

2.10 POISONING AND OVERDOSE

EMSAC OCTOBER 2025

General Assessment
<ul style="list-style-type: none">• Make sure the scene is safe• Consider body substance isolation or appropriate PPE• When indicated, obtain an accurate ingestion history:<ul style="list-style-type: none">• Identify specific medication taken (including immediate release vs sustained release)• Time of ingestion or toxin• Route of exposure• Quantity of medication or toxin taken• When appropriate, bring evidence of all medications (prescribed and not prescribed) found in the environment• Note alcohol or other intoxicant taken• If bringing in exposure agent, consider the threat to yourself and the destination facility• Obtain pertinent cardiovascular history and other prescribed medications• Check for needle marks, paraphernalia, bites, bottles, or evidence of agent involved in exposure, self-inflicted injury, or trauma• Law enforcement should have checked for weapons and drugs, but you may need to re-check• Perform remainder of physical examination
BLS Treatment – General Guidelines
<ul style="list-style-type: none">• Position of comfort• NPO except as noted below• Oxygen as indicated
ALS Treatment – General Guidelines
<ul style="list-style-type: none">• Establish IV/IO, Normal Saline at TKO• For nausea / vomiting, may administer Ondansetron

2.10 POISONING AND OVERDOSE

EMSAC OCTOBER 2025

ANTIPSYCHOTICS WITH EXTRAPYRAMIDAL REACTION
<p><u>Drug class examples:</u> droperidol, donepezil, haloperidol, olanzapine, quetiapine, risperidone,</p> <p><u>Presentation:</u> Acute dystonic reaction may have involuntary, sustained muscle contractions, often causing abnormal postures and movements and/or difficulty speaking</p>
ALS Management
<ul style="list-style-type: none"> Diphenhydramine

CALCIUM CHANNEL or BETA BLOCKER TOXICITY
<p><u>Drug class examples:</u></p> <p><u>Calcium Channel Blockers:</u> amlodipine, diltiazem, nifedipine, verapamil</p> <p><u>Beta Blockers:</u> atenolol, carvedilol, labetalol, metoprolol, nadolol, propranolol, sotalol, timolol</p> <p><u>Presentation:</u> bradycardia, hypotension, hypoglycemia and altered mental status</p>
BLS Management
<ul style="list-style-type: none"> Check blood glucose level
ALS Management
<ul style="list-style-type: none"> Obtain 12-lead EKG Activated Charcoal Calcium Chloride as indicated for Calcium Channel Blocker overdose. Glucagon as indicated for Beta Blocker Toxicity.

CARBON MONOXIDE
<p><u>Example exposures:</u> smoke inhalation, use of gas stoves for heat, occupational exposures (e.g. paint strippers)</p> <p><u>Presentation:</u> Carbon monoxide is a colorless, odorless gas which has a high affinity for binding to red cell hemoglobin, thus preventing the binding of oxygen to the hemoglobin, leading to tissue hypoxia (although pulse oximetry may appear to be normal). Duration of exposure and concentration of CO will determine onset and severity of symptoms.</p> <p><u>COHb levels 10-20%:</u> symptoms are typically mild and include headache and nausea</p> <p><u>COHb levels 20-30%:</u> associated muscle weakness and impaired cognition</p> <p><u>COHb levels 30-50%:</u> can result in cardiac ischemia and unconsciousness</p>
BLS Management
<ul style="list-style-type: none"> Administer high-flow Oxygen via NRB. Assist ventilations with BVM as needed. Do NOT withhold Oxygen therapy for patients with suspected carbon monoxide poisoning and “normal” pulse oximeter values

CYANIDE

2.10 POISONING AND OVERDOSE

EMSAC OCTOBER 2025

Example exposures: smoke inhalation, ingestion of certain foods, occupational exposures (metal extraction and plastics)

Presentation: nausea, headache, anxiety, agitation, weakness, muscular trembling, seizures

BLS MANAGEMENT

- Remove contaminated clothing. Do NOT transport with patient.

ALS MANAGEMENT

- Give **Hydroxocobalamin** for suspected overdose and if available
- Hydroxocobalamin is not routinely stocked on the ambulances but is available in your provider disaster caches. Transport patient to receiving hospital for treatment if there is any delay in ability to administer **Hydroxocobalamin**.

NARCOTICS/OPIOID OVERDOSE

Drug Class Examples: fentanyl, heroin, meperidine (Demerol), hydrocodone-acetaminophen (Norco), methadone (Dolophine), morphine, oxycodone (OxyContin, Roxicodone), oxycodone-acetaminophen (Percocet)

Presentation: pinpoint pupils, respiratory depression/apnea, decreased level of consciousness, bradycardia, hypotension and decreased muscle tone

BLS Management

- For suspected overdose with respiratory depression not responsive to BLS airway interventions: **Naloxone**
- Consider EMS-Distributed Leave Behind Naloxone under **Policy 2.03 Altered Mental Status**
- After administering **Naloxone**, assess for possible opiate withdrawal

ALS Management

- If patient is subsequently in opioid withdrawal after naloxone, consider **Buprenorphine (see 2.18 Opioid Withdrawal)**

2.10 POISONING AND OVERDOSE

EMSAC OCTOBER 2025

ORGANOPHOSPHATES-PESTICIDES
<p><u>Example Exposures:</u> malathion, parathion, chlorpyrifos</p> <p>For Organophosphates poisoning with concern for nerve agents see 11.03 Special Circumstances</p> <p><u>Presentation:</u></p> <ul style="list-style-type: none"> • Symptoms “SLUDGE” (Salivation, Lacrimation, Urination, Diaphoresis/Diarrhea, Gastric hypermotility, Emesis/Eye (small pupils, blurry vision)) • Symptoms that result in death are the Killer B’s: Bronchorrhea, Bronchospasm, Bradycardia • Severe exposures may result in decreased level of consciousness, fasciculation/muscle weakness, paralysis, seizures
ALS MANAGEMENT
<ul style="list-style-type: none"> • Administer Atropine until respiratory secretions are controlled SLUDGE symptoms subside. • Treat seizures with Midazolam.

TRICYCLIC ANTIDEPRESSANTS/SODIUM CHANNEL BLOCKER OVERDOSE
<p><u>Drug class examples:</u></p> <p><u>Tricyclic Antidepressants:</u> amitriptyline, clomipramine, nortriptyline</p> <p><u>Sodium Channel Blocker:</u> diphenhydramine, lidocaine, flecainide, lamotrigine, phenytoin</p> <p><u>Presentation:</u> dilated pupils, hypotension, myoclonus, cardiac dysrhythmia (prolonged QRS), seizure, altered mental status</p>
ALS MANAGEMENT
<ul style="list-style-type: none"> • Obtain 12-lead EKG • If SBP <90, seizure, and/or QRS widening > 0.10 seconds is present: Sodium Bicarbonate

Comments
<ul style="list-style-type: none"> • May contact Poison Control at 1-800-222-1222 if unfamiliar with substance. May follow Poison Control recommendations if they within scope of practice.
Base Hospital Contact Criteria
<ul style="list-style-type: none"> • Contact Base Physician if Poison Control recommends treatment outside of current protocols • Suspected Narcotic overdose not responsive to max doses of Naloxone. • Bradycardia and/or hypotension caused by a CALCIUM CHANNEL BLOCKER: CALCIUM-CHLORIDE • Bradycardia and/or hypotension caused by a beta blocker: Glucagon.