

## OVERDOSE / TOXIC INGESTION / POISONING

There are numerous agents and drugs which produce toxic effects in patients. This protocol is designed to provide the general guidelines for treatment. Specific treatments or antidote therapy may be appropriate as directed by the Medical Command Physician in consultation with the WV Poison Control Center. Providing as much information as possible to Medical Command will allow more accurate evaluation, treatment, and coordination of medical care.

- A. Perform **Initial Treatment / Universal Patient Care Protocol**.
- B. Routes:
  - 1. **Ingested Poisons:**
    - a. Protect airway.
    - b. Do not induce vomiting.
    - c. Transport the patient with all containers, bottles, and labels from the substance, if safe to do so.
  - 2. **Inhaled Poisons:**
    - a. Immediate removal from hazardous environment.
    - b. Maintain airway and support respirations.
    - c. Transport the patient with all containers, bottles, and labels from the substance, if safe to do so.
  - 3. **Absorbed Poisons:**
    - a. Remove the poison using procedures described in **Burn Protocol 4506**.
    - b. Transport the patient with all containers, bottles, and labels from the substance, if safe to do so.
  - 4. **Injected Poisons:**
    - a. See treatment guidelines for specific substance.
- C. After decontamination procedures have been completed, do not delay transport.

**Note:** Remember that a toxic exposure poses a significant risk to both the rescuer and patient; appropriate scene management and decontamination are critical.

## OVERDOSE / TOXIC INGESTION / POISONING

- D. Determine the following:
- What?
  - When?
  - How much?
  - Over what period of time?
  - Were any actions taken by bystanders, family members, and/or patient prior to EMS arrival?
- E. Overdose / Toxic Ingestion / Poisoning Emergencies
- Alcohol:**
    - Emergencies involving alcohol can range from acute intoxication to alcohol withdrawal and delirium tremens (DTs).
    - Assess the patient and follow the proper protocol for medical management based on clinical presentation.
      - Consider hypoglycemia. Perform rapid glucose determination. If glucose < 60 mg/dL or clinical signs and symptoms indicate hypoglycemia, refer to the **Diabetic Emergencies Protocol 4604**.
      - For signs and symptoms of hypovolemic shock or dehydration, follow the **Hypoperfusion Shock Protocol 4108**.
      - For seizures due to alcohol withdrawal, refer to the **Seizure Protocol 4603**.
    - For alcohol withdrawal with severe agitation, tachycardia, hypertension, or hallucinations:

- Midazolam (Versed®)** 2 mg IV/IO/IM or 5 mg (IN) via atomizer.

**NOTE: Midazolam may not be tolerated well in patients over 55 years of age. Doses should be initiated low and repeated as needed. Administration of these medications in patients > 55 years of age shall be as follows:**

**Midazolam (Versed®)** 1 mg IV/IO/IM or 5 mg (IN) via atomizer.

## OVERDOSE / TOXIC INGESTION / POISONING

### 2. Narcotics / Opiates:

- a. Support respirations, as necessary, with a BVM and supplemental O<sub>2</sub>.  
Defer consideration of advanced airway management until after administration of Naloxone, if BVM ventilation is adequate based on SpO<sub>2</sub> at 94 - 99%.
- b. Consider hypoglycemia. Perform rapid glucose determination. If glucose is < 60 mg/dL or clinical signs and symptoms indicate hypoglycemia, refer to the **Diabetic Emergencies Protocol 4604**.
- c. For a suspected narcotic overdose complicated by respiratory depression:
  - i. Administer **Naloxone (Narcan®)** up to 2 mg IV titrated slowly at 0.4 mg/minute to restore the respiratory drive. If patient does not show signs of improvement (adequate respiratory response/increased LOC) administer up to an additional 2 mg IV titrated slowly at 0.4 mg/minute.
  - ii. If unable to obtain IV access, give **Naloxone (Narcan®)** 2 mg IN. Medication should be administered equally in each nostril. If patient does not show signs of improvement (adequate respiratory response/increased LOC) administer an additional 2 mg IN,

### 3. Tricyclic Antidepressants:

- a. Support respirations, as necessary, with a BVM and supplemental O<sub>2</sub>.
- b. For serious signs and symptoms (altered mental status, sustained tachycardia < 120 bpm, widened QRS complex or hypotension):
  - i. Infuse a 20 mL/kg bolus NS. If no improvement after two 20 mL/kg boluses NS, assess for fluid overload during administration, then:

- ii. Contact **Medical Command** for further treatment options.



**Tricyclic Antidepressants include:** Amitriptyline (Elavil®), Doxepin (Sinequan®, Adepin®), Imipramine (Tofranil®).

### 4. Cholinergics:

- a. Support respirations, as necessary, with a BVM and supplemental O<sub>2</sub>.
- b. For serious signs and symptoms (respiratory distress, SLUDGE syndrome,

## OVERDOSE / TOXIC INGESTION / POISONING

seizures, or HR < 60 bpm): Administer **Atropine** 2 mg IV. Repeat every five (5) minutes, if needed.

Pesticides (Organophosphates, Carbamates) and nerve gas agents (Sarin, Soman) are the most common exposures.

**S** – Salivation  
**L** – Lacrimation  
**U** – Urination  
**D** – Defecation  
**G** – Gastrointestinal cramping  
**E** – Emesis

### 5. Calcium Channel Blockers:

- a. Support respirations, as necessary, with a BVM and supplemental O2.
- b. For serious signs and symptoms (altered mental status, HR < 60 bpm, conduction delays, SBP < 90 mm Hg, slurred speech, nausea/vomiting):
  - i. Administer **Atropine** 1 mg IV.

- ii. If no response to the initial **Atropine** dose contact **Medical Command** for further treatment.



### 6. Beta Blockers:

- a. Support respirations, as necessary, with a BVM and supplemental O2.
- b. For serious signs and symptoms (altered mental status, HR < 60 bpm, conduction delays, SBP < 90 mm Hg, slurred speech, nausea/vomiting):
  - i. Infuse a 20 mL/kg bolus NS. If no improvement after two (2) 20 mL/kg boluses NS, contact **Medical Command** for direction. If the patient develops signs and symptoms of fluid overload respiratory distress (dyspnea, crackles, rhonchi, decreasing SpO2), slow the IV to KVO.
  - ii. Administer **Glucagon** 1 mg IV. If additional **Glucagon** is available, administer 2 mg IV as the initial dose repeated at 2 mg IV in 10 minutes.

- iii. If no response, consider transcutaneous pacing and contact **MCP**.



### 7. Stimulants:

- a. Assess the patient and follow the proper protocol for medical management

## OVERDOSE / TOXIC INGESTION / POISONING

based on clinical presentation.

- b. Support respirations, as necessary, with a BVM and supplemental O2.
- c. Serious signs and symptoms (seizures, tachydysrhythmias, etc.):
  - i. For tachydysrhythmias with HR > 120 bpm, **Midazolam** (Versed®) 2 mg slow IV push, titrated to effect.
  - ii. For patients that are severely agitated or combative, follow the **Behavioral Emergencies / Patient Restraint Protocol 4607**.

### 8. Cyanide Exposure (Optional):

- a. Support respirations, as necessary, with a BVM and supplemental O2.
- b. Serious signs and symptoms [altered mental status, confusion, disorientation, mydriasis (excessive pupil dilation), seizures, coma and cardiovascular collapse; see drug reference for additional signs and symptoms]
  - i. Administer Cyanokit® 5 g of Hydroxocobalamin, infused over 15 minutes. Note: Pediatric dose is 70 mg/kg.
  - ii. If signs and symptoms persist, contact **MCP** for additional treatment.
- c. Signs and symptoms of Cyanide poisoning include headache, confusion, dyspnea, chest tightness, nausea, altered mental status, seizures, coma, mydriasis, hypertension (early), hypotension (late), tachypnea (early), cardiovascular collapse, and vomiting.
- d. Reconstitute **Hydroxocobalamin** with Normal Saline per manufacturer's directions.
- e. Comprehensive treatment of acute Cyanide intoxication requires support of vital functions.

