

Genesee County
TRAUMA AND ENVIRONMENTAL
POISONING/OVERDOSE/ENVIRONMENTAL EXPOSURE

Initial Date: 11/15/2012
Revised Date: 01/26/2018

Section 2-9

Poisoning/Overdose/Environmental Exposure

GENERAL MANAGEMENT OF TOXIC EXPOSURE (INCLUDING INGESTION)

1. Follow **General Pre-hospital Care Protocol**.
2. Use proper protective equipment and prepare for decontamination if necessary.
3. Remove clothing exposed to chemical (dry decon).
4. Identification of the substance (patient has been exposed to).
5. If altered mental status, refer to **Altered Mental Status Protocol**.
6. If respiratory distress, refer to **Respiratory Distress Protocol**.
7. If the patient is seizing, refer to **Seizure Protocol**.



8. Alert receiving hospital if patient may present HAZMAT risk.
9. Sample of drug or substance and any medication or poison containers should be brought in with patient if it does NOT pose a risk to rescuers.



10. Refer to **Pain Management Procedure**

INHALATION EXPOSURES:

1. Ensure high concentration of oxygen is provided.
2. If suspected cyanide gas exposure, refer to **Cyanide Exposure Protocol** and contact medical control immediately.

INGESTION:

1. Use protective eye equipment.
2. If suspected opioid overdose, refer to **Naloxone Administration Procedure**.



3. If cardiac dysrhythmia, refer to appropriate dysrhythmia protocol.

4. For extrapyramidal dystonic reactions, administer Diphenhydramine
 - a. For adults, 50 mg IV.
 - b. For pediatrics 1 mg/kg IV (max dose 50 mg).



5. For symptomatic tricyclic antidepressant ingestions (tachycardia, wide complex QRS), administer sodium bicarbonate (**post-radio**)
 - a. Adults 50 mEq IV, repeat as needed.
 - b. Pediatrics 1mEq/kg IV, repeat as needed.
6. For symptomatic calcium channel blocker overdose, consider Calcium Chloride
 - a. Adults 1 gm IV.
 - b. Pediatrics 20 mg/kg IV (max dose 1 gm).

EYE CONTAMINATION:

1. Irrigate continuously with Normal Saline or tap water for 15 minutes (attempt to continue enroute) or as directed by Medical Control.
2. For alkali exposure, maintain continuous irrigation.



3. If available, administer Tetracaine, 1-2 drops per eye to facilitate irrigation. Ensure patient does not rub eye.

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Tetracaine Included?

Yes No

SKIN ABSORPTION:

1. Brush off dry chemicals before irrigation
2. Irrigate continuously with Normal Saline, or tap water for 15 minutes or as directed by Medical Control.

MANAGEMENT OF BITES AND STINGS

SPIDERS, SNAKES AND SCORPIONS:

1. Protect rescuers. Bring in spider, snake or scorpion if captured and contained or if dead for accurate identification.
2. Ice for comfort on spider or scorpion bite; DO NOT apply ice to snake bites.

BEEES AND WASPS:

1. Remove stinger by scraping out. Do not squeeze venom sac if this remains on stinger.
2. Provide wound care.
3. Observe patient for signs of systemic allergic reaction. Treat anaphylaxis per **Anaphylaxis/Allergic Reaction Protocol.**

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NERVE AGENT/ORGANOPHOSPHATE EXPOSURE

1. **Evaluate for signs and symptoms of exposure:** Salivation, Lacrimation, Urination, Defecation, Gastrointestinal hypermotility, Emesis, Muscle twitching or spasm (seizures)
 - a. **Minor symptoms only** – alert, salivation, eye watering, dim vision, drooling, nasal drainage, constricted pupils, abdominal cramps, diaphoresis
 - b. **Moderate symptoms** – alert, vomiting, muscle twitching, increase in minor symptoms
 - c. **Severe signs & symptoms** – decline in LOC, urinary incontinence, defecation, severe muscle twitching, seizure, respiratory distress/wheezing
2. Evaluate and maintain the airway, provide oxygenation and support ventilation as needed.
3. NOTE: Anticipate need for extensive suctioning
4. Antidote administration per Mark I Kit/Duo Dote auto-injector Dosing Directive – See Chart



5. Establish vascular access



6. Atropine 2-6 mg IV/IM per Mark I Kit Dosing Directive if Mark I Kit is not available (each Mark I Kit/Duo Dote auto-injector contains 2 mg of atropine)

7. Treat seizures

a. Adult

- i. Administer Midazolam 10 mg IM prior to IV start
- ii. (or) if IV/IO already established, administer Midazolam 5 mg IV/IO
- iii. (or) If available, Valium auto-injector



b. Pediatrics

- i. Administer Midazolam 0.1 mg/kg IM (maximum individual dose 10 mg) prior to IV start
- ii. (or) if IV/IO already established, administer Midazolam 0.05 mg/kg IV/IO (maximum individual dose 5 mg)
- iii. (or) If available, Valium auto-injector

8. Monitor EKG

9. Additional **Atropine** 2 mg IV/IM for continued secretions (0.05 mg/kg for pediatrics)



10. For severe symptoms (if 3 Nerve-agent Antidote kits are administered), administer benzodiazepine as noted for seizures.

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*NA Kit Dosing Directive			
Clinical Findings	Signs/Symptoms	Required Conditions	NA Kits To Be Delivered
SELF-RESCUE	Threshold Symptoms	<ul style="list-style-type: none"> • Dim vision • Increased tearing • Runny nose • Nausea/vomiting • Abdominal cramps • Shortness of breath 	<p style="text-align: center;">Threshold Symptoms -and- Positive evidence of nerve agent or OPP on site</p> <p style="text-align: center;">1 NA Kit (self-rescue)</p>
ADULT PATIENT	Mild Symptoms and Signs	<ul style="list-style-type: none"> • Increased tearing • Increased salivation • Dim Vision • Runny nose • Sweating • Nausea/vomiting • Abdominal cramps • Diarrhea 	<p style="text-align: center;">Medical Control Order</p> <p style="text-align: center;">1 NA Kit</p>
	Moderate Symptoms and Signs	<ul style="list-style-type: none"> • Constricted pupils • Difficulty breathing • Severe vomiting 	<p style="text-align: center;">Constricted Pupils</p> <p style="text-align: center;">2 NA Kits</p>
	Severe Signs	<ul style="list-style-type: none"> • Constricted pupils • Unconsciousness • Seizures • Severe difficulty breathing 	<p style="text-align: center;">Constricted Pupils</p> <p style="text-align: center;">3 NA Kits (If 3 NA Kits are used, administer 1st dose of available benzodiazepine)</p>
PEDIATRIC	Pediatric Patient with Non-Severe Signs/Symptoms	<i>Mild or moderate symptoms as above</i>	<p style="text-align: center;">Positive evidence of nerve agent or OPP on site</p> <p>Age ≥ 8 years old:</p> <ul style="list-style-type: none"> • As Above <p>Age < 8 years old</p> <ul style="list-style-type: none"> • Per Medical Control
	Pediatric Patient with Severe Signs/Symptoms	<ul style="list-style-type: none"> • Constricted pupils • Unconsciousness • Seizures • Severe difficulty breathing 	<p style="text-align: center;">Severe breathing difficulty</p> <p style="text-align: center;">Weakness</p> <p>Age ≥ 8 years old:</p> <ul style="list-style-type: none"> • 3 NA Kits <p>Age < 8 years old:</p> <ul style="list-style-type: none"> • 1 NA Kit <p style="text-align: center;">Contact Medical Control as needed</p>

***NOTE: Nerve-agent Antidote (NA) =1 Duo Dote or 1 Mark I**