The most important and effective action in neonatal resuscitation is ventilation of the baby's lungs.

**Airway**
- Put baby's head in "sniffing" position
- Suction mouth, then nose
- Suction trachea if meconium-stained and NOT vigorous

**Breathing**
- PPV for apnea, gasping, or pulse <100 bpm
- Ventilate at rate of 40 to 60 breaths/minute
- Listen for rising heart rate, audible breath sounds
- Look for slight chest movement with each breath
- Use CO₂ detector after intubation
- Attach a pulse oximeter

**Circulation**
- Start compressions if HR is <60 after 30 seconds of effective PPV
- Give (3 compressions: 1 breath) every 2 seconds
- Compress one-third of the anterior-posterior diameter of the chest

**Drugs**
- Give epinephrine if HR is <60 after 30 seconds of compressions and ventilation
- Caution: epinephrine dosage is different for ET and IV routes

**Corrective Steps**
- Chest compressions
- Coordinate with PPV
- Intubate if no chest rise

**Endotracheal Intubation**

<table>
<thead>
<tr>
<th>Gestational Age (weeks)</th>
<th>Weight (kg)</th>
<th>ET Tube Size (ID, mm)</th>
<th>Depth of Insertion* (cm from upper lip)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;28</td>
<td>&lt;1.0</td>
<td>2.5</td>
<td>6-7</td>
</tr>
<tr>
<td>28-34</td>
<td>1.0-2.0</td>
<td>3.0</td>
<td>7-8</td>
</tr>
<tr>
<td>34-38</td>
<td>2.0-3.0</td>
<td>3.5</td>
<td>8-9</td>
</tr>
<tr>
<td>&gt;38</td>
<td>&gt;3.0</td>
<td>3.5-4.0</td>
<td>9-10</td>
</tr>
</tbody>
</table>

*Depth of Insertion (cm) = 6 + weight (in kg)

Medications Used During or Following Resuscitation of the Newborn

**Epinephrine**
- IV (UVC preferred route)
  - 0.1 mL/kg
  - Endotracheal 1 mL/kg
  - ETT (MAXIMUM 3 mL/dose)
- Concentration: 1:10,000
- Total IV Volume (mL) by weight (kg):
  - 1 kg: 0.1 mL
  - 2 kg: 0.2 mL
  - 3 kg: 0.3 mL
  - 4 kg: 0.4 mL

**Volume expanders**
- Isotonic crystalloid (normal saline) or blood
- Concentration: 10 mL/kg IV
- Total IV Volume (mL) by weight (kg):
  - 1 kg: 10 mL
  - 2 kg: 20 mL
  - 3 kg: 30 mL
  - 4 kg: 40 mL

*Note: Endotracheal dose may not result in effective plasma concentration of drug. So vascular access should be established as soon as possible. Drugs given endotracheally require higher dosing than when given IV.