

This document is for **reference only**. Please refer to SWO's for specific indications, dosages, and applications



Drug Name: Norepinephrine
Trade Name: Noradrenalin, Nor-Epi, Levophed

REVISED: December 01, 2022

- Class:**
- Adrenergic Catecholamine
 - Sympathomimetic
 - Vasopressor

- Mechanism of Action:**
- α --peripheral vasoconstriction,
 - Increases systemic vascular resistance and blood pressure

- Indications:**
- Refractory hypotension

- Contraindications:**
- Untreated hypovolemia
 - Hypertension
 - Suspected mesenteric Ischemia (relative)

- Precautions:**
- Ischemic heart disease
 - Cerebrovascular insufficiency
 - Pulmonary edema
 - Deactivated/precipitates with alkaline solutions (NaHCO₃)
 - Increases myocardial oxygen demand
 - Peripheral vascular Disease
 - Pregnancy (C)
 - Geriatrics
 - Protect from light

Dosage:

Adults:

IV Infusion

- IV/IO: 0.01- 2 mcg/kg/min
- Start at 0.1 mcg/kg/min.
 - Titrated to maintain MAP>65 or SBP >100

Pediatrics:

- IV/IO: 0.01- 2 mcg/kg/min
- Start at 0.1 mcg/kg/min.
 - Titrated to maintain MAP>65 or SBP >100

Onset:

- IV/IO: 1-2 min

Duration:

- Based on infusion duration

Side Effects:

- Anxiety
- Tachycardia
- HTN
- Angina
- Arrhythmias
- V-Fib
- N/V
- Fear
- Headache
- Pallor
- Dizziness
- Tremors

DRUG: NOREPINEPHRINE

RX

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Interactions:

- Potentiated by MAOIs and TCAs
- Antagonized by beta blockers
- Precipitates in alkaline solutions such as Sodium Bicarbonate

PEARLS:

Caution should be observed to avoid extravasation of norepinephrine during intravenous administration. Check the infusion site frequently for free-flow.

- **Preferred Concentration/mixture:** 4 mg/250 cc normal saline.
 - May also be available in 8 mg/250 ml.
 - **Confirm concentration prior to administration.**
- **Ensure that aggressive fluid resuscitation is accomplished (unless contraindicated) prior to norepinephrine use.**
- **Nor epinephrine infusions should be administered by infusion pump only.**
- **Nor epinephrine infusions should be established in the largest vein possible for the clinical situation.**
 - **Norepinephrine is preferentially given through a central line but in the field and in emergent situations it can be given peripherally through good IV access.**
 - **Avoid administering nor epinephrine through an IV in the hand, wrist, or leg.** These veins are more likely to be affected by vaso-occlusive diseases and more prone to ischemic complications.
 - Administration through IO in the leg is permitted
- **Nor epinephrine is necrotic to tissue.**
 - Observe and monitor for infiltration. Caution should be observed to avoid extravasation of norepinephrine during intravenous administration.
 - Check the infusion site frequently for free-flow.
 - Blanching along the course of the infused vein, sometimes without obvious extravasation, has been attributed to vasa vasorum constriction with increased permeability of the vein wall, permitting some leakage. **If blanching occurs**, consider changing the infusion site at intervals to allow the effects of local vasoconstriction to subside.
 - An ischemic area may be identified by a cool, hard, and pallid appearance.
- Sodium bicarbonate will inactivate nor-epinephrine; flush line well between administration.
- Concurrent/simultaneous administration of beta agonists may produce increases in heart rate and mild bronchodilation.