

Suspected overdose or exposure to an unknown drug:

Provide excellent symptomatic and supportive care
Utilize **ACLS** and **PALS** Guidelines if needed

Obtain good **patient history** (scene where patient was found and PMH)
May need to obtain information from EMS, friend, or family member

Determine if a **Toxidrome** is present by looking at signs and symptoms
VS: Heart rate, blood pressure, temperature, respiratory rate, oxygenation
Physical exam: ENT, neuro, pulmonary, CV, GI/GU, Derm, and odors

Call poison control at **1-800-222-1222**

Obtain and assess **laboratory** data:
CMP – assess for acidosis (low bicarb or CO₂), hyper/hypoglycemia, electrolyte abnormalities, renal and liver function
Calcium/Magnesium – low calcium or magnesium may contribute to QTc prolongation

ABG – obtain if acidotic or hypoxic
Lactic acid – obtain if acidotic or if suspect cyanide or metformin exposure

CPK – obtain if patient was seizing, found down, or has persistent muscle activity
Coagulation studies – may be elevated in liver injury or after anticoagulant exposure

Serum Osmolality – aids in determining if a toxic alcohol was ingested (a normal osmolality cannot rule out toxic alcohol ingestion)
Urinalysis – may detect myoglobinuria, hematuria, or crystalluria (ethylene glycol ingestion cannot be ruled out if calcium oxalate crystals are absent)

CBC – obtain if risk of exposure to a bone marrow suppressing agent (e.g. colchicine or methotrexate)
Urine pregnancy test – should be checked in all women of childbearing age

Specific toxicology testing – quantitative salicylate, ethanol, and 4 hour acetaminophen levels; other drug levels may be indicated based on circumstances

Carboxyhemoglobin – obtain if patient was found down indoors, in proximity to open flames or a machine that produces CO (even if machine was not running)

Methemoglobin – obtain if blood has brown color, cyanosis is unresponsive to oxygen, or exposure to methemoglobin inducing agent

Urine drug screen – may or may not be helpful as there are numerous false positives and false negatives

Antidotes

Contact the IPCC for questions or specific dosing instructions regarding the therapies listed below or any other antidote.

Activated Charcoal – Most effective if given within the first hour post-ingestion. However, activated charcoal should NEVER be given to a patient (a) with an unprotected airway; (b) who is unconscious, semiconscious or may soon lose consciousness; (c) who is seizing. A risk-benefit analysis regarding the decision of whether or not to give activated charcoal to a patient who has ingested a seizure-inducing substance needs to be performed on a case-by-case basis.

Flumazenil (Romazicon®) – The use of flumazenil in overdoses involving benzodiazepines (BZD) is generally not recommended. Flumazenil can lower the seizure threshold and can cause BZD withdrawal and seizures in patients chronically taking BZD's.

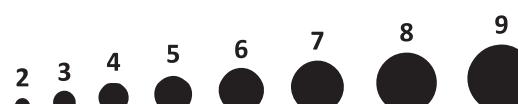
Naloxone (Narcan®) – Naloxone should be used with caution in patients with opioid overdoses. Naloxone's clinical effects last only approximately 30-45 minutes, and this is a much shorter duration than the clinical effects of most opioids. Consequently, re-sedation and decreased respiratory rate or apnea may reappear, with potentially disastrous or lethal results. Naloxone may put chronic opioid users into withdrawal.

Iowa Poison Control Center Surveillance

The National Poisoning Data System (NPDS) is the only real-time surveillance database in the U.S. De-identified poison center data from across the entire U.S. is collected in the NPDS. Unusual patterns in the data are identified and real-time automated alerts are sent to the appropriate poison control center to determine if the unusual pattern is an indicator of a possible public health threat. To help in accurate identification of potential threats, it is important to have all poisoning cases reported to poison control centers.

Exposures handled by the Iowa Poison Control Center

Automotive products
Biological, chemical, and radiological terrorism
Drugs of abuse
Drug overdoses (e.g. therapeutic, illicit, foreign, veterinary)
Eye exposures
Fertilizers, herbicides, and pesticides
Food poisonings
Food and drug recalls
Hazardous materials
Household and OTC products
Industrial chemicals
Marine intoxications (e.g. jellyfish, scombroid)
Medication errors
Plant and mushroom ingestion
Venomous bites and stings (e.g. snake, spider, bee)
And....many others



IOWA
POISON
CONTROL CENTER

1-800-222-1222

When calling the poison control center please provide the following if available:

- Facility name and if referring to another facility
- Patient's name and age
- Drugs or chemicals involved
 - Quantity
 - Strength
 - Formulation (e.g. IR, SR, XR)
- Route used (e.g. ingested, snorted, inhaled, injected)
- Time of exposure
- Medical history and allergies
- Present condition and mental status
- Vital signs
- Fluids and medications given
- Laboratory results
- X-ray and CT results

	Sympathomimetic (Stimulant)	Anticholinergic	Cholinergic	Opioid	Ethanol or Sedative-Hypnotic	Tricyclic Antidepressant	Salicylate	Methemoglobinemia	Serotonin Syndrome
Pupils	Dilated	Dilated	Constricted	Constricted (Dilation with propoxyphene & meperidine)	Constricted/Dilated	Dilated	No change	No change	Dilated
BP	Increased	No change/Increased	Increased/Decreased	Decreased	Decreased	Increased/Decreased	Decreased (severe OD)	Decreased	Increased
P	Increased	Increased	Decreased	Decreased	Decreased	Increased	Increased	Increased	Increased
RR	Increased	Increased/Decreased	No change/Increased	Decreased	Decreased	Decreased	Increased	Increased	Increased
Temp	Increased	Increased	No change	Decreased	No change/Decreased	Increased	Increased	No change	Increased
Mental Status	Agitation, hyperactivity, psychosis, seizures	Confusion, delirium, agitation, hallucinations, seizures, coma	Confusion, stupor, coma, seizures	Euphoria, stupor, coma	Agitation, confusion, stupor, coma	Lethargy, agitation, hallucinations, coma, seizures	Confusion, delirium, lethargy, seizures	Lethargy, coma, seizures	Confusion, agitation, coma, seizures
Neuromuscular	Tremors	Dyskinesias	Muscle fasciculations, weakness, paralysis	Hyporeflexia	Ataxia, hyporeflexia	Ataxia, dyskinesias	No specific findings	No specific findings	Hyperreflexia, inducible clonus, myoclonus, tremor
Other signs & symptoms	Flushing, hyperactive bowel sounds, sweating, tachydysrhythmias	Dry mucous membranes, flushed/hot/dry skin, hypoactive bowel sounds, urinary retention, QRS prolongation (not all anticholinergics)	Bronchorrhea, bronchospasm, diarrhea, garlic odor, lacrimation, salivation, sweating, urination	Slowed GI tract	Nystagmus, vesicle/bullae formation from barbiturate-induced coma	Nystagmus, QRS prolongation, slowed GI tract	Metabolic acidosis, respiratory alkalosis, tinnitus, vomiting, wintergreen odor from methyl salicylate	Metabolic acidosis, chocolate brown colored blood, cyanosis not relieved with oxygen, dizziness, headache, nausea	Metabolic acidosis, rhabdomyolysis
Treatment & Antidote	Supportive care, benzodiazepines	Supportive care, benzodiazepines, sodium bicarb (for wide QRS)	Supportive care, atropine, benzodiazepines, pralidoxime	Supportive care, naloxone	Supportive care	Supportive care, benzodiazepines, sodium bicarb (for wide QRS)	Supportive care, sodium bicarb, dialysis	Supportive care, oxygen, methylene blue	Supportive care, benzodiazepines, cyproheptadine
Common drugs in category	Amphetamines Caffeine Cocaine MDMA (Ecstasy) Methylphenidate Theophylline	Antihistamines Atropine Jimsonweed Phenothiazines Tricyclic antidepressant	Carbamate insecticides Muscarinic mushrooms Organophosphate insecticides Physostigmine	Codeine Fentanyl Heroin Hydrocodone Methadone Morphine Oxycodone	Alcohol Barbiturates Benzodiazepines GHB Rohypnol Skeletal muscle relaxants	Amitriptyline Desipramine Doxepin Imipramine Nortriptyline	Aspirin Bismuth subsalicylate Methyl salicylate Salicylic acid Salsalate	Aniline dyes Dapsone Local anesthetics - (e.g. benzocaine) Nitrates/Nitrites Phenazopyridine	SSRI's (multiple & single agent overdose) Drug interactions MDMA (Ecstasy) LSD

The constellation of findings depends upon the severity of the toxicodrome. A severe case will have most or all of the findings listed, while less severe cases may have only a few of the findings.