

EPINEPHRINE 1 MG/1000 ML (1 MCG/ML) INFUSION

ACTION: Inotropic, Chronotropic

- Catecholamine (sympathomimetic)
- Dose dependent stimulation of alpha, beta and dopaminergic receptors.

INDICATIONS Hypotension due to:

- **Cardiogenic shock.**
- **Distributive shock:** Neurogenic and anaphylactic shock.
- **Symptomatic bradycardias** unresponsive to other treatments such as atropine and pacing.

CONTRAINDICATIONS:

- None in life threatening situation

POTENTIAL SIDE EFFECTS:

- Tachydysrhythmias including V-Tach and V-Fib
- Hypertension
- Nausea and vomiting
- Chest pain, ischemia and acute MI exacerbation
- Extravasation causes tissue necrosis

ADULT DOSE/ROUTE:

⇒ **Cardiogenic or distributive shock:** Inject 1 mg (1:1000 OR 1:10,000) epinephrine into 1000 ml of 0.9% sodium chloride. Infuse at 1-3 drips/second (6-18 ml/min) ~10-20 ml/min using the 10 drip/ml drip chamber. If SBP>90 mm Hg, use roller clamp to slow rate.

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PEDIATRIC DOSE/ROUTE:

⇒ Inject 1mg (1:1000 OR 1:10,000) epinephrine into 1000 ml of 0.9% sodium chloride. Connect the liter bag to a Buretrol.

⇒ Fill a Buretrol with 100 ml of the mixed solution.

⇒ Run the infusion at 0.3 mL/kg/min, which is 0.3 drops/kg/second-minute using the drip chamber. Use roller clamp to adjust rate as necessary to achieve normotension. If the patient is greater than 20kg, see adult dosing.

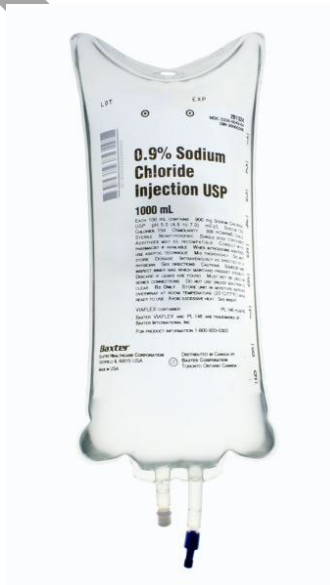
NOTES:

- Do not infuse in same line with sodium bicarbonate
- Ensure that the patient is not hypovolemic before infusing
- Label bag clearly to prevent rapid infusion
- Microdrip chambers have 1060 droips per mL, so the 1 drip/second is equivalent to 6 ml/min, or 6 mcg/min. drip rate is the same as the flow rate. 10mL/min = 10mcg/min, for instance.

Epinephrine 1mcg/ml infusion preparation



Add 1ml of 1:1000 = 1mg **OR** 10ml of 1:10,000 = 1mg
to 1000ml 0.9% sodium chloride



Effective: 02/03/20
Supersedes: 05/22/19

DRAFT

EPINEPHRINE (Adrenaline)

ACTION: Sympathomimetic

- Catecholamine (sympathomimetic) with alpha and beta adrenergic action.
- Results in increased heart rate, systemic vascular resistance, and blood pressure. It also causes bronchodilation due to its effects of beta-2 adrenergic receptors.

INDICATIONS:

- All cardiac arrest patients, including V-Fib, pulseless V-Tach, asystole and PEA.
- Anaphylaxis.
- Severe bronchospasm.
- Refractory symptomatic bradycardia.

CONTRAINDICATIONS:

- None in cardiac arrest.
- Tachydysrhythmias.
- Use with extreme caution for severe asthma or allergic reactions in patients >age 40 or in patients with coronary artery disease since myocardial ischemia may be precipitated.
- Intravenous Epinephrine should **only** be used in extreme emergencies or cardiac arrest. Use intramuscular initially for patients with anaphylaxis.

POTENTIAL SIDE EFFECTS:

- Increased myocardial O₂ demand leading to chest pain and myocardial ischemia.
- Tachydysrhythmias including V-Tach and V-Fib.
- Headache and dizziness.
- Nausea and vomiting.

ADULT DOSE/ROUTE:

- ⇒ **For Anaphylaxis and severe bronchospasm:** (1:1,000) 0.3mg IM. May repeat x1. If hypotension not responding to IM Epinephrine x2 or IV fluid boluses, give Epinephrine (1:10,000) IV 0.1mg slow IV/IO over 5 minutes. Max IV dose 0.3mg.
- ⇒ For Symptomatic bradycardia, follow epinephrine infusion protocol above.
- ⇒ **Cardiac Arrest:** (1:10,000) 1mg IVP/IO at the time intervals specified in Protocol 2.04 Cardiac Arrest - VF/pulseless VT and asystole/PEA.

PEDIATRIC DOSE/ROUTE:

- ⇒ **For anaphylaxis and severe bronchospasm:** (1:1,000) 0.01 mg/kg IM in anterolateral thigh. May repeat x1 in 5 minutes. If patient not responding to IM epinephrine x2, follow epinephrine infusion protocol above.
- ⇒ **Cardiac Arrest:** 0.01 mg/kg IVP/IO (1:10,000) at the time intervals specified in Protocol 2.04 Cardiac Arrest – VF/pulseless VT and asystole/PEA.

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