

EPINEPHRINE

2024

ACTIONS

1. Increases myocardial contractile force, heart rate, and systemic vascular resistance, raising blood pressure.
2. Bronchodilator

INDICATIONS

1. Cardiac arrest
2. Systemic allergic reactions/anaphylaxis
3. Asthma and other forms of reactive airway disease
4. Treatment of bradycardia, with the pulse, in pediatric resuscitation
5. Temporary blood pressure support for the hypotensive patient before Intubation or while awaiting norepinephrine drip.
6. Croup (inhaled)

PRECAUTIONS

1. It must be used cautiously in patients with hypertension, hyperthyroidism, ischemic heart disease, or cerebrovascular insufficiency.
2. Should not be added directly to bicarbonate infusion.
3. Epinephrine should be administered in a large, patent vein, i.e., the AC or larger. IO administration permitted.
4. Extravasation may lead to tissue necrosis. Therefore, the IV line should be monitored continuously for patency before administration.

SIDE EFFECTS

1. Anxiety, tremors, palpitations, tachycardia, headache, and hypertension.
2. At the IM injection site, a temporary area of blanching may occur.
3. With nebulized administration, perioral pallor or blanching may be noted and requires no treatment.

ADULT

Cardiac Arrest:

- 1 mg (10 ml of 1:10,000 solution) IVP or IO every 4 min during arrest, EMT-I, Paramedic
- ET 2.0 mg per dose. (2 ml of a 1:1,000 solution is preferred because of the smaller volume) *Paramedic Only*



Allergic Reaction/Anaphylaxis

- 0.3 - 0.5 mg (0.3 – 0.5 ml of 1:1,000). May repeat X 1. *EMT AEMT, EMT-I, Paramedic*

Allergic Reaction Refractory to IM epinephrine:

- If the patient is pulseless, treat as per the cardiac arrest protocol.
- If the patient has a pulse but a Systolic BP of < 90, impending respiratory failure or altered mental status, administer 0.5 cc of 1:10,000 (cardiac epinephrine) IV or IO while preparing and epinephrine drip. MR in 5 minutes X 1



	<ul style="list-style-type: none"> • Administer epinephrine drip IV beginning at 0.1 mcg/kg/min. Call OLMC of receiving hospital. <p>Preparation/Administration of Epinephrine Drip</p> <ol style="list-style-type: none"> 1. Add 1 mg of epinephrine (1 cc of 1:1000) to a 100 cc NS med bag. The result is a 10 mcg/ml concentration. 2. Divide patient weight, in kg, by 100. 3. The result is the number of ccs to be delivered over 1 minute. 4. Example: 70 kg patient divided by 100 = 0.7 0.7 ml (7 mcg) administered over 1 minute. Using a 60 gtt/ml drip set, that is 42 drops per minute 5. Increase drip rate by half every 3 minutes until SBP > 90. <p>Temporary Blood Pressure Support for the Hypotensive Patient</p> <ul style="list-style-type: none"> • Prepare ten mcg/ml solution as above and administer one cc IVP. • May repeat x 1 <p>Asthma Reactive Airway Disease</p> <ul style="list-style-type: none"> • 0.3 mg (0.3 ml of 1:1,000 solution) IM. <i>Paramedic Only</i> • Standing orders if < age 40 and no cardiac disease; otherwise, Call OLMC of receiving hospital.
<p>PEDIATRIC</p>  	<p>Neonate and Pediatric Cardiac Arrest:</p> <ul style="list-style-type: none"> • 0.1 ml/kg of 1:10,000 IVP or IO - every 4 Min. <i>EMT-I, Paramedic</i> <p>Allergic Reaction/Anaphylaxis:</p> <ul style="list-style-type: none"> • Children between 15 and 25 kg: Epi Auto Injection Device: 0.15 mg IM. May repeat x 1 <i>EMR, EMT, AEMT, EMT-I, Paramedic</i> • Children > 25 kg: Epi Auto Injection Device: 0.3 mg IM. • For children of any weight: 0.01 ml/kg of a 1:1,000 solution IM. Maximum of 0.5 ml of 1:1000. May repeat x 1. <i>EMT, AEMT, EMT-I, Paramedic.</i> • If the patient is pulseless, treat as per the cardiac arrest protocol. <p>Allergic Reaction Refractory to IM epinephrine:</p> <ul style="list-style-type: none"> • If the patient has a pulse but has not responded to IM epinephrine, administer epinephrine drip IV at 0.1 mcg/kg/min (the same as the adult dose). Call OLMC of receiving hospital. • Prepare drip as in the adult section for a ten mcg/ml solution. • Administer 0.01 ml/kg/min (0.1 mcg/kg/min). <ol style="list-style-type: none"> 1. Example: 10 kg child would get 0.1 ml/minute (1 mcg/minute) 2. With at 60 gtt/min drip set = to 6 drops per minute

