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
   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.

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.

BEES 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.
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, dia phoresis
   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) and Pralidoxine Chloride 600 mg.
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.
**NA Kit Dosing Directive**

<table>
<thead>
<tr>
<th>Clinical Findings</th>
<th>Signs/Symptoms</th>
<th>Required Conditions</th>
<th>NA Kits To Be Delivered</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SELF-RESCUE</strong></td>
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<tr>
<td>Threshold Symptoms</td>
<td>Dim vision</td>
<td>Threshold Symptoms</td>
<td>1 NA Kit (self-rescue)</td>
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<tr>
<td></td>
<td>Increased tearing</td>
<td>-and- Positive evidence of nerve agent or OPP on site</td>
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<tr>
<td></td>
<td>Runny nose</td>
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<td></td>
<td>Nausea/vomiting</td>
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<td></td>
<td>Abdominal cramps</td>
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<td></td>
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<tr>
<td></td>
<td>Shortness of breath</td>
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<tr>
<td><strong>ADULT PATIENT</strong></td>
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<td></td>
</tr>
<tr>
<td>Mild Symptoms and Signs</td>
<td>Increased tearing</td>
<td>Medical Control Order</td>
<td>1 NA Kit</td>
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<tr>
<td></td>
<td>Increased salivation</td>
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<tr>
<td></td>
<td>Dim Vision</td>
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<td>Runny nose</td>
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<td>Sweating</td>
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<td></td>
<td>Abdominal cramps</td>
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<tr>
<td></td>
<td>Diarrhea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate Symptoms and Signs</td>
<td>Constricted pupils</td>
<td>Constricted Pupils</td>
<td>2 NA Kits</td>
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<tr>
<td></td>
<td>Difficulty breathing</td>
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<tr>
<td></td>
<td>Severe vomiting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severe Signs</td>
<td>Constricted pupils</td>
<td>Constricted Pupils</td>
<td>3 NA Kits (If 3 NA Kits are used, administer 1st dose of available benzodiazepine)</td>
</tr>
<tr>
<td></td>
<td>Unconsciousness</td>
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<tr>
<td></td>
<td>Seizures</td>
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<td></td>
<td>Severe difficulty breathing</td>
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<tr>
<td><strong>PEDIATRIC</strong></td>
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</tbody>
</table>
| Pediatric Patient with Non-Severe Signs/Symptoms | Mild or moderate symptoms as above | Positive evidence of nerve agent or OPP on site | Age ≥8 years old:  
- As Above  
Age <8 years old:  
- Per Medical Control |
| Pediatric Patient with Severe Signs/Symptoms   | Constricted pupils  | Severe breathing difficulty | Age ≥ 8 years old:  
- 3 NA Kits  
Age < 8 years old:  
- 1 NA Kit  
Contact Medical Control as needed | |
|                        | Unconsciousness                        | Weakness               |                         |
|                        | Seizures                                |                        |                         |
|                        | Severe difficulty breathing             |                        |                         |

*NOTE: Nerve-agent Antidote (NA) = 1 Duo Dote or 1 Mark I*
Follow General Prehospital Care Protocol

GENERAL MANAGEMENT OF TOXIC EXPOSURE

- Use proper equipment & prepare for decontamination
- Remove clothing exposed to chemical
- Identify substance, if possible
- Alert receiving hospital if patient presents HAZMAT risk
- Sample of substance & any containers should be brought with patient if it does not pose a risk to others

Refer to Pain Management Procedure as needed

INGESTION

If altered, refer to Altered Mental Status Protocol
If in cardiac dysrhythmia, refer to appropriate dysrhythmia protocol
If respiratory distress, refer to Respiratory Distress Protocol
If patient is seizing, refer to Seizures Protocol
If opioid overdose, refer to Naloxone Administration Procedure
INGESTION (CONTINUED)

Contact Medical Control

Administer

- If symptomatic tricyclic antidepressant ingestion
  - Sodium Bicarbonate 50mEq IV or 1 mEq/kg for pediatrics

- If extrapyramidal dystonic reactions
  - Diphenhydramine 50 mg IV or 1 mg/kg for pediatrics

- If symptomatic calcium channel blocker overdose
  - Consider calcium chloride 1 gm IV or 20 mg/kg for pediatrics

INHALATION EXPOSURE

- Dilute noxious gas
- Ensure high concentration of oxygen

If suspected cyanide gas exposure, refer to Cyanide Exposure Protocol
EYE CONTAMINATION
- Irrigate continuously with Normal Saline or tap water for 15 minutes
- Attempt to continue during transport
- For alkali exposure, maintain continuous irrigation

If available, administer Tetracaine, 1-2 drops per eye, per MCA selection (ensure patient does not rub eye)

Tetracaine Included?
☐ Yes ☑ No

SKIN ABSORPTION
- Brush off dry chemicals
- Irrigate continuously with Normal Saline for 15 minutes or
- As directed by medical control

BITES AND STINGS
Spiders, Snakes, & Scorpions
- Protect rescuers
- Bring in for accurate identification (if contained and/or dead)
- Ice for comfort (spiders or scorpions ONLY)

Bees & Wasps
- Remove sting mechanism
- Do not squeeze
- Provide wound care
- Observe for systemic reaction

If systemic reaction, refer to Anaphylaxis, Allergic Reaction Protocol
NERVE AGENT/ORGANOPHOSPHATE EXPOSURE

- Evaluate for signs and symptoms
  - Minor Symptoms
  - Moderate Symptoms
  - Severe Symptoms
- Evaluate and maintain the airway, provide oxygenation and support ventilation as needed.
- Anticipate the need for extensive suctioning
- Antidote administration per Mark I Kit/Duo Dote auto-injector Dosing Direction – see chart

Establish vascular access

Atropine 2-6 mg IV/IM per Dosing Directive if Mark I Kit is not available
(Each Mark I kit has 2 mg of Atropine)

Seizures?

Adults
- Administer Midazolam 0.1 mg/kg to max 10 mg IM
- If available, Valium auto-injector

Pediatrics
- Midazolam 0.1 mg/kg IV/IM (maximum individual dose 5 mg)
- If available, Valium auto-injector

Monitor EKG

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