Poisoning/Overdose/Environmental Exposure

NERVE AGENT/ORGANOPHOSPHATE EXPOSURE refer to **Nerve Agent/Organophosphate Pesticide Exposure-Special Operations Protocol**.

GENERAL MANAGEMENT OF TOXIC EXPOSURE (INCLUDING INGESTION)

1. Follow **General Pre-hospital Care-Treatment Protocol.**
2. Pediatric patients (≤ 14 years) utilize MI MEDIC cards for appropriate medication dosage. When unavailable utilize pediatric dosing listed within protocol.
3. Use proper personal protective equipment and prepare for decontamination if necessary.
4. Remove clothing exposed to chemical (dry decon) refer to **Hazardous Contaminated Patient-Special Operations**
5. Identification of the substance the patient has been exposed to.
6. If altered mental status, refer to **Adult or Pediatric Altered Mental Status-Treatment Protocol**.
7. If suspected opioid overdose, refer to **Opioid Overdose Treatment and Prevention-Treatment Protocol.**
8. If respiratory distress, refer to **Adult or Pediatric Respiratory Distress-Treatment Protocol.**
9. If the patient is seizing, refer to **Adult or Pediatric Seizure-Treatment Protocol.**
10. Alert receiving hospital if patient may present HAZMAT risk.
11. 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.
12. Refer to **Pain Management-Procedure Protocol**
13. For inhalation exposures, ensure high flow oxygen is provided.
14. If suspected cyanide gas exposure, refer to **Cyanide Exposure-Special Operations Protocol** and contact Medical Control immediately.
15. If suspected nerve agent or organophosphate pesticide, refer to **Nerve Agent/Organophosphate Pesticide Exposure-Special Operations Protocol** and contact Medical Control immediately.
16. Obtain 12 lead (Per MCA selection, may be a BLS or Specialist procedure) refer to **12-Lead ECG- Procedure Protocol** and monitor cardiac rhythm, treat dysrhythmia per appropriate dysrhythmia protocol.
17. For extrapyramidal dystonic reactions, administer **diphenhydramine.**
    a. For adults (>14 years of age), 50 mg IV.
    b. For pediatrics (≤ 14 years of age), 1 mg/kg IV (max dose 50 mg).
15. For symptomatic tricyclic antidepressant ingestions (tachycardia, wide complex QRS), contact Medical Control for administration of **sodium bicarbonate**
    a. Adults (>14 years of age), 50 mEq IV, repeat as needed per medical control.
    b. Pediatrics (≤ 14 years of age), 1mEq/kg IV, repeat as needed per medical control.
16. For symptomatic calcium channel blocker overdose, contact Medical Control and consider **calcium chloride**
    a. Adults (>14 years of age), 1 gm IV.
    b. Pediatrics (≤ 14 years of age), 20 mg/kg IV (max dose 1 gm).

17. For other specific medications in overdose (i.e., beta blockers), contact Medical Control for further guidance.

EYE CONTAMINATION:

1. Irrigate continuously with **NS,** tap water, or bottled water (if available) for 15 minutes (attempt to continue enroute) or as directed by Medical Control.
2. For alkali exposure, maintain continuous irrigation.
3. If available (per MCA selection), administer **tetracaine,** 1-2 drops per eye every 5 minutes, maximum of 5 doses, 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 **NS** 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.
    a. CAUTION: Dead snakes can reflexively bite after "death". Ensure animal is dead prior to placement into container and utilize tools that keep a distance between the rescuer and the animal whenever possible (e.g., shovel, tongs, etc.)

2. Ice for comfort on spider or scorpion bite; DO NOT apply ice to snake bites.
3. SNAKES
    a. Determine if localized or systemic reaction to bite:
        1) Localized Signs/Symptoms (pain and swelling, numbness/tingling, bruising)
            a) Consider pain management, per **Pain Management-Procedure Protocol** (avoid **morphine** if possible as the histamine release from **morphine** may lead to confusion between envenomation vs. medication effects
        2) Systemic Signs/Symptoms (hypotension, altered mental status, hemorrhage, airway swelling/compromise)
            a) Prepare to manage airway & hypotension; if necessary, refer to **Airway Management-Procedure Protocol, Adult or Pediatric Respiratory Distress-Treatment Protocol, Shock-Treatment Protocol** and **Anaphylaxis/Allergic Reaction-Treatment Protocol**
            b) Consider pain management, per **Pain Management-Procedure Protocol** (avoid morphine if possible)
        3) Obtain specific snake information:
            a) Species, color, rattle, elliptical pupils, or thermal pit (photos are encouraged

b. Evaluate and document appearance of wound: location, puncture marks and number, timing of bite, and prior first aid.
c. Remove all constricting items from bitten limb (rings, jewelry, watch, clothing etc.)
d. Immobilize bitten part below the level of the heart (sling, loose wrapping)
e. Initiate prompt transport.
f. If present, mark margins of erythema and/or edema with a marker and include time measured.
g. Do NOT use ice, refrigerants, tourniquets, scalpels, or suction devices.
h. Specific Precautions
    1) Eastern Massasauga Rattlesnake is the only venomous snake native to Michigan.
    2) Exotic venomous snakes i.e., pets/zoo animals, are common; obtain species information and antivenom if available on-scene, from pet owner/zookeeper and transport with patient. Antivenom should be available on-site if patient is coming from a zoo.
    3) Transport to the closest facility.

BEES, CENTIPEDES, SLUGS, 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-Treatment Protocol.**

ANIMAL BITES

1. Assure scene safety and contact Police or Animal Control Officer if necessary.
2. DO NOT collect live animals to avoid self-injury; delegate collection of animals to Animal Control Officer, if necessary, for rabies identification. Do NOT bring live animals to the Emergency Department or healthcare facility.
3. Consider pain management per **Pain Management-Procedure Protocol.**
4. Control bleeding per **Bleeding Control (BCON)-Treatment Protocol**.
5. Rabies evaluation:
    a. The following animals are known transmitters and confer risk requiring emergent evaluation: Bat, Skunk, Fox, Dog, Cat, Ferret, Livestock, Opossum, Woodchuck
    b. Obtain the following animal information: type/species of animal, wild/stray vs domestic, bite vs scratch, animal immunization status, and if animal collection was possible
    c. All patients at risk for rabies exposure should be transported, follow local MCA transport protocols. If patient refuses transport, they should be advised to seek immediate medical evaluation for rabies evaluation and possible vaccination. Document the refusal per **Refusal of Care; Adult and Minor-Procedure Protocol**.
6. For additional information, see www.michigan.gov/rabies or contact Michigan Department of Health and Human Services: Communicable Disease Division

Medication Protocols
Calcium Chloride
Diphenhydramine
Sodium Bicarbonate
Tetracaine