

	<b>COUNTY OF SACRAMENTO</b> EMERGENCY MEDICAL SERVICES AGENCY	<b>Document #</b>	8028.13
	<b>PROGRAM DOCUMENT:</b> <b>Environmental Emergencies</b>	<b>Draft Date:</b>	06/14/96
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 EMS Medical Director

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 EMS Administrator

**Purpose:**

- A. To serve as the treatment standard for prehospital personal ~~Emergency Medical Technicians and Paramedics~~ in treating patients suffering from environmental emergencies in the prehospital setting.

**Authority:**

- A. California Health and Safety Code, Division 2.5
- B. California Code of Regulations, Title 22, Division 9

**Protocol:**

- A. **Frostbite:**

<b>BLS</b>
I. Supplemental O2 as necessary to maintain SpO2 ≥ 94%. Use lowest concentration and flow rate of O2 as possible. II. Airway adjuncts as needed. III. Remove wet/frozen clothing and place patient in a warm environment. IV. Assess area of frostbite; check circulation, sensation and movement of extremities <ul style="list-style-type: none"> <li>• Do not rub-protect from further trauma, contamination, or moisture</li> </ul> V. Transport in position of comfort.

**BLS TREATMENT**

<p><del>Supplemental O2</del> as necessary to maintain SpO2 ≥ 94%. Use the lowest concentration and flow rate of O2 as possible.</p> <p><del>Airway Adjuncts</del> as needed.</p> <p><del>Remove</del> wet/frozen clothing and place patient in warm environment.</p> <p><del>Assess area of frostbite</del>; Check circulation, sensation and movement of extremities.</p> <ul style="list-style-type: none"> <li>• <del>Do not rub-protect from further trauma, contamination, or moisture.</del></li> </ul> <p><del>Transport</del> in position of comfort.</p>
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## B. Hypothermia:

BLS	
I.	Supplemental O <sub>2</sub> as necessary to maintain SpO <sub>2</sub> ≥ 94%. Use lowest concentration and flow rate of O <sub>2</sub> as possible.
II.	Airway adjuncts as needed.
III.	Assess for trauma
IV.	Place in a warm environment, remove wet clothes; re-warm with warm clothes and blankets.
V.	Handle patients with care, sudden jarring of patients may precipitate cardiac arrest.
*If in cardiac arrest perform CPR until patient can be warmed in hospital. *	
ALS	
I.	Advanced airway adjuncts as needed.
II.	Cardiac Monitoring
III.	Consider vascular access.
IV.	Monitor and reassess.
V.	If in cardiac arrest refer to policy 8031.
VI.	Transport

### BLS TREATMENT

~~Supplemental O<sub>2</sub> as necessary to maintain SpO<sub>2</sub> ≥ 94%. Use the lowest concentration and flow rate of O<sub>2</sub> as possible.~~

~~Airway adjuncts as needed.~~

~~Assess for trauma.~~

~~Place in warm environment, remove wet clothes; re-warm with warm clothes and blankets.~~

~~Handle patients with care, sudden jarring of patients may precipitate cardiac arrest.~~

~~If in cardiac arrest – perform CPR until patient can be warmed in hospital.~~

### ALS TREATMENT

~~Advanced airway adjuncts as needed.~~

~~Cardiac monitoring.~~

~~Initiate Intravenous (IV) ACCESS with saline lock or connect Normal Saline (NS) and titrate to Systolic Blood Pressure (SBP) of 90–100 mm Hg~~

~~If in cardiac arrest, start Cardiopulmonary Resuscitation (CPR). If Ventricular Fibrillation or Ventricular Tachycardia deliver one shock:~~

- ~~• Manual biphasic: device specific (typically 120-200 Joules)~~
- ~~• Monophasic: 360 Joules~~
- ~~• Automated External Defibrillator (AED): device specific~~

~~Resume CPR immediately (as needed) and transport.~~

**VI. Hyperthermia:**

BLS	
<ul style="list-style-type: none"> <li>I. Supplemental O2 as necessary to maintain SpO2 ≥ 94%. Use lowest concentration and flow rate of O2 as possible.</li> <li>II. Airway adjuncts as needed.</li> <li>III. Place patient in a cool area and remove clothing as appropriate.</li> </ul> <p style="margin-left: 40px;">* If sweating is absent, proceed with cooling patients as rapidly as possible (cool packs on neck, in axilla and inguinal areas; fanning and misting, if possible, undress patient, cover with sheet and wet thoroughly.)*</p> <ul style="list-style-type: none"> <li>IV. Transport</li> </ul>	
ALS	
<ul style="list-style-type: none"> <li>I. Advanced airway adjuncts as needed.</li> <li>II. Consider vascular access.</li> <li>III. Cardiac Monitoring</li> <li>IV. Transport</li> </ul>	
<b>Cross Reference</b>	<p style="margin-left: 40px;">PD# 8062      Behavioral Crisis/Restraints</p>

**BLS TREATMENT**

<p><del>Supplemental O2 as necessary</del> to maintain SpO2 ≥ 94%. Use the lowest concentration and flow rate of O2 as possible.</p> <p><del>Airway adjuncts</del> as needed.</p> <p><del>Place patient in a cool area</del> and remove clothing as appropriate.</p> <p><del>If sweating is absent</del>, proceed with cooling patients as rapidly as possible (cool packs on neck, in axilla and inguinal areas; fanning and misting, if possible, undress patient, cover with sheet and wet thoroughly.)</p> <p><del>Transport.</del></p>
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**ALS TREATMENT**

<p><del>Advanced airway</del> adjuncts as needed.</p> <p><del>Initiate IV ACCESS</del> with Normal Saline titrated to SBP of 90 – 100 mm Hg.</p> <p><del>Cardiac monitoring.</del></p>
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V. Near Drowning:

BLS	
II.	Supplemental O2 as necessary to maintain SpO2 ≥ 94%. Use lowest concentration and flow rate of O2 as possible.
II.	Airway adjuncts as needed.
III.	Consider <b>Spinal Motion Restriction (SMR) per policy 8044</b>
IV.	Transport
ALS	
<b>*Follow appropriate protocol*</b>	
<b>*Body temperature criteria shall not be used as criteria for declaring death.*</b>	

**BLS TREATMENT**

<del>Supplemental O2 as necessary to maintain SpO2 ≥ 94%. Use the lowest concentration and flow rate of O2 as possible.</del>
<del>Airway adjuncts as needed.</del>
<del>Consider spinal immobilization.</del>
<del>Transport.</del>

**ALS TREATMENT**

<del>Follow appropriate protocol.</del>
<del>Body temperature criteria shall not be used as criteria for declaring death.</del>

VI. Snake Bite:

BLS	
I.	Supplemental O2 as necessary to maintain SpO2 ≥ 94%. Use lowest concentration and flow rate of O2 as possible.
II.	Airway adjuncts as needed.
III.	Assess site of wound for swelling redness from stings/bites.
IV.	Immobilize affected extremity at or slightly below the level of the heart.
V.	Keep patient at rest.
VI.	Transport
<b>*Do not apply ice or tourniquet to site*</b>	
<b>*Do NOT bring dead snake to the hospital, take a picture if possible*</b>	
ALS	
<b>*Assess for anaphylaxis and treat per policy 8001*</b>	

## BLS TREATMENT

~~**Supplemental O2** as necessary to maintain SpO2 ≥ 94%. Use the lowest concentration and flow rate of O2 as possible.~~

~~**Airway adjuncts** as needed.~~

~~**Assess site** of wound for swelling/redness from stings/bites.~~

~~**Immobilize affected extremity** at or slightly below the level of the heart.~~

~~**Keep patient at rest.**~~

~~**Transport.**~~

~~**Do not apply ice or tourniquet to site.**~~

~~**Bring snake to hospital, only if dead.**~~

## ALS TREATMENT

~~**Assess for anaphylaxis** and treat accordingly.~~

### VII. Stings / Bites:

BLS		
I.	Supplemental O2 as necessary to maintain SpO2 ≥ 94%. Use lowest concentration and flow rate of O2 as possible.	
II.	Airway adjuncts as needed.	
III.	Assess skin for swelling, redness and rash. If extremity, check distal circulation, sensation and movement	
IV.	Keep affected extremities at level of heart and immobilize.	
V.	Transport	
*Apply ice for insect bite, not snake bites.*		
ALS		
*Assess for anaphylaxis and treat per policy 8001*		
<b>Cross Reference:</b>	<b>Allergic Reaction/Anaphylaxis</b>	<b>PD# 8001</b>
	<b>Cardiac Arrest</b>	<b>PD# 8031</b>
	<b>Spinal Motion Restriction</b>	<b>PD# 8044</b>
	<b>Shock</b>	<b>PD# 8038</b>
	<b>Decreased Sensorium</b>	<b>PD# 8061</b>

## BLS TREATMENT

~~Supplemental O<sub>2</sub> as necessary to maintain SpO<sub>2</sub> ≥ 94%. Use the lowest concentration and flow rate of O<sub>2</sub> as possible.~~

~~Airway adjuncts as needed.~~

~~Assess skin for swelling, redness and rash. If extremity, check distal circulation, sensation and movement.~~

~~Keep affected extremities at level of heart and immobilize.~~

~~Apply ice for insect bite, not snake bites.~~

~~Transport.~~

## ALS TREATMENT

~~Assess for anaphylaxis and treat accordingly.~~

Cross Reference: PD# 8038 Shock  
PD# 8061 Decreased Sensorium