

Causes

- ↑ **Acid** ↓ **Base** in plasma
- **Overproduction of ketones**
 - **DM, Chronic ETOH, Severe malnutrition/starvation, ↓ CHO intake, Hyperthyroidism, Severe infection**
- **Lactic Acidosis**
 - **Shock, HF, Pulm disease, Hepatic d/o, Seizures, Strenuous exercise**
- **↓ Kidneys ability to excrete acids**
- **Excessive GI losses**
- **Pts ċ poisoning or toxic reaction to drug**

METABOLIC ACIDOSIS

pH < 7.35
HCO₃ < 22

Caused by a ↑ in H⁺ production
Depress the CNS

S/S

- **Respiratory**
 - **Hyperventilation → Kussmaul's (rapid & deep)**
 - **Fruity breath odor**
- **Neuro**
 - **↓ LOC**
 - **↓ Muscle tone & DTR**
- **Cardiac**
 - **↓ CO, ↓ BP**
 - **Arrhythmias (if ↑ K⁺)**
 - **Skin warm, dry → cold, clammy**
 - **Weakness, dull headache**
- **GI**
 - **Anorexia, N, V**

Associated Drugs

- **K⁺ sparing diuretic (acetazolamide)**
- **Toluene**
- **Aspirin or Aspirin-containing med**

Labs/Diagnostics

- **pH < 7.35**
- **HCO₃ < 22**
- **PCO₂ < 35 (if compensating)**
- **↑ Serum K⁺**
- **↑ BG & ketones**
- **↑ Plasma lactate (ċ lactic acidosis)**
- **↑ Anion gap**
- **EKG changes**

Tx

- **Respiratory compensation**
- **Rapid-acting insulin**
- **IV sodium bicarb**
- **Dialysis**
- **Anitbiotic**
- **Antidiarrheal**
- **Ventilatory support**