**Class and Action:** Sympathomimetic; stimulates alpha and beta receptors. May cause rapid increase in BP, ventricular contractility and heart rate. Causes vasoconstriction in the cutaneous arterioles, mucosa, and spleen. Antagonizes histamine.

**Indications:** Acute allergic reaction, acute asthma attack, cardiac arrest, profound symptomatic bradycardia

**Contraindications:** Hypersensitivity (unlikely), hypovolemia, coronary insufficiency.

**Side Effects:** Headache, nausea, restlessness, weakness, dysrhythmias, hypertension, tachycardia, angina

**Drug Interactions:** MAO inhibitors and bretylum may potentiate the effect of epinephrine, beta antagonists may blunt response, can be deactivated by alkaline solutions such as sodium bicarb and furosemide.

**Onset, Duration, and Routes:** Onset is 1-2 minutes for IV/IO. Duration for all routes is 5-10 minutes. Routes include IV, IO, or IM.

**Adult Dose:**
Anaphylaxis (1:1,000) IM:
- 25-50 kg - 0.3 mg
- 60 kg - 0.4 mg
- 70+ kg - 0.5 mg

Shock 0.05 - 1.0 mcg/kg/min

Cardiac Arrest - 1 mg IV/IO

**Pediatric Dose:**
Anaphylaxis <25 kg 0.15 mg IM

Cardiac Arrest (1:10,000):
- 0.01 mg/kg (0.1 ml/kg)

Neonate Resuscitation (1:10,000):
- 10-30 mcg/kg (0.1-0.3 ml/kg)

**WDM EMS Protocols:**
- B6. Cardiac arrest
- C4: Allergic Reaction/Anaphylaxis
- C12. Shock
- D5. Pediatric Cardiac Arrest
- D6. Neonatal Resuscitation

**Special Considerations:**
- Make sure you are looking at the right concentration, have partner double check dosages.
- Infusion - Mix 4 mg in 250 ml NS or D5W

Date of Most Recent Update: 6/2020