NORepinephrine

Warnings	Classification	Alternate Names
vesicant	sympathomimetic	LEVOPHED noradrenaline bitartrate, levarterenol bitartrate, NORepinephrine bitartrate

Indications

- maintenance of blood pressure in acute hypotensive states or shock.
- maintenance of cerebral perfusion in patients with cerebral vasospasm

Reconstitution and Stability

- available as NORepinephrine bitartrate vials:
  - each vial contains NORepinephrine base 4 mg/4 mL
  - store vials at room temperature; protect from light
- available as NORepinephrine bitartrate in dextrose 5% 250 mL premixed bags:
  - each bag contains NORepinephrine base 8 mg in dextrose 5% 250 mL (32 mcg/mL)
  - store premixed bags at room temperature, in foil overwrap to protect from light and oxygen (must be used within 30 days once removed from overwrap)
- do not use if the solution is pinkish or darker than slightly yellow or contains a precipitate

Compatibility

- compatible with dextrose 5%, sodium chloride 0.9%, dextrose 5%-sodium chloride 0.9% solution

Preparation and Administration

Administration Route	Approved	Preparation and Administration Instructions	Required Monitoring
Subcutaneous	NO		
Intramuscular	NO		
IV direct	NO		
IV intermittent	NO		
Continuous IV infusion	YES	**standard solution concentrations**: 16 mcg/mL: ○ dilute 4 mg in 250 mL 32 mcg/mL: ○ dilute 8 mg in 250 mL *or* ○ premixed bag, if available 64 mcg/mL: ○ dilute 16 mg in 250 mL **infuse by central line** ○ may use peripheral line in large vein in forearm; if possible, avoid hand, wrist, or antecubital fossa • pending insertion of central line • *or* for short term use per site protocol *rate must be controlled with an infusion pump*	Intensive Monitoring See site-specific restrictions (Full monitoring may be used short term when treatment is initiated and transfer for hemodynamic monitoring is imminent)

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Dosage

- dosing refers to NORepinephrine base:
  2 mg NORepinephrine bitartrate is equivalent to 1 mg NORepinephrine base
- initial dose: 5 to 15 mcg/min continuous IV infusion
- usual maintenance dose: 2 to 40 mcg/min; titrate every 5 to 15 min to achieve desired blood pressure (higher doses have been used; however, further increments above 1 mcg/kg/min may not achieve similar dose-response effects compared to lower doses)

Potential Hazards of Parenteral Administration

- rapid IV: tachycardia, premature ventricular contractions, chest pain
- extravasation risk (vesicant); may cause sloughing and necrosis
  - **refer to** : Extravasation Management (Non-Antineoplastic Vesicant/ Irritant Medications) – Adults
  - treat with phentolamine (administer within 12 hours), refer to phentolamine monograph
- hypersensitivity reactions
- discontinue gradually to avoid a sudden drop in blood pressure

Important Implications

Contraindications/Cautions

- high doses over prolonged periods and low doses in patients with occlusive vascular disease have resulted in gangrene of extremities due to vasoconstriction.
- contraindicated in patients with pheochomocytoma
- Pregnancy/Lactation: refer to Lexicomp or Micromedex

Side effects
- headache, anxiety, restlessness, tremor, hypertension, arrhythmias

Monitoring
- monitor urine output, perfusion of extremities,
- monitor peripheral infusion site Q1H and PRN for signs of extravasation

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