



REGIONAL ADULT PARENTERAL DRUG MONOGRAPH

GENERIC NAME
EPINEPHrine



Effective Date: Dec 2011

Revised Date: Nov 2024

CLASSIFICATION
**Sympathomimetic
Adrenergic Agonist**

OTHER NAMES
Adrenalin

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ADMINISTRATION POLICY:

- IV Infusion Administration restricted to nurses experienced in ED/OR/CARDIAC ROOM/ICU/PACU
- IV Bolus Administration restricted to nurses under direct supervision of prescriber
- Intraosseous (IO) -May be administered by a nurse
- IM Injection -May be administered by a nurse
- Subcutaneous -May be administered by a nurse
- Nebulization -May be administered by a nurse

RECONSTITUTION/DILUTION/ADMINISTRATION:

Available as: 1 mg/mL – 1 mL ampoule, 30 mL vial PROTECT FROM LIGHT
 0.1 mg/mL – 10 mL pre-filled syringe

IV Bolus: Administer using the 0.1 mg/mL pre-filled syringe

Subcutaneous/IM: Administer using the 1 mg/mL ampoule

IV Infusion: Pump Library:

EPINEPHrine Bradycardia

Drug Library	Dose Rate	Short Name	Care Unit
Yes	mcg/min	epi brady	Critical Care
Drug	Diluent	Final Volume (VTBI)	Final Concentration
5 mg (5 mL of 1 mg/mL)	100 mL normal saline	105 mL	0.048 mg/mL
Clinical Advisory: High Alert			
Soft Low Dose Limit: 2 mcg/min		Soft High Dose Limit: 10 mcg/min	

EPINEPHrine Vasopressor

Drug Library	Dose Rate	Short Name	Care Unit
Yes	mcg/kg/min	epi vaso	Critical Care
Drug	Diluent	Final Volume (VTBI)	Final Concentration
5 mg (5 mL of 1 mg/mL)	100 mL normal saline	105 mL	0.048 mg/mL
Clinical Advisory: High Alert			
Soft Low Dose Limit: 0.01 mcg/kg/min		Soft High Dose Limit: 3 mcg/kg/min	

DOSAGE:

Cardiac Arrest:

- IV Bolus:** 1 mg (using the 0.1 mg/mL pre-filled syringes) and follow with a 20 mL normal saline IV flush. Repeat as necessary every 3 to 5 minutes.
- IV Continuous:** 0.1 to 0.5 mcg/kg/minute – titrate to patient’s response

(dosage continued)



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DOSAGE (continued):
Anaphylactic Reaction:
IM (preferred): 0.5 mg (using the 1 mg/mL ampoule) Recommended site: anterolateral thigh. Repeat as necessary every 5 to 15 minutes as needed.
IV Continuous: Anaphylaxis (hypotension and decreased level of consciousness) not responding after second or third epinephrine strongly consider to initiate IV/IO infusion at 0.1 mcg/kg/minute increasing every 2 to 3 minutes by 0.05 mcg/kg/minute until mean arterial pressure greater than 70 mmHg
NOTE: *Subcutaneous administration is not recommended due to its slower absorption*

Hypotension refractory to dopamine/dobutamine:
IV continuous: 0.01 to 0.1 mcg/kg/min. Increase by doubling the dose (or by 0.02 mcg/kg/min) every 3 to 15 minutes until desired effect.

Bradycardia:
IV continuous: Initial 2 to 10 mcg/minute. Usual range 8 to 40 mcg/minute. Titrate to desired effect

Nebulization: 5 mg, repeat as necessary

Maximum single dose:

IV/IO:	1 mg
IM:	0.5 mg
Nebulized:	5 mg

Maximum concentration:

IM/Subcut:	1 mg/mL
IV continuous:	0.1 mg/mL

Maximum rate: Bronchospasm: over 1 to 2 minutes

STABILITY/COMPATIBILITY:

Stability of diluted solution: 24 hours at room temperature

Compatibility: Compatible with normal saline, D5W, dextrose/saline solutions, Lactated Ringer

PRECAUTIONS, POTENTIAL ADVERSE REACTIONS:

- Tachycardia, arrhythmias, hypertension, angina, palpitations, headache, angina, weakness, anxiety
- Extravasation can cause serious local irritation or skin necrosis

ADDITIONAL NOTES AND NURSING CONSIDERATIONS:

- During cardiac arrest if the IV/IO route is not available, administer 2 to 2.5 times the IV dose diluted to 10 mL with normal saline via the endotracheal tube
- Peripheral administration may be used only as an interim measure until a central venous access device is established
- Continuous cardiac monitoring
- Monitor vital signs
- Monitor blood glucose
- If 0.1 mg/mL prefilled syringe not available; may prepare solution by diluting 1 mL of the 1 mg/mL solution with 9 mL of normal saline (1 mg = 10 mL; 0.1 mg = 1 mL)