



**SIERRA SACRAMENTO VALLEY EMS AGENCY
TREATMENT PROTOCOL – MEDICAL EMERGENCY**

**ENVIRONMENTAL
REFERENCE NO. E-7**

SUBJECT: HAZARDOUS MATERIAL EXPOSURE

Haz Mat incidents require special attention and frequently the need for specially trained personnel. Refer to policy # 836 Hazardous Material Incidents.

Important Caveats For Medical Responders:

- Do not enter a contaminated area unless properly protected.
- Personal Protective Equipment (PPE) including SCBAs shall not be utilized by untrained personnel.
- Do not transport a contaminated patient without base/modified base approval until the patient has been thoroughly decontaminated.
- Do not delay the treatment or transportation of Immediate patients who are contaminated with radioactive material (see page 3).
- If transporting personnel become contaminated, they shall immediately undergo decontamination.
- Early base/modified base contact, and CHEMPACK activation when appropriate, will maximize assistance from necessary resources.
- Refer to Hazardous Materials Medical Management Reference as appropriate.

Information that must be obtained by EMS personnel on every Haz Mat incident:

- Number of patients.
- Material involved or DOT 4-digit placard #.
- Route(s) of exposure for each patient.
- Signs & Symptoms for each patient.
- Decontamination procedure completed for each patient.
- Procedure utilized to determine effectiveness of decontamination procedure.
- Risk of secondary exposure to rescuers.
- PPE required to transport patient.

For Specific Therapy See Pages 2 - 3

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BLS

- ABC's – establish and secure airway, with adjuncts as appropriate and necessary
- O₂ at appropriate flow rate
- If trauma suspected, use full spinal immobilization when indicated
- Contact base/modified base hospital for assistance in determining a decontamination and treatment plan if necessary
- After patient is fully decontaminated, cover with blankets and/or sheets as appropriate for medical and weather conditions
- If eye exposure occurs, irrigate each exposed eye with NS – ensure contact lenses are removed

ALS

- Cardiac Monitor
- IV/IO – NS in non-burned/non-contaminated extremity

CHEMICAL BURNS

IF isolated burn without inhalation is documented and **ALL** of the following are present:

- SBP > 100
- No allergy to Morphine
- Patient in moderate - severe pain

Morphine Sulfate

- 2 mg increments slow IVP / IO (max 2mg/min)
- Titrate to tolerable pain level
- Discontinue Morphine if SBP < 100

HYDROFLUORIC ACID (HF)

Calcium Chloride 10%

- 10 mL **slow** IVP / IO
- May repeat q 5 minutes

For HF burns that are isolated to the hand(s), finger(s), or toe (s):

Calcium Chloride 10%

- Pour contents of one ampule into a sterile glove and immerse affected area into solution
- If **Calcium Gluconate gel** has been applied, do not remove. No further treatment is necessary

Skin exposure to HF with a concentration > 20% can cause fatal hypocalcemia and should be treated. Provide continuous EKG monitoring to look for QT-interval prolongation which is an early sign of hypocalcemia

ORGANOPHOSPHATE OR CARBAMATE

Atropine

- 2 mg IV / IO if HR < 60
- May repeat q 3 minutes to HR > 80
- No maximum dose

Refer to Nerve Agent Treatment Protocol E-8 if additional treatment is necessary

NOTE: Precautions must be taken to prevent direct contact with secretions of the patient who has ingested organophosphates or carbamate pesticides



SUBJECT: HAZARDOUS MATERIALS

RADIATION EMERGENCIES

- Patient care always takes priority over radiological concerns. Addressing contamination issues should not delay treatment of life-threatening injuries.
- Viable patients are a high priority. Therefore, rapidly extricate, treat and transport those patients who are most critical and likely to survive.
- It is highly unlikely that the levels of radioactivity associated with a contaminated patient would pose a significant health risk to care providers.
- Body Substance Isolation Clothing (gloves, gowns, N-95 masks, protective eyewear, shoe protectors, and head cap) are recommended, including 2-3 pair of disposable gloves.
- Due to fetal sensitivity to radiation, assign pregnant staff to other duties.

AMBULANCE PREPARATION

If time permits, consider the following:

- Avoid using internal and external compartments; work out of mobile kits as much as possible.
- Close all internal compartments prior to loading patient.
- Cover radio communication microphones with a rubber glove.
- Cover floor of ambulance with disposable papers or pads.

Patients

- If oxygen is warranted for patient treatment use a non re-breather mask, if patient will tolerate it. Additionally, the mask provides protection from inadvertent respiratory contamination hazards. An N95 mask is appropriate to protect patient from inadvertent respiratory contamination hazards when oxygen is not indicated.
- Frequent glove changes will reduce the spread of contamination, and should be considered prior to handling patient, and patient care adjuncts.
- All medical procedures should be utilized to save an immediate patient. If it is medically necessary to intubate a patient that is contaminated, then do so.
- Change gloves prior to intubation.
- Maintain endotracheal tube sterility if possible.

Pt's with limited / no field decontamination

- Initiate ALS care as necessary.
- Keep patient wrapped (cocoon style) as much as possible to minimize the potential for contamination spread.
- Only expose areas to assess and treat.
- If necessary, cut and remove the patient's clothing away from the body being careful to avoid contamination to the unexposed skin.
- Properly contain all removed clothing by placing it in a sealable bag.
- Continue to reassess and monitor vitals while en route to the appropriate receiving facility.
- Contact with patient may result in transfer of contamination; change gloves as necessary.

Pt's with field decontamination

- Patients with non life-threatening injuries should have field decontamination prior to removal from the hot zone.**
- Patient's condition permits a more thorough radiological survey prior to continued care.
 - Conduct a head to toe assessment as the patient's injuries warrant.
 - If patients clothing has not been removed during decontamination procedures, keep patient wrapped (cocoon style) as much as possible.
 - Expose patient's injuries for assessing and treating only.
 - Contact with patient may result in transfer of contamination; change gloves as necessary.