

**Pharmacologic properties:**

Epinephrine is a sympathomimetic which stimulates both alpha and beta adrenergic receptors. Its effects are to increase systemic vascular resistance, arterial blood pressure, coronary and cerebral blood flow, heart rate and contractility. The alpha-adrenergic effect increases vascular resistance and coronary blood flow, which may make the fibrillating myocardium more susceptible to counter-shock. The beta adrenergic effect increases heart rate and cardiac output, and induces bronchodilation.

**Indications:**

- Anaphylaxis and acute allergic reactions associated with severe systemic symptoms (BP < 90 mmHg, stridor, severe respiratory distress) in adults and pediatrics

**Contraindications:**

- Known hypersensitivity

**Precautions:**

- Presence of hypertension
- Epinephrine 1:1,000 cannot be given intravenously in non-cardiac arrest patients
- Epinephrine is inactivated by alkaline solutions and should not be mixed with Sodium Bicarbonate

**Adverse Reactions:**

- Anxiety, Headache, Cerebral hemorrhage, Tachycardia, Ventricular dysrhythmias, Hypertension, Angina, Nausea and vomiting

**Dosage and administration:***Adult*

- Allergic reactions
  - 0.3 - 0.5 mg (0.3-0.5 cc) IM repeated every 3 – 5 minutes.

*Pediatric*

- Cardiac Arrest
  - Administer 0.01 mg/kg IVP / IO or 0.1 mg/kg ET followed by 0.1 mg/kg IVP / IO or ET every 3 minutes.
- Allergic reactions
  - 0.01 mg/kg up to 0.3 mg IM for allergic reactions.