Hypothermia: What's the big deal
Body’s normal response

- Peripheral vasoconstriction
  - Increased SVR

- Increased cardiac output
  - Oxygen demand increased

- Shivering
  - Myocardial oxygen demand can increase upwards of 600%
  - Limited by glycogen availability
  - Loss of shivering ability at 32ºC

Hypothermia
Effects

- Hyperglycemia – Insulin becomes inefficient
- Cold diuresis
  - Caused by peripheral vasoconstriction, hyperglycemia, and decreased reabsorption of water
- Metabolic acidosis
  - Hyperkalemia
- Coagulopathy - DIC
  - Increased bleeding time
  - Enzymatic reactions needed to maintain clotting cascades are inefficient

Hypothermia
Hypothermia

**Effects**

- **EKG changes**
  - J waves or Osborne waves and QT prolongation are proportional to the degree of hypothermia
  - Typically not seen in temps greater than 25ºC

- **Oxygen delivery is compromised**
  - Adequately oxygenate the blood but it will not release the oxygen to the tissues (Left shift of oxyhemoglobin dissociation curve)