

PEORIA AREA EMS SYSTEM
PREHOSPITAL CARE MANUAL

Burn Protocol

Burn injuries vary depending on the type of burn (thermal, electrical, chemical) and the amount of exposure (time and depth). Burn injuries range from localized redness to deep tissue destruction and airway compromise. Signs of burn injury include: blisters, pain, tissue destruction, charred tissue and singed hair.

The primary goal in the treatment of the burn patient is to stop the acute burning process by removing the patient from direct contact with the source of the burn and maintaining the patient's body fluids. Special attention should be given to limit further pain and damage of the burn to the patient. However, burn care should not interfere with lifesaving measures.

First Responder Care

First Responder Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. Make sure the scene is safe to enter.
3. **Oxygen:** 15 L/min via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.
4. **THERMAL BURN TREATMENT:**
 - a. If the burn occurred within the last 20 minutes, reverse the burning process and cool the area by flushing the area with **1 Liter of sterile saline** (or sterile water if sterile saline is not available). The goal of cooling is to extinguish the burning process – not to systemically cool the patient. Fluid application should be held to a minimum and discontinued if the patient begins shivering.
 - b. Remove jewelry and loose clothing. Do not pull away clothing that is stuck to the burn.
 - c. Cover the wound with sterile dressings***
 - d. Place a sterile burn sheet on the stretcher. If the patient's posterior is burned, place a sterile burn pad on top of the sheet with the absorbent side toward the patient.
 - e. Place patient on the stretcher.
 - f. Cover the patient with additional sterile burn sheets and blanket to conserve body heat.
5. **ELECTRICAL BURN TREATMENT:**
 - a. Assure that the power service has been cut off and remove the patient from the source of electricity.
 - b. Fully immobilize the patient due to forces of electrical current and possible trauma.
 - c. Assess for entry and exit wounds. No cooling or flushing is necessary due to the type of burn.
 - d. Cover the burn with dry, sterile dressings.
 - e. Closely monitor the patient.
6. **CHEMICAL BURN TREATMENT:**
 - a. Consider possible scene and patient contamination and follow agency safety procedures.
 - b. Note which chemical agent caused the burn and obtain the MSDS for that chemical (if possible).
 - c. The patient's clothing should be completely removed to prevent continued exposure and the patient decontaminated **prior to** being placed in the ambulance for transport.
 - d. **Dry chemical powder** should be brushed off before applying water.
 - e. Irrigate the patient with sterile water and if the MSDS indicates use of water will not cause an adverse reaction. Body parts should be flushed for at least 1-2 minutes. Do not use sterile saline on chemical burns.
 - f. Irrigate burns to the eye with sterile water for at least 20 minutes. Alkaline burns should receive continuous irrigation throughout transport.

BLS Care

BLS Care should be directed at conducting a thorough patient assessment, initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock and preparing the patient for or providing transport.

1. Includes all components of *First Responder Care*.
2. Initiate ALS intercept and transport as soon as possible.
3. **Contact Medical Control** as soon as possible for significant burns.

ILS Care

ILS Care should be directed at continuing or establishing care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. Includes all components of *First Responder Care*.
2. **IV Fluid Therapy**: 20mL/kg fluid bolus. Repeat if necessary.
3. **Fentanyl**: *For pain* - **Choose one of the following**:
 - Intranasal (**See Intranasal Fentanyl Dosing Chart**)
 - *If unable to initiate IV access.* 50mcg IM. May repeat as needed to a total of 200mcg.
 - 50mcg IV, over 2 minutes. May repeat every **5 minutes** to a total of 200mcg.
4. Initiate ALS intercept and transport as soon as possible.
5. **Contact Medical Control** as soon as possible for significant burns.

ALS Care

ALS Care should be directed at continuing or establishing care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. Includes all components of *First Responder Care*.
2. Be prepared to intubate if necessary.
3. **IV Fluid Therapy**: 20mL/kg fluid bolus. Repeat if necessary.
4. **Fentanyl**: *For pain* - **Choose one of the following**:
 - Intranasal (**See Intranasal Fentanyl Dosing Chart**)
 - *If unable to initiate IV access.* 50mcg IM. May repeat as needed to a total of 200mcg.
 - 50mcg IV, over 2 minutes. May repeat every **5 minutes** to a total of 200mcg.
5. Transport and **Contact Medical Control** as soon as possible for significant burns.

Critical Thinking Elements

- Monitor the patient for respiratory depression when administering narcotics.
- If respiratory depression or hypotension occurs after administration of Fentanyl, ventilate the patient as necessary and administer Narcan.
- Monitor respiratory status, SPO2 and or Waveform Capnography if available.
- ***WaterJel® may be used for **THERMAL BURNS** (after the burn has been irrigated according to protocol) if it is available:
 - 1. Open the foil package, unfold dressing and apply to burn. **NOTE**: Do not remove burned clothing - apply gel-soaked dressing directly on top.
 - 2. Pour excess gel from the foil package directly onto the burn dressing or surrounding skin.
 - 3. Loosely wrap sterile gauze over the dressing to hold it in place.
- WaterJel® helps reduce pain from burns and cools the skin to help prevent burn progression and helps protect the burn against airborne contamination. It is the only approved commercial burn care product in the Peoria Area EMS System.
- BurnJel® contains Lidocaine and may **NOT** be used in the Peoria Area EMS System.
- Treat other symptoms or trauma per the appropriate protocol (e.g. if someone suffers from smoke inhalation along with being burned, refer to the *Smoke Inhalation Protocol*).
- IV access should not be obtained through burned tissue unless no other site is available.
- Closely monitor the patient's response to IV fluids and assess for pulmonary edema.
- Closely monitor the patient's airway – have BVM, suction and/or intubation equipment readily available.

- Do not delay transport of a "Load and Go" trauma patient to care for burns.
- For chemical/powder burns, be aware of inhalation hazards and closely monitor for changes in respiratory status.
- **In patients with known renal failure, the Fentanyl dose must be reduced to 25mcg. The dose may be repeated one time to a maximum dose of 50mcg.**

