

Epinephrine

<u>Allergic Reaction/Anaphylaxis</u>		
Adult	B	Intramuscular: 0.3 mg IM (0.3mL 1:1000). May repeat q5 minutes.
	P	Nebulized: 0.05 mg/kg 1:1000 (max 3mg) mixed with NS to total volume of 3mL. May repeat up to three treatments. IV Infusion: Start at 4mcg/min. Titrate 2mcg/min q1min to max of 16mcg/min. Mini Bolus: 5-10mcg IV/IO (0.5 - 1mL 1:100,000). May repeat q1 min.
Pediatric	B	Intramuscular: If <25kg, 0.15mg IM (0.15mL Epi 1:1000). May repeat q5 minutes. <i>Lateral thigh preferred.</i> If >25kg, 0.3mg IM (0.3mL Epi 1:1000). May repeat q5 minutes. <i>Lateral thigh preferred.</i>
	P	IV Infusion: Start at 0.1mcg/kg/min. Titrate 0.1mcg/kg/min q1min to max of 1.5 mcg/kg/min or 16mcg/min, whichever is lowest. Nebulized: 0.05 mg/kg 1:1000 (max 3mg) mixed with NS to total volume of 3mL. May repeat up to three treatments.
<u>Adult Cardiac Arrest</u> <u>Infants and Children in Cardiac Arrest</u> <u>Neonatal Resuscitation</u>		
Adult	I	IV/IO Push: 1 mg IV/IO (10mL 1:10000). May repeat q10 minutes.
Pediatric >1mo		IV/IO Push: 0.01mg/kg IV/IO (0.1mL/kg 1:10000). May repeat q10 minutes.
Neonatal <1mo		IV/IO Push: 0.01mg/kg IV/IO (0.1mL/kg 1:10000). May repeat q3-5 minutes.
<u>Adult Congestive Heart Failure / Pulmonary Edema</u> <u>Ventricular Assist Device</u> <u>Bites and Envenomations</u> <u>Adult Symptomatic Bradycardia</u> <u>Adult Drug Overdose</u> <u>Pediatric Symptomatic Bradycardia</u> <u>Pediatric Drug Overdose</u>		
Adult	P	IV Infusion: Start at 4mcg/min. Titrate 2mcg/min q1min to max of 16mcg/min. Mini Bolus: 5-10mcg IV/IO (0.5 - 1mL 1:100,000). May repeat q1 min.
Pediatric	P	IV/IO Push: 0.01mg/kg IV/IO (0.1mL/kg 1:10000). May repeat q3-5 minutes. IV Infusion: Start at 0.1mcg/kg/min. Titrate 0.1mcg/kg/min q1min to max of 1.5 mcg/kg/min or 16mcg/min, whichever is lowest.
<u>Stridor/Croup</u>		
Pediatric	P	Nebulized: 0.05 mg/kg 1:1000 (max 3mg) mixed with NS to total volume of 3mL. May repeat up to three treatments.
<u>Reactive Airway Disease</u>		
Adult	I	Intramuscular: 0.3 mg IM (0.3mL 1:1000). May repeat q5 minutes.
	P	IV Infusion: Start at 4mcg/min. Titrate 2mcg/min q1min to max of 16mcg/min. Mini Bolus: 5-10mcg IV/IO (0.5 - 1mL 1:100,000). May repeat q1 min.
Pediatric >2yo	I	Intramuscular: If <25kg, 0.15mg IM (0.15mL Epi 1:1000). May repeat q5 minutes. <i>Lateral thigh preferred.</i> If >25kg, 0.3mg IM (0.3mL Epi 1:1000). May repeat q5 minutes. <i>Lateral thigh preferred.</i>
<u>Adult Sepsis/Septic Shock</u> <u>Adult Post-ROSC Care</u> <u>Pediatric Sepsis/Septic Shock</u> <u>Pediatric Post-ROSC Care</u>		
Adult	P	IV Infusion: Start at 4mcg/min. Titrate 2mcg/min q1min to max of 16mcg/min. Mini Bolus: 5-10mcg IV/IO (0.5 - 1mL 1:100,000). May repeat q1 min.
Pediatric		IV Infusion: Start at 0.1mcg/kg/min. Titrate 0.1mcg/kg/min q1min to max of 1.5 mcg/kg/min or 16mcg/min, whichever is lowest.

KEY POINTS

Drug Mixing and Administration: See [Mixing of Vasopressors](#)
Clinical Considerations: See [Vasopressors](#)
Weight-Based Pediatric Dosing Chart: See [Weight Based Pediatric Dosing Chart](#)

All drips should be run through a pump if possible.
Epinephrine is the preferred vasopressor for pediatrics.

Anaphylaxis/Angioedema/Urticaria:

- EMT-Basics can assist with the self-administration of patient's own (prescribed) Epinephrine auto-injector (Epi-Pen) after MCEP contact.

Class:

- Sympathomimetic catecholamine

Description of Use:

- Stimulates alpha-adrenergic receptors and beta-1 / beta-2 adrenergic receptors to produce vasoconstriction, cardiac stimulation, and bronchodilation.

Pharmacokinetics (IV):

- Onset: 3-5 mins
- Peak: 20 mins
- Duration: 1-3 hrs
- Half-life: Short

Special Populations:

- Pregnancy Category: C
- Children: No age related precautions noted.
- Elderly: May be more sensitive to sympathomimetic effects.

Contraindications:

- Narrow-angle glaucoma
- Cautions: Caution with heart disease; may precipitate/aggravate angina pectoris or produce ventricular arrhythmias. Caution during labor and delivery; may result in uterine vasoconstriction, decreased uterine blood flow, and fetal anoxia. Caution with hyperthyroidism, Parkinson's disease, diabetes mellitus (DM), pheochromocytoma, pregnant women, and in elderly.

Adverse Reactions:

- Anxiety, restlessness, tremor, weakness, dizziness, sweating, palpitations, pallor, nausea, vomiting, headache, respiratory difficulties.