

Causes

- **Hyperventilation**
 - Anxiety or panic attack
 - During CPR
- **Hypermetabolic states**
 - Fever
 - Liver failure
 - Sepsis
- **Acute hypoxia** (2^o pulmonary disease, severe anemia, pulmonary embolus, hypotension)

RESPIRATORY ALKALOSIS

pH > 7.45
PCO₂ < 35

Results from alveolar hyperventilation & hypocapnia.
↑ elimination of CO₂

S/S

- ↑ **Rate & depth of respirations**
- **Tachycardia**
- **Anxious, restless**
- **Lightheadedness**
- **Muscle weakness**
- **Difficulty breathing**
- **Confusion, syncope**
- **Apnea**
- **Hyperventilation**
- **Tingling in fingers & toes**
- **EKG changes** (prominent U wave, flattened T wave)
- **Vasoconstriction of peripheral & cerebral vessels due to ↓ Ca⁺⁺**
- **Tetany, Arrhythmias**
- **↓ LOC, Seizures, Coma**

Associated Drugs

- **Catecholamines**
- **Nicotine**
- **Salicylates**
- **Xanthines** (Aminophylline)

Labs/Diagnostics

- pH > 7.45
- PCO₂ < 35
- HCO₃ may be normal when acute but < 22 when alkalosis is

Tx

- Tx underlying cause**
- **Remove causative agent**
 - **↓ Fever**
 - **Eliminate source of sepsis**
 - **Meds**
 - **Counteract hyperventilation by breathing into paper bag**