

## ***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.

**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**

- a. Administer **Diazepam** 2-10 mg IV/IM **OR** Midazolam 0.05 mg/kg to max 5 IV/IM
- b. Administer **Midazolam** 0.1 mg/kg to max 10 mg IM
- c. If available, **Valium** auto-injector



**b. Pediatrics**

- a. **Midazolam** 0.15 mg/kg IV/IM (maximum individual dose 5 mg)
- b. If available, **Valium** auto-injector



8. Monitor EKG

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



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

**\*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**

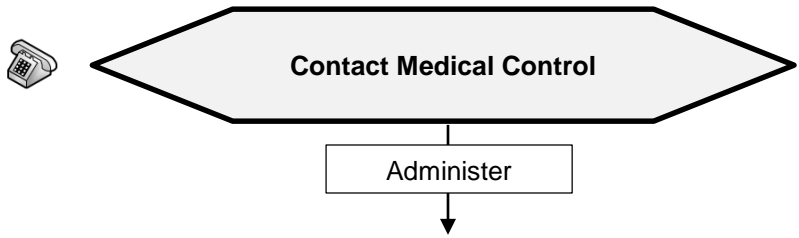
If in cardiac dysrhythmia, refer to **appropriate dysrhythmia protocol**

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)**



If symptomatic tricyclic antidepressant ingestion

**Sodium Bicarbonate 50mEq IV or 1 mEq/kg for pediatrics**

If extrapyramidal dystonic reactions

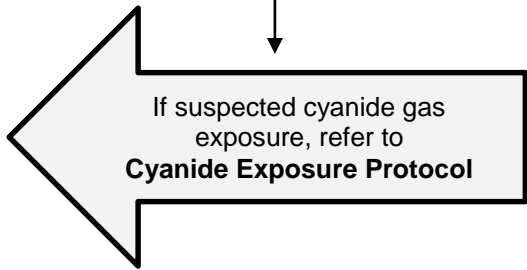
**Diphenhydramine 50 mg IV or 1 mg/kg for pediatrics**

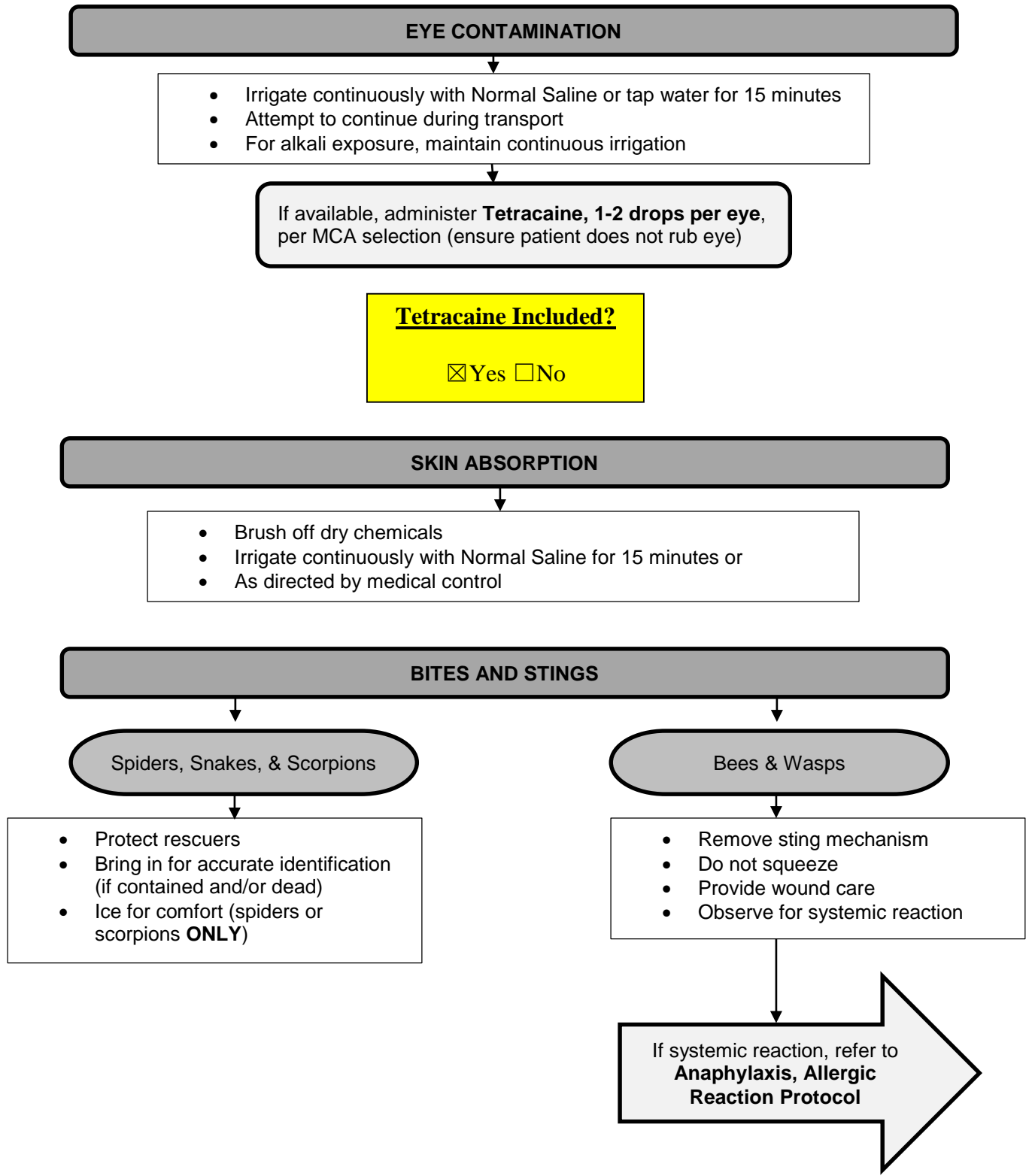
If symptomatic calcium channel blocker overdose

**Consider calcium chloride 1 gm IV or 20 mg/kg for pediatrics**

**INHALATION EXPOSURE**

- Dilute noxious gas
- Ensure high concentration of oxygen





**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 **Diazepam** 2-10 mg IV/IM **OR** Midazolam 0.05 mg/kg to max 5 IV/IM
- Administer **Midazolam** 0.1 mg/kg to max 10 mg IM
- If available, **Valium** auto-injector



**Pediatrics**

- **Midazolam** 0.15 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)