

Initial Management Guidelines for the Adult Burn Patient

Burn Disaster Crisis Standards of Care

If transfer to University of Utah Health Care Burn Center is not feasible, consider Burn Center consultation at (801) 581-2700.

Prior to initiating care of the patient with wounds it is critical that healthcare providers take measures to reduce their own risk of exposure to potentially infectious substances and/or chemical contamination. In addition, patients with burns/wounds are at high risk for infection and potential cross contamination. Body substance precautions are the most effective way to do this. The level of protection utilized will be determined by patient presentation. Patients with burns > 20% TBSA are most at risk.

Primary Assessment

Intervention /Care	Key Points
<p>Airway maintenance with C-Spine Protection Consider inhalation injury with :</p> <ul style="list-style-type: none"> • History of closed space fire • Hypoxia • Facial Burns • Stridor • Carbonaceous sputum • Nasal Singe • Hoarseness <p>Treatment</p> <ul style="list-style-type: none"> • High flow oxygen using a non-rebreather mask, wean as appropriate. • Early intubation (Assess Glasgow prior to intubation) • Secure the ETT with ties passed around the head, do not use tape as it will not adhere to burned tissue. • A nasogastric tube should be inserted on all patients who are intubated. 	<ul style="list-style-type: none"> • Airway edema increases significantly after fluids are started. • Stridor or noisy breath sounds are indicators of impending upper airway obstruction. • Prophylactic intubation is often preferred because the ensuing edema obliterates the landmarks needed for successful intubation. • An endotracheal tube that becomes dislodged may be impossible to replace due to obstruction of the upper airway by edema. <p>Comfort Care Patients</p> <ul style="list-style-type: none"> • Patients placed in the comfort care category should not be intubated. Oxygen should be administered to aid comfort and prevent air hunger.
<p>Breathing and Ventilation</p> <ul style="list-style-type: none"> • Assess for appropriate rate and depth of respirations in addition to breath sounds. • Monitor pulse oximetry and obtain ABGs • Check CO level if indicated • In circumferential torso burns monitor chest expansion closely. Chest/abdominal escharotomy may be necessary; consider burn center consult. 	<p>An escharotomy is an incision performed longitudinally through burned tissue down to subcutaneous tissue over the entire involved area of full thickness circumferential (or nearly circumferential burn) that is causing constriction and loss of peripheral perfusion or airway constriction. Finger escharotomies are rarely indicated.</p>
<p>Circulation with Hemorrhage Control</p> <ul style="list-style-type: none"> • Heart Rate • Blood Pressure • Pulses and capillary refill • Skin color of unburned skin 	<ul style="list-style-type: none"> • Due to the increased circulating catecholamines and hypermetabolism associated with burn injuries, a normal heart rate for an adult is 100-120 bpm.

<ul style="list-style-type: none"> • Cardiac monitoring as appropriate and available • One large bore IV or IO line should be inserted until it is determined that adequate resources are available for all patients. Secure well. • IV/IO Priority should be given to patients with burns >20% TBSA. Starting points for fluid resuscitation rates are as follows : <ul style="list-style-type: none"> 5 years or younger: 125 ml LR/NS/hr 6-13 years of age: 250 ml LR/NS/hr 14 years or older: 500 ml LR/NS/hr • More definitive calculation is performed during the secondary survey when TBSA is known. • Patients with burns usually do not develop shock within 60 minutes from time of injury if left untreated unless there are associated injuries or medical conditions in addition to the burn. Manage any bleeding as soon as possible. 	<ul style="list-style-type: none"> • Heart rates above this may indicate hypovolemia, inadequate oxygenation, unrelieved pain or anxiety. • Heart rates below this level may be due to an underlying cardiac abnormality. Dysrhythmias may be the result of an electrical injury and are abnormal. • The B/P in the early stages of burn resuscitation should be the individuals pre-injury B/P. • IV's may be placed through burned skin if necessary, suture to secure in place or use coban or kerlix roll. • Oral resuscitation should be considered for awake alert pediatric patients with burns < 10% TBSA and adult patients with burns < 20% TBSA using flavored sport drinks and/or an equal electrolyte maintenance solution. Have the family monitor the quality and quantity of urinary output and watch for signs of dehydration. • When supplies of LR are depleted, fluid resuscitation may continue using NS, ½ NS or colloids. Do not use fluid containing glucose. <p>Comfort Care Patients IVs should be started for administration of medication to manage pain and anxiety. Do not administer large volumes of fluid. Excessive fluid will result in decreased circulation and increased pain due to edema.</p>
<p>Disability</p> <ul style="list-style-type: none"> • Consider using the "AVPU" method: <ul style="list-style-type: none"> -A – Alert -V – Responds to verbal stimuli -P – Responds to painful stimuli -U – Unresponsive 	<p>Typically the burn patient is alert and oriented If altered neurological status, consider associated injury, CO poisoning, substance abuse, hypoxia, medications administered or pre-existing medical conditions.</p>
<p>Exposure</p> <ul style="list-style-type: none"> • Check temperature • Remove all clothing and jewelry • Keep patient and environment warm 	<p>Localized hypothermia causes vasoconstriction to the damaged area reducing blood flow and tissue oxygenation and may deepen the injury. Systemic hypothermia (core temp less than 95° F / 35° C) induces peripheral vasoconstriction that may increase the depth of the burn and interfere with clotting mechanisms and respiration in addition to causing cardiac arrhythmias.</p>