
Labetalol*	100mg/20ml	Hypertension (incl pregnancy-induced)/ aortic dissection/AF/SVT/VT	Neat, 10-20mg (2-4ml) IV, slow push over 1-2min, then 20-80mg q5-10min as necessary, then infusion (see infusions table); max total dose 300mg	
Lignocaine/Lidocaine 2%	100mg/5ml	Local/regional anaesthesia	Dilute 1:1 with NS (1%), or neat, locally; max dose 3mg/kg [†]	For lignocaine with adrenaline: Dilute adrenaline 1mg in 10ml with NS (1:10,000), take 2ml of this and dilute to 10ml with NS (1:50,000), mix this 1:1 with 2% lignocaine (to give 1% lignocaine with 1:100,000 adrenaline); max dose 7mg/kg
		Ventricular arrhythmias (VT/VF)	Dilute 1:1 with NS (1%), 1mg/kg [†] (0.1ml/kg) IV, slow push over 2min, then infusion (see infusions table). Further 0.5mg/kg q5-10min if no response; max 3mg/kg bolus dose	Watch for neurological toxicity
Metaraminol	10mg/1ml	Shock/hypotension	Dilute to 20ml with NS (0.5mg/ml), 0.5-1mg (1-2ml) IV, repeat q2-3min as necessary	Short term option Beware reflex bradycardia
Metoclopramide	10mg/2ml	N&V/prophylaxis	Neat, 10mg IM; or 10mg IV, slow push	
Metoprolol	5mg/5ml	Hypertension/aortic dissection/AF/SVT/VT	Neat, 5mg IV, slow push over 1-2min, repeat q5min as necessary; max dose 15mg	May give 25-50mg PO 15 min after last IV dose
Midazolam	15mg/3ml	Seizure/status epilepticus	Neat, 10mg IM; or 5mg IV, repeat q5-10min as necessary; max dose 30mg	
		Agitation	Dilute to 15ml with NS (1mg/ml), 2.5-5mg IV, repeat q5min; or neat, 5-10mg IM, repeat q10min; max dose 30mg	Less if elderly/frail/<60kg
Morphine	10mg/1ml	Analgesia	Dilute to 10ml with NS (1mg/ml), 2.5-5mg IV, repeat q10min as necessary; or neat, 10mg IM, repeat q15min as necessary	
Naloxone	400mcg/1ml	Opioid OD	Neat, 1.6-2mg IM/IV for full reversal; or dilute to 10ml in NS (40mcg/ml), 40mcg (1ml) IV for partial reversal, repeat q1-2min to effect	Occasionally, up to 10mg required for full reversal Titrate partial reversal to adequate respiration IM reversal will give longer duration of action If recurrence of toxicity, repeat effective dose, consider naloxone infusion (see infusions table)
Nifedipine	20mg tablet	Hypertensive crisis Vasospastic angina	PO, crushed or chewed, repeat x1 after 20min	Onset within 10min if crushed or chewed, duration 3-6h
		Tocolysis in pre-term labour	PO, crushed or chewed, 20mg, repeat q3-4hr if necessary	
Ondansetron	8mg/4ml IV 4mg wafer	N&V/prophylaxis	4mg SL, repeat x1 after 5-10min if necessary; or neat, 8mg IV, slow push	
Propofol	200mg/20ml	RSI	Neat, 1.5-2mg/kg [‡] IV	When ketamine contraindicated, or in hypertensive emergencies (e.g. SAH, ICH) Decrease dose to 0.5mg/kg if haemodynamic compromise (or less if profoundly shocked/poor reserve)
Rocuronium	50mg/5ml	RSI	Neat, 1.2 - 1.5 mg/kg [‡] IV, max 150mg	1.5mg/kg if haemodynamic compromise
		Ongoing paralysis	Neat, 0.2mg/kg [‡] IV, repeat as necessary, or infusion (see infusions table)	Duration of action ~25min at this dose
Salbutamol	5mg/2.5ml MDI 100mcg/puff	Asthma Bronchospasm	Neat, 5-10mg solution, or 10 puffs, q10min as necessary	Can give salbutamol & ipratropium concurrently (both undiluted)
Sodium Bicarbonate	8.4%/100ml (=1mmol/ml)	TCA OD	Neat, 100mmol (100ml) IV, over 3min, repeat q5min, titrated to effect, then infusion (see infusions table)	Aim for reversal of wide QRS, ventricular arrhythmias and hypotension, with pH 7.5-7.55 and Na+ ~150mmol/l
		Salicylate OD	Neat, 100mmol (100ml) IV, over 3min if features of intoxication, then infusion (see infusions table)	Aim urinary pH 7.5-8
		Hyperkalaemia	Neat, 50-100mmol (50-100ml) IV, over 10-15min (esp if metabolic acidosis)	Can dilute in 5% dextrose if fluid resuscitation required (e.g. 150ml in 850ml 5% dextrose = 1.3% [isotonic])
Sugammadex	200mg/2ml 500mg/5ml	Rescue reversal of rocuronium	Neat, 16 mg/kg [§] , bolus (= 1280mg = 12.8ml in an 80kg patient)	Reversal of 1.2mg/kg rocuronium takes mean 4.5min Also effective for vecuronium reversal
Suxamethonium	100mg/2ml	RSI	Neat, 1.5mg/kg [§] IV	Only when rocuronium contraindicated
Syntocinon	10U/ml	Post-partum haemorrhage	Neat, 5U IV, slow push, followed by infusion (see infusions table), may repeat IV dose x1	May also be given IM, and may be combined with ergometrine No bolus if syntocin already given at delivery
Tenecteplase*	50mg/10ml (=10000U/10ml)	STEMI	Neat, <60kg 30mg/6000U/6ml, 60-69kg 35mg/7000U/7ml, 70-79kg 40mg/8000U/8ml, 80-89kg 45mg/9000U/9ml, ≥90kg 50mg/10000U/10ml	Half dose in patients ≥75yrs
Tranexamic acid	1g/10ml	Trauma at risk of significant haemorrhage	Neat, 1g IV, slow push over 3min, followed by infusion (see infusions table)	Should be commenced within 3hr of haemorrhage
		Post-partum haemorrhage	Neat, 1g IV, slow push over 3min, repeat x1 if ongoing bleeding after 30min	PPH due to any cause including genital tract trauma Should be commenced within 3hr of haemorrhage
Verapamil	5mg/2ml	SVT Rate control in AF	Dilute 10mg to 20ml in NS (0.5mg/mL), 5-10mg IV, slow push over 2min, repeat x1 after 15-30min as necessary, max dose 20mg, or infusion (see infusions table)	

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