

Emergency drug doses – PBS* doctor's bag items

DRUG	INDICATION	DOSE
Adrenaline (1000 microgram in 1 mL injection equivalent to 1:1000) 1000 microgram = 1 mg	Anaphylaxis ¹	5–10 microgram/kg IM approximates to: Adults: <50 kg 0.25–0.5 mL >50 kg 0.5 mL Children: 10 kg (1–2 years) 0.1 mL 15 kg (2–3 years) 0.15 mL 20 kg (4–6 years) 0.2 mL 30 kg (7–10 years) 0.3 mL Repeat dose every 5 minutes if no response
	Cardiac arrest	Adults: 0.5–1 mg IV Flush with normal saline to aid entry into the circulation Children: 10 microgram/kg slow IV (Dilute 1 mL adrenaline injection 1:1000 with 9 mL sodium chloride (0.9%) and give 0.1 mL/kg)
Atropine (0.6 mg in 1 mL injection)	Severe bradycardia, asystole	Adults: 1 mg IV, repeat every 3–5 minutes until desired heart rate is reached or to a maximum of 3 mg Children: 20 microgram/kg IV (maximum dose 0.5 mg), repeat every 5 minutes until desired heart rate is reached or to a total maximum of 1 mg
Benztropine (2 mg in 2 mL injection)	Acute dystonic reactions	Adults: 1–2 mg IM or IV Children >3 years: 20 microgram/kg IM or IV (maximum 1 mg). Repeat after 15 minutes if needed.
Benzylpenicillin (600 mg or 3 g powder, dissolve in water for injections)	Severe infections, including suspected meningococcal disease	Adults and children ≥10 years: 1.2 g IV or IM Children aged 1–9 years: 600 mg IV or IM Children <1 year: 300 mg IV or IM
Chlorpromazine (50 mg in 2 mL injection)	Acute psychosis, severe behavioural disturbance	Avoid parenteral use – injections cause pain and skin irritation. Use haloperidol instead. Adults: If there is no alternative, chlorpromazine 25–50 mg (12.5–25 mg in the elderly) can be given by deep IM injection (buttock or deltoid)
Dexamethasone sodium phosphate (4 mg in 1 mL injection)	Acute severe asthma ²	Adults: 4–12 mg IV slowly
	Severe croup	Children: 0.15 mg/kg IM if oral route is not possible
	Bacterial meningitis	Start before or at the same time as antibiotic Adults: 10 mg IV Children aged >3 months: 0.15 mg/kg IV
Diazepam (10 mg in 2 mL injection)	Severely disturbed patients	Adults: 5–10 mg IV over 1–2 minutes (halve dose in elderly) in a large vein. Repeat if necessary every 5–10 minutes (maximum 30 mg).
	Seizures	Adults: 10 mg IV slowly in a large vein. Repeat once if necessary. 10–20 mg rectally if IV access not possible. Repeat once if necessary. Children: 0.2–0.3 mg/kg IV slowly in a large vein (maximum 10 mg). Repeat once if necessary. 0.3–0.5 mg/kg rectally (maximum 10 mg). Repeat once if necessary.
Dihydroergotamine (1 mg in 1 mL injection)	Severe migraine	Adults: 0.5–1 mg SC or IM. Repeat every hour if needed (maximum 3 mg daily).

* Pharmaceutical Benefits Scheme

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Diphtheria and tetanus booster vaccine (0.5 mL pre-filled syringe)	Tetanus prophylaxis	Adults and children >8 years: 0.5 mL IM
Frusemide (20 mg in 2 mL injection)	Left ventricular failure, acute pulmonary oedema	Adults: 20–40 mg IV slowly or IM
Glucagon (injection kit containing 1 mg glucagon and 1 mL solvent in syringe)	Severe hypoglycaemia	Adults and children >5 years: 1 mg SC, IM or IV Children <5 years: 0.5 mg SC, IM or IV
Glyceryl trinitrate (400 microgram per dose, 200 doses as sublingual spray)	Acute angina, acute left ventricular failure	Adults: 1–2 sprays under the tongue. Repeat after 5 minutes if needed (maximum 3 sprays).
Haloperidol (5 mg in 1 mL injection)	Acute psychosis, severe behavioural disturbance	Adults: 2–10 mg IM (0.5–2 mg in the elderly)
Hydrocortisone sodium succinate (100 mg or 250 mg with 2 mL solvent for injection)	Acute severe asthma	Adults: 100 mg IV Children: 4 mg/kg IV
	Anaphylaxis	Adults: 100 mg IV or IM Children: 2–4 mg/kg IV
	Acute adrenal insufficiency	Adults: 100 mg IV or IM Children 1–12 years: 50 mg IV or IM Children 1–12 months: 25 mg IV or IM
Lignocaine (100 mg in 5 mL injection)	Sustained ventricular tachycardia	Lignocaine has serious adverse effects including the potential to worsen arrhythmia and cardiac failure. Do not use outside of hospital. Adults and children: 1 mg/kg IV over 1–2 minutes. Repeat after 5 minutes if needed.
Metoclopramide (10 mg in 2 mL injection)	Nausea and vomiting	Adults: IV or IM >60 kg 10 mg starting dose 30–59 kg 5 mg starting dose (maximum 0.5 mg/kg daily) Not generally recommended in children as there is a risk of extrapyramidal adverse effects
Methoxyflurane (3 mL plus inhaler)	Pain after acute trauma	Adults and children (who are able to use the device, usually ≥ 5 years): 6–8 breaths at a time (maximum 6 mL/day)
Morphine sulfate (15 mg or 30 mg in 1 mL injection)	Severe pain	Adults: SC or IM starting at lower dose <39 years 7.5–12.5 mg 40–59 years 5–10 mg 60–69 years 2.5–7.5 mg 70–85 years 2.5–5 mg >85 years 2–3 mg Can also be given as IV increments of 0.5–2 mg titrated to effect Children >1 year and <50 kg: 0.05–0.1 mg/kg SC or IM
Naloxone (2 mg in 5 mL injection)	Opioid overdose	Adults and children: 0.4–0.8 mg IV, IM or SC repeated as necessary Neonates born with low APGAR scores to mothers taking opioids: 0.1 mg/kg IV, IM or SC. Repeat if needed.
Procaine penicillin (1.5 mg in 3.4 mL injection)	Severe infections (only suitable for infections where prolonged low concentrations are appropriate)	Adults: 1–1.5 g by deep IM injection Children: 50 mg/kg by deep IM injection

This should read (1.5 g in 3.4 mL injection) Corrected May 2013

DRUG	INDICATION	DOSE
Prochlorperazine (12.5 mg in 1 mL injection)	Nausea and vomiting, vertigo	Adults: 12.5 mg IM or IV
Promethazine hydrochloride (50 mg in 2 mL injection)	Allergic reactions Nausea and vomiting	Adults and children >12 years: 25–50 mg IM Children >2 years: 0.125 mg/kg IM Adults and children >12 years: 12.5–25 mg IM
Salbutamol inhaler (100 microgram per dose, 200 doses)	Acute asthma, bronchospasm	Adults and children: 4 puffs (400 microgram) via spacer. Repeat after 4 minutes if needed. If still no improvement, continue giving 4 puffs every 4 minutes until ambulance arrives.
Salbutamol nebuliser solution (2.5 mg or 5 mg in 2.5 mL per dose, 30 doses)	Acute asthma, bronchospasm	Adults and children >2 years: 2.5–5 mg by nebuliser as required Children <2 years: 0.1 mg/kg up to 2.5 mg by nebuliser as required For anaphylaxis give 5 mg by nebuliser to adults and children, repeat if required
Terbutaline (500 microgram in 1 mL injection)	Acute asthma	Adults: 250 microgram SC Children: 5 microgram/kg SC
Tramadol (100 mg in 2 mL injection)	Pain	Adults: 50–100 mg IV over 2–3 minutes or IM
Verapamil (5 mg in 2 mL injection)	Paroxysmal supraventricular tachycardia in patients who are not : - taking beta blockers - having an infarction - in second or third degree atrioventricular block	Do not use outside of hospital Adults: 5 mg IV slowly (over at least 3 minutes), repeat after 5–10 minutes if no response Children: 0.1–0.3 mg/kg IV, repeat after 30 minutes if no response (maximum 5 mg)

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IM intramuscular IV intravenous SC subcutaneous

A guide to paediatric weights 10 kg at 1–2 years 15 kg at 2–3 years 20 kg at 4–6 years 30 kg at 7–10 years

PBS* doctor's bag items for palliative care patients

These drugs should only be used after consultation with a palliative care specialist

DRUG	INDICATION	DOSE
Clonazepam (oral liquid containing 25 mg in 10 mL)	Preventing seizures, hiccups	Adults: 0.25–1 mg orally or sublingually
Hyoscine butylbromide (20 mg in 1 mL injection)	Noisy breathing and secretions	Adults: 10–20 mg subcutaneously

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Acknowledgement: Australian Prescriber thanks the staff at the Australian Medicines Handbook for their help in preparing this chart.

REFERENCES

1. Anaphylaxis: emergency management for health professionals [wall chart]. Aust Prescr 2011;34:124. www.australianprescriber.com/magazine/34/4/artid/1210
2. National Asthma Council Australia. Asthma Management Handbook 2006. www.nationalasthma.org.au/handbook

FURTHER READING

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- Baird A. Drugs for the doctor's bag. Aust Prescr 2007;30:143–6.