**EPINEPHRINE 1:1,000 (Adrenalin®)**

**Classification:** Sympathomimetic agent (catecholamine)

**Actions:**
1. Increases cardiac output due to increased inotropy, chronotropy, dromotropy, and AV conduction (β₁ effect)
2. Relaxes smooth muscles of the respiratory tract (β₂ effect)
3. Increases systolic blood pressure due to increased cardiac output (β₁ effect) and vasoconstriction (α effect)
4. Increases coronary perfusion during CPR by increasing aortic diastolic pressure

**Indications:**
1. Cardiopulmonary arrest
2. Anaphylaxis
3. Respiratory distress with wheezing
4. Pediatric symptomatic bradycardia
5. Neonatal resuscitation
6. Suspected croup or epiglottitis

**Contraindications:**
1. Use with caution in pregnancy.
2. Consider base physician consultation if possible if the patient has history of MI, angina or hypertension.

**Adverse Effects:**

<table>
<thead>
<tr>
<th>Cardiovascular</th>
<th>Neurological</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tachycardia</td>
<td>Anxiety</td>
</tr>
<tr>
<td>Hypertension</td>
<td>Dizziness</td>
</tr>
<tr>
<td>Chest pain</td>
<td>Headache</td>
</tr>
<tr>
<td>Palpitations</td>
<td>Tremors</td>
</tr>
<tr>
<td>Ventricular fibrillation</td>
<td>Seizures</td>
</tr>
</tbody>
</table>

**Gastrointestinal**
Nausea/vomiting

**Administration:**

**ADULT DOSE**
1. **Asthma:** 0.01 mg/kg IM, not to exceed 0.5 mg, may repeat every 5 minutes, not to exceed 3 doses

2. **Allergic reaction/anaphylaxis:** 0.01 mg/kg IM, not to exceed 0.5 mg, may repeat every 5 minutes, not to exceed 3 doses

3. If the patient is in extremis: 0.01 mg/kg **SL** injection, not to exceed 0.5 mg, may repeat every 5 minutes, not to exceed 3 doses
EPINEPHRINE 1:1,000 (Adrenalin®) CONTINUED

**PEDIATRIC DOSE**

1. **Asthma:** 0.01 mg/kg, IM, not to exceed 0.3 mg, may repeat every 5 minutes, not to exceed 3 doses

2. **Allergic reaction/anaphylaxis:** 0.01 mg/kg, IM, not to exceed 0.3 mg, may repeat every 5 minutes, not to exceed 3 doses

3. If the patient is in extremis: 0.01 mg/kg **SL** injection, not to exceed 0.3 mg, may repeat every 5 minutes, not to exceed 3 doses

4. **Bradycardia:** The first line drug in pediatric bradycardia is epinephrine 1:10,000

**Notes:**

- IM administration is with 1-1½" needle in anterior/lateral thigh or deltoid.
- SL injection is with a small 25 gauge ¼" TB syringe.
- Tachycardia is not a contraindication to Epinephrine.