

Push-Dose (PD) EPINEPHRINE 10 mcg/mL (1 mg/100 mL) (Adrenalin)

Classification: Sympathomimetic agent (catecholamine)

Actions:

- Increases cardiac output due to increased inotropy, chronotropy, dromotropy (β_1 effect)
- Relaxes smooth muscles of the respiratory tract (β_2 effect)
- Increases systolic blood pressure due to increased cardiac output (β_1 effect) and vasoconstriction (α effect)

Indications:

1. Symptomatic adult bradycardia refractory to other therapies
2. ROSC with persistent hypotension
3. Distributive shock (septic or neurogenic) unresponsive to fluid resuscitation
4. Cardiogenic shock with signs/symptoms of CHF or not responding to fluid resuscitation

Contraindications: **There are no absolute contraindications in a life-threatening situation**

Precautions:

- Hypovolemia: correct volume depletion prior to administration
- Cardiac disease and ischemia

Adverse Effects (select list): *Frequency not defined:*

- CNS: Excitability, dizziness, drowsiness, disorientation, headache, exacerbation of Parkinson's, paresthesia, cerebral hemorrhage
- Resp: **Dyspnea, pulmonary edema**
- CV: Angina, cardiac ischemia, HTN, vasoconstriction, palpitations, **tachyarrhythmia, supraventricular and ventricular dysrhythmias, CVA**
- Metabolic: hyperglycemia, hypoglycemia, hypokalemia, acidosis
- GI: Nausea and vomiting
- Other: Tremor, pallor, erythema, diaphoresis, piloerection
- Tissue necrosis at injection site

Administration: Mix 1 mL of epinephrine 1:10,000 (0.1 mg/mL) with 9 mL NS in a 10 mL syringe. Mixture now provides 10 mL of epinephrine at a 10 mcg/mL concentration

LABEL SYRINGE with "Epinephrine 10 mcg/mL"

ADULT DOSE

Base station order only: 1 mL IVP every 1-3 min

Repeat as needed. No max

- Titrate timing of repeat doses to maintain SBP >90 mmHg, heart rate, or other indicators of perfusion

PEDIATRIC DOSE

Base station order only: 1 mL IVP (0.1 mL/kg if <10 kg) every 1-3 min
Repeat as needed. No max

- Titrate timing of repeat doses maintain age appropriate minimum SBP mmHg, or other indicators of perfusion.

Bradycardia: See epinephrine 1:10,000 formulary

Pharmacology:

Onset:

- Immediate

Duration:

- Half-life <5 min
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Notes:

- Attempt to correct hypovolemia with IV fluid bolus prior to administration of any vasopressors.
- **Anaphylactic shock and pediatric bradycardias** with circulatory collapse, refer to Protocols #611 and #644. Base physician may order PD epinephrine at their discretion.