Assessment and Emergency Care of Soft-Tissue Injuries

Scene Size-up

Scene Safety	Ensure scene safety by looking for threats, possible violence, and other hazards. Standard precautions should include a minimum of gloves and eye protection. Consider the number of patients, the need for additional resources/ALS, and cervical spine stabilization.
Mechanism of Injury (MOI)/ Nature of Illness (NOI)	Determine the MOI. Look for clues that may help you determine what happened to your patient.

Primary Assessment

Form a General Impression	Observe overall appearance of the patient and body position. Observe work of breathing and circulation. Determine level of consciousness. Perform a rapid scan to identify and manage immediate life threats. Determine priority of care based on the MOI. If the patient has a poor general impression, call for ALS assistance.
Airway and Breathing	If a cervical spine injury is suspected, open the airway using a modified jaw-thrust maneuver and ensure the airway is patent. Quickly assess the chest for DCAP-BTLS and treat any threats to life. Provide high-flow oxygen at 15 L/min, and evaluate depth and rate of the respiratory cycle, providing ventilatory support as needed.
Circulation	Evaluate pulse rate and quality; observe skin color, temperature, and condition; look for life-threatening bleeding, and treat accordingly by placing the patient in a supine or shock position. Be alert for signs and symptoms of internal bleeding.
Transport Decision	Significant MOI requires rapid transport.

History Taking

Investigate Chief Complaint	Investigate the chief complaint. Identify signs and symptoms and pertinent negatives. Ask pertinent OPQRST and SAMPLE questions. Be alert for pain or loss of sensation. Medications such as aspirin, blood thinners, and beta-blockers may alter your care plan.

NOTE: The order of the steps in this section differs depending on whether the patient is conscious or unconscious. The following order is for a conscious patient. For an unconscious patient, perform a primary assessment, perform a full-body scan, obtain vital signs, and obtain the past medical history from a family member, bystander, or emergency medical identification device.

Secondary Assessment

Physical Examinations	Perform a systematic full-body scan beginning with the head. Assess the pupils, and reassess the patient's mental status. If a spinal injury is suspected, apply a cervical immobilization device after assessing the neck. Inspect, palpate, and auscultate the chest, focusing on the respiratory effort and adequacy of ventilation. Assess the abdomen for signs of internal bleeding. Assess the musculoskeletal system for DCAP-BTLS. Log roll the patient, and assess the posterior regions.

Assessment and Emergency Care of Soft-Tissue Injuries, continued

Vital Signs	Take vital signs, monitoring trends. Note skin color, temperature, and condition, as well as the patient's level of consciousness. Use pulse oximetry, if available, to assess the patient's perfusion status. This reading may not be accurate if peripheral blood flow is compromised.

Reassessment

Interventions	Consider the use of oxygen and proper positioning of the patient. Expose all wounds, cleanse the wound surface, control bleeding, and be prepared to treat the patient for shock. Reassess dressings and bandages.
Communication and Documentation	Contact medical control with a radio report. Include a thorough description of the MOI and the position in which the patient was found. Include injuries found, estimated blood loss, treatments performed, and patient response. Follow local protocols. Be sure to document any changes in patient status and the time. Document the reasoning for your treatment and the patient's response.

NOTE: Although the following steps are widely accepted, be sure to consult and follow your local protocols.

Soft-Tissue Injuries

Closed Injuries

1. Ensure an open airway and adequate ventilations. Treat as required.
2. Be alert for and treat for shock (hypoperfusion) by raising the legs or backboard 6″ to 12″, maintain body temperature, and administer high-concentration oxygen.
3. Treat a closed soft-tissue injury by applying the mnemonic RICES:
   - Rest to keep patient quiet and comfortable
   - Ice to constrict blood vessels and reduce pain
   - Compression to compress blood vessels to slow bleeding
   - Elevation to raise injured part above level of the heart to decrease swelling
   - Splinting of extremity to decrease bleeding and pain

Open Injuries

1. Ensure you have followed standard precautions.
2. Ensure an open airway and adequate ventilations. Treat as required.
3. Apply an occlusive dressing to open chest injuries.
4. Apply direct pressure over the wound with a dry, sterile dressing.
5. Apply a pressure dressing.
6. If bleeding continues or recurs, apply a tourniquet to an extremity above the level of bleeding.
7. Be alert for and treat for shock (hypoperfusion) by raising legs or backboard 6″ to 12″, maintain body temperature, and administer high-concentration oxygen.

Assessment and Emergency Care of Soft-Tissue Injuries, continued

Soft-Tissue Injuries, continued

Abdominal Wounds

1. Ensure you have followed standard precautions.
2. Ensure an open airway and adequate ventilations. Treat as required.
3. If organs are protruding (evisceration), do not attempt to replace.
4. Cover the wound with moist sterile gauze or dressing and an occlusive dressing.
5. Prevent heat loss.
6. Be alert for and treat for shock (hypoperfusion) by raising legs or backboard 6″ to 12″, maintain body temperature, and administer high-concentration oxygen.

Impaled Objects

1. Ensure you have followed standard precautions.
2. Ensure an open airway and adequate ventilations. Treat as required.
3. Only remove object if it interferes with airway control or cardiopulmonary resuscitation.
4. Control bleeding with direct pressure.
5. Stabilize the object using bulky dressings to prevent movement during transport.
6. Tape a rigid object over the impaled item and its bandaging.
7. Be alert for and treat for shock (hypoperfusion) by raising legs or backboard 6″ to 12″, maintain body temperature, and administer high-concentration oxygen.

Neck Injuries

1. Ensure you have followed standard precautions.
2. Ensure an open airway and adequate ventilations. Treat as required.
3. Cover the wound with an occlusive dressing first, then apply a pressure bandage, being careful not to compress both carotid arteries.
4. Be alert for and treat for shock (hypoperfusion) by raising legs or backboard 6″ to 12″, maintain body temperature, and administer high-concentration oxygen.

Bites

1. Ensure you have followed standard precautions.
2. Ensure an open airway and adequate ventilations. Treat as required.
3. Apply a dry, sterile dressing.
4. Immobilize the area with a splint or bandage.
5. Transport patient to the emergency department for wound cleansing.

Assessment and Emergency Care of Burns

Scene Size-up

Scene Safety	Ensure scene safety by looking for threats, possible violence, and other hazards. Standard precautions should include a minimum of gloves and eye protection. Consider the number of patients, the need for additional resources/ALS, and cervical spine stabilization. Ensure that factors that led to the patient's burn injury do not pose a hazard to you.
Mechanism of Injury (MOI)/ Nature of Illness NOI)	Determine the MOI/NOI. Observe the scene, and look for indicators of the MOI such as fire, electrical, chemical, or environmental.

Primary Assessment

Form a General Impression	Observe overall appearance of patient and body position. Observe work of breathing and circulation. Determine level of consciousness. Perform a rapid scan to identify immediate life threats. Determine the priority of care based on the MOI. If the patient has a poor general impression, call for ALS assistance. Stop the burning process.
Airway and Breathing	If a cervical spine injury is suspected, open the airway using a modified jaw-thrust and ensure the airway is patent. Quickly assess the chest for DCAP-BTLS, and treat any threats to life. Provide high-flow oxygen at 15 L/min, and evaluate depth and rate of the respiratory cycle, providing ventilatory support as needed. Hoarsness and/or singed facial hair is an indicator of a potential airway/breathing problem; call for ALS. If the patient is unresponsive or has a significantly altered level of consciousness; consider inserting a properly sized oropharyngeal or nasopharyngeal airway.
Circulation	Evaluate pulse rate and quality; observe skin color, temperature, and condition; look for life-threatening bleeding and treat accordingly. Place patient in a supine or shock position. Prevent heat loss.
Transport Decision	If the patient has an airway or breathing problem, significant burn injuries, significant external bleeding, or signs and symptoms of internal bleeding, consider rapid transport or calling for ALS assistance. ALS providers can treat the patients with endotracheal intubation and intravenous fluids to support airway, breathing, and circulation (shock) problems. Consider the need for a burn center.

History Taking

Investigate Chief Complaint	Investigate the chief complaint. Be alert for other inuries. If possible, ask OPQRST questions. Identify signs and symptoms and pertinent negatives. Ask the patient if he or she is having any difficuly breathing, difficulty swallowing, pain, or loss of sensation. Obtain a SAMPLE history from the patient or if unresponsive, from family, bystanders, or medical alert tags.

NOTE: The order of the steps in this section differs depending on whether the patient is conscious or unconscious. The following order is for a conscious patient. For an unconscious patient, perform a primary assessment, perform a full-body scan, obtain vital signs, and obtain the past medical history from a family member, bystander, or emergency medical identification device.

Assessment and Emergency Care of Burns, continued

Secondary Assessment

Physical Examinations	Perform a systematic full-body scan beginning with the head, looking for DCAP-BTLS. Estimate extent of burned area using the rule of nines. Determine burn classification and severity. Inspect, palpate, and auscultate the chest, focusing on the respiratory effort and adequacy of ventilation. Perform a thorough neurologic examination. Assess the musculoskeletal system for DCAP-BTLS. Assess the abdomen for signs of internal bleeding.
Vital Signs	Take vital signs, monitoring trends. Because shock is often pronounced in a burn patient, blood pressure, pulse, and skin assessment for perfusion are important signs to obtain. Note the patient's level of consciousness. Use pulse oximetry, if available, to assess the patient's perfusion status.

Reassessment

Interventions	Stop the burning process. Manage airway, breathing, and circulation problems. Consider cervical spine precautions, and immobilize if needed. Provide high-concentration oxygen. Cover burn areas with sterile burn sheets following local protocols. Treat for shock. Do not delay transport.
Communication and Documentation	Contact medical control with a radio report. Include a thorough description of the MOI and the position the patient was found in. Include how the burn occurred, estimated body surface area burned, treatments performed, and patient response. Follow local protocols. Be sure to document any changes in patient status and the time. Document the reasoning for your treatment and the patient's response.

NOTE: Although the following steps are widely accepted, be sure to consult and follow your local protocols.

Burns

General Management of Burn Injuries

1. Stop the burning process.
2. Take appropriate standard precautions.
3. Treat life threats involving the ABCs.
4. Cool the burned area with sterile water or saline. Immerse or continuously irrigate the affected area, following local treatment protocols.
5. Cover the burned area with a sterile dressing. Dressing will be moist or dry depending on local protocol.
6. Maintain body temperature and treat for shock.

Chemical Burns

1. Stop the burning process by safely removing the chemical from the patient.
2. Remove patient's clothing and jewelry.
3. Flush burned area with large amounts of water for 15 to 20 minutes.

Assessment and Emergency Care of Burns, continued

Burns, continued

Electrical Burns

1. Ensure scene is safe and patient is not in contact with electrical source.
2. Treat respiratory and cardiac arrest. Defibrillate if necessary.
3. Administer high-concentration oxygen.
4. Cover burn wounds with dry, sterile dressings.
5. Splint suspected fractures.

Inhalation Burns

1. Ensure scene safety.
2. Treat life threats to airway, breathing, and circulation.
3. Consider requesting ALS.
4. Do not rely on pulse oximetry readings.

Radiation Burns

1. Ensure scene safety. Increase your distance from contaminated area.
2. Decontaminate the patient as needed.
3. Irrigate open wounds.
4. If a radiation burn is from a fission product, as found in nuclear power plants, contact medical control to find out if potassium iodide is available.