

Ingestible toxins are virtually endless, however, some of the more common and dangerous toxins include: toxic alcohols (methanol, ethylene glycol) and salicylates, like aspirin, lithium, sodium valproate and carbamazepine. Methanol, ethylene glycol and salicylates (aspirin) can also cause an anion-gap metabolic acidosis, in addition to direct cytotoxic effects.

### **Overload (Volume)**

#### **Overloaded Volume-cup**

Patients with congestive heart failure or chronic kidney disease can develop severe volume overload, which can lead to compromised respiratory function. If initial medical therapy with loop diuretics (like furosemide) fails, then dialysis is indicated to rapidly clear the excess fluid.

### **Uremia**

#### **U-rainbow**

Urea is a nitrogen-containing byproduct produced by the liver and excreted by the kidneys. It is normally harmless when dissolved in the blood, but high concentrations of urea can lead to abnormalities, such as encephalitis, pericarditis, and coagulopathies due to platelet dysfunction.

### **Encephalitis**

#### **Brain-in-flames**

Uremia leads to an excessive nitrogen load, which itself can cause CNS conditions, like encephalitis. Patients present with altered mental status, seizures and coma.

### **Pericarditis**

#### **Pear-heart-on-fire**

Uremia causes both serous pericarditis and fibrinous pericarditis. Serous pericarditis involves fluid accumulating within the pericardial sac. Fibrinous pericarditis involves fibrin-rich exudate forming within the pericardial sac. Patients present with pleuritic chest pain and EKG changes, like global ST segment elevation.