

**BOX 5-1** *Functional Classifications and Examples of Shock*

**Hypovolemic: A Decrease in Circulating Blood Volume**

Hemorrhage  
Severe dehydration  
Trauma

**Cardiogenic: A Decrease in Forward Flow from the Heart**

Congestive heart failure  
Cardiac arrhythmia  
Cardiac tamponade  
Drug overdose (e.g., anesthetics,  $\beta$ -blockers, calcium channel blockers)

**Distributive: A Marked Decrease or Increase in Systemic Vascular Resistance or Maldistribution of Blood**

Sepsis  
Obstruction (heartworm disease, saddle thrombosis)  
Anaphylaxis  
Catecholamine excess (pheochromocytoma, extreme fear)  
Gastric dilatation-volvulus

**Metabolic: Deranged Cellular Metabolic Machinery**

Hypoglycemia  
Cyanide toxicity  
Mitochondrial dysfunction  
Cytopathic hypoxia of sepsis

**Hypoxemic: A Decrease in Oxygen Content in Arterial Blood**

Anemia  
Severe pulmonary disease  
Carbon monoxide toxicity  
Methemoglobinemia