

Phenylephrine hydrochloride

● INDICATIONS AND DOSE

Acute hypotension

- ▶ BY SUBCUTANEOUS INJECTION, OR BY INTRAMUSCULAR INJECTION
 - ▶ Child 1–11 years: 100 micrograms/kg every 1–2 hours (max. per dose 5 mg) as required
 - ▶ Child 12–17 years: Initially 2–5 mg (max. per dose 5 mg), followed by 1–10 mg, after at least 15 minutes if required
- ▶ BY SLOW INTRAVENOUS INJECTION
 - ▶ Child 1–11 years: Initially 5–20 micrograms/kg (max. per dose 500 micrograms), repeated as necessary after at least 15 minutes
 - ▶ Child 12–17 years: 100–500 micrograms, repeated as necessary after at least 15 minutes
- ▶ BY INTRAVENOUS INFUSION
 - ▶ Child 1–15 years: Initially 100–500 nanograms/kg/minute, adjusted according to response
 - ▶ Child 16–17 years: Initially up to 180 micrograms/minute, reduced to 30–60 micrograms/minute, adjusted according to response

- **UNLICENSED USE** Not licensed for use in children by intravenous infusion or injection.
- **CONTRA-INDICATIONS** Hypertension · severe hyperthyroidism
- **CAUTIONS** Coronary disease · coronary vascular thrombosis · diabetes · extravasation at injection site may cause necrosis · following myocardial infarction · hypercapnia · hyperthyroidism · hypoxia · mesenteric vascular thrombosis · peripheral vascular thrombosis · Prinzmetal's variant angina · susceptibility to angle-closure glaucoma · uncorrected hypovolaemia
- CAUTIONS, FURTHER INFORMATION**
 - ▶ Hypertensive response Phenylephrine has a longer duration of action than noradrenaline (norepinephrine), and an excessive vasopressor response may cause a prolonged rise in blood pressure.
- **INTERACTIONS** → Appendix 1: sympathomimetics, vasoconstrictor
- **SIDE-EFFECTS** Angina pectoris · arrhythmias · cardiac arrest · dizziness · dyspnoea · flushing · glucose tolerance impaired · headache · hyperhidrosis · hypersalivation · hypotension · intracranial haemorrhage · metabolic change · mydriasis · palpitations · paraesthesia · peripheral coldness · pulmonary oedema · soft tissue necrosis · syncope · urinary disorders · vomiting
- **PREGNANCY** Avoid if possible; malformations reported following use in first trimester; fetal hypoxia and bradycardia reported in late pregnancy and labour.
- **MONITORING REQUIREMENTS** Contra-indicated in hypertension—monitor blood pressure and rate of flow frequently.
- **DIRECTIONS FOR ADMINISTRATION** For *intravenous injection*, dilute to a concentration of 1 mg/mL with Water for Injections and administer slowly. For *intravenous infusion*, dilute to a concentration of 20 micrograms/mL with Glucose 5% or Sodium Chloride 0.9% and administer as a continuous infusion via a central venous catheter using a controlled infusion device.
- **PRESCRIBING AND DISPENSING INFORMATION** Intravenous administration preferred when managing acute hypotension in children.

- **MEDICINAL FORMS** There can be variation in the licensing of different medicines containing the same drug. Forms available from special-order manufacturers include: solution for injection

Solution for injection

▶ Phenylephrine hydrochloride (Non-proprietary)

Phenylephrine (as Phenylephrine hydrochloride) 50 microgram per 1 ml Phenylephrine 500micrograms/10ml solution for injection pre-filled syringes | 1 pre-filled disposable injection [PoM] £15.00 | 10 pre-filled disposable injection [PoM] £150.00

Phenylephrine hydrochloride 100 microgram per 1 ml Phenylephrine 1mg/10ml solution for injection ampoules | 10 ampoule [PoM] £40.00

Phenylephrine hydrochloride 10 mg per 1 ml Phenylephrine 10mg/1ml solution for injection ampoules | 10 ampoule [PoM] £99.12
Phenylephrine 10mg/1ml concentrate for solution for injection ampoules | 10 ampoule [PoM] £99.12

5 Heart failure

Other drugs used for Heart failure Bendroflumethiazide, p. 117 · Candesartan cilexetil, p. 121 · Captopril, p. 118 · Chlorothiazide, p. 117 · Chlortalidone, p. 150 · Digoxin, p. 86 · Enalapril maleate, p. 120 · Glyceryl trinitrate, p. 142 · Hydralazine hydrochloride, p. 123 · Lisinopril, p. 120 · Losartan potassium, p. 122 · Metoprolol tartrate, p. 113 · Prazosin, p. 107 · Sodium nitroprusside, p. 124 · Valsartan, p. 122

BETA-ADRENOCEPTOR BLOCKERS > ALPHA- AND BETA-ADRENOCEPTOR BLOCKERS

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Carvedilol

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● INDICATIONS AND DOSE

Adjunct in heart failure (limited information available)

▶ BY MOUTH

- ▶ Child 2–17 years: Initially 50 micrograms/kg twice daily (max. per dose 3.125 mg) for at least 2 weeks, then increased to 100 micrograms/kg twice daily for at least 2 weeks, then increased to 200 micrograms/kg twice daily, then increased if necessary up to 350 micrograms/kg twice daily (max. per dose 25 mg)

- **UNLICENSED USE** Not licensed for use in children under 18 years.
- **CONTRA-INDICATIONS** Acute or decompensated heart failure requiring intravenous inotropes
- **INTERACTIONS** → Appendix 1: beta blockers, non-selective
- **SIDE-EFFECTS**
 - ▶ **Common or very common** Anaemia · asthma · dyspepsia · eye irritation · fluid imbalance · genital oedema · hypercholesterolaemia · hyperglycaemia · hypoglycaemia · increased risk of infection · oedema · postural hypotension · pulmonary oedema · renal impairment · urinary disorders · weight increased
 - ▶ **Uncommon** Alopecia · angina pectoris · constipation · hyperhidrosis · skin reactions
 - ▶ **Rare or very rare** Dry mouth · hypersensitivity · leucopenia · nasal congestion · severe cutaneous adverse reactions (SCARs) · thrombocytopenia
- **PREGNANCY** Information on the safety of carvedilol during pregnancy is lacking. If carvedilol is used close to delivery, infants should be monitored for signs of alpha-blockade (as well as beta-blockade).
- **BREAST FEEDING** Infants should be monitored as there is a risk of possible toxicity due to alpha-blockade (in addition to beta-blockade).