Hypotension / Shock

**History**
- Blood loss - vaginal or gastrointestinal bleeding, AAA, ectopic
- Fluid loss - vomiting, diarrhea, fever
- Infection
- Cardiac ischemia (MI, CHF)
- Medications
- Allergic reaction
- Pregnancy
- History of poor oral intake

**Signs and Symptoms**
- Restlessness, confusion
- Weakness, dizziness
- Weak, rapid pulse
- Pale, cool, clammy skin
- Delayed capillary refill
- Hypotension
- Coffee-ground emesis, Tarry stools

**Differential**
- Ectopic pregnancy
- Dysrhythmias
- Pulmonary embolus
- Tension pneumothorax
- Medication effect / overdose
- Vasovagal
- Physiologic (pregnancy)
- Sepsis

---

**Blood Glucose Analysis Procedure**

**12 Lead ECG Procedure**

**IV / IO Procedure**

**Cardiac Monitor**

**Airway Protocol(s) if indicated**

**Diabetic Protocol AM 2 if indicated**

**Cardiac/Arrhythmia Protocol(s) if indicated**

---

**History and Exam Suggest Type of Shock**

**Cardiogenic**

**Hypovolemic**

**Distributive**

**Obstructive**

---

**Chest Pain: Cardiac and STEMI Protocol AC 4**

**Appropriate Cardiac Protocol(s) if indicated**

**Normal Saline Bolus 500 mL IV**

Repeat to effect SBP > 90

2 L Maximum

Caution with excess fluids

Consider:

- Epinephrine 1 - 10 mcg/min IV / IO
- Dopamine 2 -20 mcg/kg/min IV / IO

Titrated to SBP ≥90 mmHg

**Norepinephrine 1-10mcg/min. IV/IO or**

**Dopamine 5-20 mcg/min. IV/IO**

Titrated to SBP >90 mmHg

---

**Suspected Sepsis Protocol UP 14 if indicated**

**Multiple Trauma Protocol TB 6 if indicated**

**Normal Saline Bolus 500 mL IV**

Repeat to effect SBP > 90

2 L Maximum

Caution with excess fluids

---

**Notify Destination or Contact Medical Control**
Hypotension / Shock

Pearls
- **Recommended Exam:** Mental Status, Skin, Heart, Lungs, Abdomen, Back, Extremities, Neuro
- Hypotension can be defined as a systolic blood pressure of less than 90. This is not always reliable and should be interpreted in context and patients typical BP if known. Shock may be present with a normal blood pressure initially.
- Shock often is present with normal vital signs and may develop insidiously. Tachycardia may be the only manifestation.
- Consider all possible causes of shock and treat per appropriate protocol.
- For non-cardiac, non-trauma hypotension, consider Dopamine when hypotension unresponsive to fluid resuscitation.
- **Hypovolemic Shock:**
  - Hemorrhage, trauma, GI bleeding, ruptured aortic aneurysm or pregnancy-related bleeding.
  - **Tranexamic Acid (TXA):** Utilize TXA as per Multiple Trauma Protocol TB-6.
- **Cardiogenic Shock:**
- **Distributive Shock:**
  - Sepsis
  - Anaphylactic
  - Neurogenic: Hallmark is warm, dry, pink skin with normal capillary refill time and typically alert.
  - Toxins
- **Obstructive Shock:**
  - Pericardial tamponade. Pulmonary embolus. Tension pneumothorax.
  - Signs may include hypotension with distended neck veins, tachycardia, unilateral decreased breath sounds or muffled heart sounds.
- **Acute Adrenal Insufficiency or Congenital Adrenal Hyperplasia:**
  - Body cannot produce enough steroids (glucocorticoids / mineralocorticoids.) May have primary or secondary adrenal disease, congenital adrenal hyperplasia, or more commonly have stopped a steroid like prednisone. Injury or illness may precipitate. Usually hypotensive with nausea, vomiting, dehydration and / or abdominal pain. If suspected Paramedic should give Methylprednisolone 125 mg IM / IV / IO. May administer prescribed steroid carried by patient IM / IV / IO. Patient may have Hydrocortisone (Cortef or Solu-Cortef). Dose: < 1y.o. give 25 mg, 1-12 y.o. give 50 mg, and > 12 y.o. give 100 mg or dose specified by patient’s physician.