Bone and Joint Injuries

LESSON 9

LESSON LENGTH

2 hours, 15 minutes

MATERIALS, EQUIPMENT AND SUPPLIES

- Newsprint and markers
- Wilderness and Remote First Aid Emergency Reference Guide (one for each participant)
- Wilderness and Remote First Aid Pocket Guide (one for each participant)
- Wilderness and Remote First Aid Report Form/Rescue Request (one for each participant; Appendix 3-7)
- Non-latex disposable gloves (multiple sizes; at least one pair for each participant)
- Splinting materials
  - SAM® Splint, triangular bandages
  - Improvised: Hiking poles, waist belts, sleeping pads, extra clothing
  - Materials for securing splints
- Scenario cue cards (Appendix 3-10)
- Moulage (wound makeup) (optional)
- Wilderness and Remote First Aid Competency Check Sheet (one for each group; Appendix 3-8)

LESSON OBJECTIVES

After completing this lesson, participants will be able to:

- Define strain, sprain, fracture and dislocation.
- List the signs and symptoms of a strain, sprain, fracture and dislocation.
- Demonstrate a field assessment for injuries to bones and joints.
- Define RICE (rest, immobilization, cold and elevation).
- Describe the use of RICE.
- Demonstrate and/or describe the emergency treatment, including the use of improvisation, for:
  - Strains and sprains.
  - Fractures.
  - Dislocations, including realignment of fingers, toes, patella and shoulder.
TOPIC: BONE AND JOINT INJURIES OVERVIEW

Key Points:
- Injuries to the musculoskeletal system—bones, ligaments, muscles, tendons and cartilage—are among the most common in wilderness activities.
- Although you may not always be able to determine exactly what is wrong, the care is the same regardless.
- Strains are overstretched muscles or the tendons that attach muscles to bones.
- Sprains are injuries to ligaments (the bands holding bones to bones at joints).
- A fracture is a complete break, chip or crack in a bone. A fracture can be either open or closed.
  - With an open fracture, there is an open wound in the skin over the fracture. In some cases, the broken bone actually sticks out or is visible through the wound.
  - With a closed fracture, there is no break in the skin.
  - Closed fractures are more common, but open fractures are more dangerous because they have the risk of both infection and severe bleeding.
- A dislocation is the movement of a bone in a joint away from its normal position. This movement is usually caused by a violent force tearing the ligaments that hold the bones in place. With a dislocation, the bone ends in a joint are no longer properly aligned.

TOPIC: GUIDELINES FOR PREVENTING BONE AND JOINT INJURIES

Key Points:
- What steps do you think you can take to prevent bone and joint injuries?
  Answers: Responses should include the following:
  - Paying attention to safety
  - Wearing adequate and properly fitted footwear
  - Engaging in pre-trip physical conditioning
  - Setting up the camp, home or work site so there are as few tripping hazards as possible
TOPIC: CHECKING FOR STRAINS, SPRAINS AND FRACTURES

Time: 15 minutes

Key Points:

- What signs and symptoms may indicate a bone or joint injury?
  
  **Answers:** Facilitate a discussion so that responses include the following:
  
  - Deformity, open injuries, tenderness and swelling (DOTS)
  - Moderate or severe pain or discomfort (including from muscle spasms or from touching the area, called point tenderness)
  - Bruising (may take hours to appear)
  - Inability to move or use the affected body part normally
  - Broken bone or bone fragments sticking out of a wound
  - Bones grating or sounds of bones grating
  - Feeling or hearing a snap or pop at the time of injury
  - Loss of circulation, sensation or motion (CSM) beyond the site of injury, including tingling, cold or bluish color
  - Mechanism of injury (MOI), such as a fall, that suggests the injury may be severe

**Instructor’s Note:** Refer participants to their emergency reference guides to find the signs and symptoms of a bone or joint injury if they are having trouble answering the question.

- In the wilderness, the primary goal of your initial evaluation should be to determine whether the injured body part is “usable.” As you check the patient, think about how the body normally looks and feels.

**Skill Session: Checking a Possible Bone and Joint Injury**

**Activity:**

- Ask participants to find a partner and designate who will be the patient and who will be the responder.
- Lead responders through the steps in the Skills Chart. While leading them through the steps, answer questions about the hands-on physical exam and SAMPLE history that would give clues as to what is injured.
- Explain to participants that these first steps help determine whether you are dealing with an extremity that has a sprain or strain and may be usable, or a fractured extremity, which is unusable and requires splinting.
- Explain to participants that loss of a pulse, numbness, tingling and inability to move are all signs of serious fracture-related complications. Explain that they will practice applying various types of splints later in this lesson.
- Have participants switch roles and use the emergency reference guide to guide them through the steps of evaluating an injury. Monitor for technique and provide feedback.
- Explain that assessing dislocations will be covered later in this lesson.
Skills Chart

| **Evaluating a Bone or Joint Injury** | 1. Have the patient rest and relax in a comfortable position. Have the patient remove rings, bracelets or watches from the injured extremities.  
2. If necessary, remove clothing carefully as you check the area and take a look at the injury. Replace the clothing once you have checked the area. Remove a shoe only if CSM is affected, the footwear is wet or the footwear makes assessment or care impossible.  
3. Ask how the injury happened and whether there are any painful areas.  
4. Visually inspect the entire body from head to toe. Compare the two sides of the body. Then carefully check each body part. Look, listen and feel for DOTS. Notice whether the patient can easily move the injured part or if he or she guards it to prevent movement. |
| --- | --- |
| **Suspected Sprain or Strain** | 1. Have the patient actively move the joint and then evaluate the amount of pain involved. Manipulate the joint with your hands and evaluate the pain response.  
2. If the joint appears usable, have the patient test it with his or her body weight. |
| **Suspected Fracture** | 1. Determine whether the injured part looks broken by comparing it to the uninjured side.  
2. Ask the patient whether he or she thinks the part is broken. Injured people are often correct in their assessments.  
3. Gently touch the injured area and look for these signs of a fracture:  
   - The patient reacts to your touch.  
   - The muscles appear to be spasming.  
   - The injured area feels unstable.  
   - One spot hurts noticeably more than others.  
4. Check for CSM beyond the site of the injury. |

**TOPIC: CARING FOR STRAINS, SPRAINS AND FRACTURES**

**Time:** 50 minutes

**Key Points:**

- Whether or not the injury is usable, the general care for bone and joint injuries is RICE, which stands for:
  - Rest: *Do not* allow the injury to be used for at least the first half hour. (A strained area can be used depending on how much pain the patient feels. A good rule is that if it hurts to use it, *do not* use it.)
Immobilization: Prevent further harm by keeping the injured area still. You will learn how to immobilize different types of injuries later in this lesson.

Cold: Reduce the temperature of the injury site as much as possible without freezing.
- Crushed ice works best. It conforms to the shape of the anatomy involved. Do not put ice directly on skin—put it in a plastic bag and wrap it in a shirt or sock.
- If you do not have ice, soak the injury in cold water or apply chemical cold packs, if available.
- Another option (during warmer months) is to wrap the injury in wet cotton and let evaporation cool the damaged area.

Elevation: Keep the injury higher than the patient’s heart.
- After 20 to 30 minutes of RICE, remove the cold and let the joint warm naturally for 10 to 15 minutes before testing to determine whether the joint can be used.
- For long-term care, the injury will heal faster if RICE is repeated 3 to 4 times a day until pain and swelling subside.

Splinting

Key Points:
- In a wilderness or remote setting, the patient most likely will need to be moved. The general rule in the delayed-help situation is: “When in doubt, splint!”
- A splint should restrict movement of the broken bone or bones, prevent further injury and maximize the patient’s comfort until a medical facility can be reached.
- A splint must be made of something to pad the injury comfortably and something rigid enough to provide support. Padding should fill all the spaces within the system to prevent movement of the injury.
- Useful items in your first aid kits for securing splints include large triangular bandages, tape, elastic wraps and roller gauze.
- Lightweight commercial splints are available as additions to your first aid kits.
- You can also improvise by using materials you have on hand to create splints.

Find and Shout Out

Activity:
- Ask participants to find splinting materials in their equipment or in the classroom. Tell them that when choosing materials for splinting, they are only limited by their imagination.
- Ask participants to gather materials for the next practice session. Provide any additional splinting materials so that the following types of items are available:
  - Padding
    - Sleeping bags
    - Foamlite pads, which can be cut to fit the problem
    - Extra clothing
    - Soft debris from the forest floor stuffed into extra clothing
    - Rolls of sterile dressings
- Rigid materials
  - Sticks
  - Tent poles
  - Ski/trekking poles
  - Oars or paddles
  - Ice axes
  - Lightweight camping chairs
  - Internal and external pack frames
  - SAM® Splints
- To secure splints in place
  - Bandanas
  - Strips of clothing
  - Pack straps
  - Belts
  - Rope
  - Triangular bandages
  - Tape
  - Elastic wraps
  - Roller gauze

- Explain to participants that they should be careful not to use material or equipment that is necessary for other essential purposes. Assess what is available for usable materials and, if possible, use materials belonging to the injured or ill patient.

**Key Points:**

- When splinting a patient, prepare the splinting materials ahead of time. Limit as much movement as possible to prevent internal injuries.
- Plan splints to hold the injury in the position of function—a natural, neutral position for the body part—or as close to position of function as possible. Functional positions include:
  - Spine, including neck and pelvis, in-line, with padding in the small of the back.
  - Legs almost straight with padding behind the knees for slight flexion.
  - Feet at 90 degrees to legs.
  - Arms flexed to cross the heart.
  - Hands in a functional curve with padding in the palms.
- A shoe left on the foot can act as a splint. Remove a shoe only if CSM is affected, the footwear is wet or the footwear makes assessment or care impossible.
- Also, remember to gently remove rings, watches, boots or anything else that could restrict blood flow once swelling occurs.
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Skill Session: Splinting

Activity:
- Ask participants to find a partner and designate the roles of patient and responder.
- Have each responder practice one skill with his or her partner as the patient. Have the first set of responders care for a patient who has a suspected fracture in the lower leg.
- Once participants have completed the skill, have them switch roles. Have the next set of responders care for a patient who has a suspected elbow fracture.
- Participants should follow the principles in the emergency reference guide and pocket guide and use the splinting materials gathered earlier to care for the injuries.
- Use the Skills Chart to guide participants through the steps, if necessary.
- After assessing their skills, share with the group good examples and problematic areas (e.g., too loose to support or loosens with movement; no padding; missed immobilizing joint above or below).

Skills Chart

<table>
<thead>
<tr>
<th>Applying a Splint to a Long Bone</th>
<th>1. Support the injured body part above and below the site of the injury.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Check for CSM.</td>
</tr>
<tr>
<td></td>
<td>3. Apply splint (options):</td>
</tr>
<tr>
<td></td>
<td>○ Anatomic—For legs, place several folded triangular bandages above and below the injured body part. Place the uninjured body part next to the injured body part. Tie triangular bandages securely above and below the injured body part.</td>
</tr>
<tr>
<td></td>
<td>○ Soft—Place several folded triangular bandages above and below the injured body part. Gently wrap a soft object (a folded blanket or pillow) around the injured body part. Tie triangular bandages securely with knots above and below the injured body part.</td>
</tr>
<tr>
<td></td>
<td>○ Rigid—Place several folded triangular bandages above and below the injured body part. Place the rigid splint (board) under the injured body part and the joints that are above and below the injured body part. Tie several folded triangular bandages above and below the injured body part.</td>
</tr>
<tr>
<td></td>
<td>4. Re-check CSM.</td>
</tr>
</tbody>
</table>

Note: If you are not able to check warmth and color because a sock or shoe is in place, check for sensation and ask the injured patient how it feels.
Skills Chart continued

| Applying a Sling-and-Swathe (sling and binder) | 1. Support the injured body part above and below the site of the injury.  
2. Check for CSM.  
3. Place a triangular bandage under the injured arm and over the uninjured shoulder to form a sling.  
4. Tie the ends of the sling at the side of the neck. Pad underneath the knot.  
5. Bind the injured body part to the chest with a folded triangular bandage. You may need to tie the two together.  
6. Re-check CSM.  

Note: If a rigid splint is used on an injured forearm, immobilize the wrist and elbow with a sling and then bind the arm to the chest using folded triangular bandages to create a swathe. |

Key Points:
- A splint should be long enough to restrict the movement of the joints above and below a broken bone, or restrict the movement of the bones above and below an injured joint.
- After splinting, check CSM often to ensure circulation is not cut off by wraps that are too tight.

Shout It Out: Splinting Specific Fractures

Activity:
- Explain to participants that the Wilderness and Remote First Aid Emergency Reference Guide provides details for splinting specific fractures. Explain that this activity provides examples of the different ways to splint specific fractures, as well as makes them familiar with the content in the emergency reference guide.
- Have participants refer to their emergency reference guides, find the specific fractures and state the answers for how to splint specific fractures. Be sure to call on different participants.
- Ask participants: “How do you splint a jaw fracture?”  
  Answer: Hold a jaw fracture in place with a wide wrap that goes around the head. Be sure the wrap can be removed quickly if the patient feels like vomiting.
- Ask participants: “How do you splint a collarbone (clavicle) fracture?”  
  Answer: Secure a collarbone (clavicle) fracture with a sling-and-swathe. Slings can be made from triangular bandages or improvised by lifting the tail of the patient’s shirt up over the arm on the injured side and pinning it in place. Be sure the sling lifts the elbow to take pressure off the shoulder.
- Ask participants: “How do you splint a finger or toe?”  
  Answer: Secure a finger or toe to nearby uninjured fingers or toes with padding between the digits and then tape.
■ Ask participants: “How do you splint an upper arm fracture?”

 Answer: Secure an upper arm (humerus) fracture by placing it in a sling-and-swathe. Leaving the elbow free sometimes eases the pain. Secure the broken bone to the patient’s chest wall with a wide soft wrap.

■ Ask participants: “How do you splint a rib fracture?”

 Answer: Splint a rib fracture by supporting the arm on the injured side with a sling-and-swathe. Do not wrap a band snugly around the patient’s chest. Encourage the patient to take regular, deep breaths, even if it hurts, to keep the lungs clear. Be sure to watch the patient for increased difficulty breathing.

■ Ask participants: “How do you splint a pelvis or hip fracture?”

 Answer: Secure the legs comfortably to one another. Be sure to watch the patient for signs and symptoms of shock due to internal bleeding, which is common with pelvic fractures. Conforming wraps with jackets or sheets around the pelvis will provide some support and security.

Instructor’s Note: If you wish to conduct a second skill session so participants can practice splinting for these specific fractures, follow the format as outlined in the previous splinting skill session.

Caring for Complicated Fractures

Key Points:

■ Angulated fractures, which leave the bone in a distorted, unnatural position, and open fractures, which expose the body to infection, both require specific care.

■ To care for an open fracture, irrigate the wound and dress it appropriately.

■ If bone ends stick out of the wound, and a health care provider is longer than 4 to 6 hours away:
  ○ Control any bleeding.
  ○ Clean the wound and bone ends without touching them.
  ○ Apply gentle in-line traction to the fracture to pull the bone ends back under the skin.
  ○ Dress the wound.

■ Splint the fracture. Infection is likely, but bones survive better if pulled back inside the body.

■ With an angulated fracture, the bones must be straightened through gentle in-line traction. In-line traction can be painful to the patient. To do this:
  ○ Pull in the direction in which the bones are pointing. This will relax the muscle and reduce the pain. The sooner this movement takes place, the better.
  ○ Slowly and gently move the broken bone back into normal alignment.
  ○ Do not use force.
  ○ Do not continue if the patient complains of increasing pain.

■ Once the injured part is aligned, splint the injury.

■ If you are unable to successfully align the injury, splint as best you can.
TOPIC: CHECKING AND CARING FOR DISLOCATIONS

Time: 27 minutes

Instructor’s Note: Have participants locate each skill in the emergency reference guide so they can follow along as you explain the care for each type of dislocation. This allows them to become familiar with this resource and may help them better understand the skills through the written description and any supporting photographs.

Key Points:
- A patient with a dislocation will have pain in the joint and a loss of normal range of motion.
- The joint will “look wrong.”
- Many dislocations can only be managed in the field by splinting them in the most comfortable position.
- In other cases, the joint can be put back in its normal position, or realigned, through a process called reduction. If attempting a reduction, be sure to:
  - Work quickly but calmly. Usually, the sooner a reduction is done, the easier it is on the injured patient and the responder.
  - Encourage the patient to relax, with particular concentration on the injured joint.
  - Stop if the pain increases dramatically.
  - Splint the injury after the joint is back in its normal position.

Specific Dislocations

Anterior Shoulder Dislocations

Key Points:
- Anterior shoulder dislocations are the most common type of dislocations that occur in the field.
  One approach that is often used to reduce a shoulder dislocation is the Stimson technique. The advantage to this approach is that there is little chance of harming the patient. The disadvantage is that it takes a bit of time and is not always successful. To use the Stimson technique, follow these steps:
  - Position the patient face-down across a rock or log with the arm on the injured side dangling down vertically.
  - With a soft cloth, tie something of about 5 to 10 pounds of weight to the dangling wrist. Do not have the patient hold the weight.
  - Wait. This process takes 20 to 30 minutes to work. The goal is to have the bone slide back into the socket.
- The key to success is for the patient to be relaxed and to allow the gentle pull of the weight to tire the chest and back muscles, allowing the shoulder to return to its normal position. Too much weight will cause increased spasms and prevent this method from working.
A patient with a shoulder dislocation can perform a similar technique on him- or herself to put the shoulder back in place. Standing or sitting, the patient should pull the injured arm straight forward, away from the body, by gripping the wrist with the opposite hand.

The injured patient should perform the technique right away. Otherwise, the dislocation will cause the chest muscles to spasm so much that the technique probably will not work.

As soon as the reduction is completed, the injured patient should be placed in a sling-and-swathe. Do not swathe the patient if he or she must use the arm in an emergency, such as escaping from an overturned raft.

**Finger or Toe Dislocations**

Key Points:

- To put a dislocated finger or toe back in its normal position:
  - Keeping the injured finger or toe partially flexed (bent), pull on the end with one hand while gently pressing the dislocated joint back into place with your other thumb.
  - Place a gauze pad between the injured finger or toe and neighboring finger or toe.
  - Tape the fingers together.
  - Do not tape directly over the joint itself.

**Kneecap (Patella) Dislocations**

Key Points:

- It is usually easy to put a dislocated kneecap back into its normal position by taking the following steps:
  - Apply gentle traction to the leg to straighten it out. This may cause the kneecap to pop back into place without any further treatment.
  - If the kneecap does not pop back into place after the leg is straightened, massage the thigh and use your hand to push the kneecap gently back into normal alignment.
  - Apply a splint that does not put pressure on the kneecap. This way, the patient may be able to walk.

**TOPIC: GUIDELINES FOR EVACUATION**

Time: 5 minutes

Key Points:

- With a usable body part after injury, the patient’s degree of discomfort will determine the need to evacuate the patient more than anything.
- Evacuate anyone with unusable body part injuries and with first-time dislocations (except perhaps dislocations of the outer joints of the fingers and toes).
Go FAST to rapidly evacuate any patients with angulated fractures, open fractures, fractures of the pelvis, hip or femur (thigh), more than one long bone fracture (e.g., femur [thigh bone] and tibia [shin bone]), and injuries that create a decrease in CSM beyond the injury.

SCENARIO: BONE AND JOINT INJURY

Time: 30 minutes

Instructor’s Note: See Section 3: Appendices of this instructor’s manual for information on setting and staging scenarios. Provide participants sufficient information up front, by physical setting and props, verbal descriptions or cue cards, so that they are responding to parameters rather than having to assume them. Because participants are going to simulate responding to an emergency situation, provide only the information necessary for responders to make a decision and give care by prompting the responder/group on the conditions found, such as “Air goes in” instead of “Give a rescue breath.” You will have time to debrief and build on scenarios later.

- Ask participants to take to the practice area their wilderness first aid kits/pack (if available), emergency reference guides, pocket guides, Wilderness and Remote First Aid Report Forms/Rescue Requests, non-latex disposable gloves and any necessary materials and equipment to complete the scenario.
- Have participants get into groups of four or five. Identify one participant to be the note taker for the scenario and give him or her the report form/rescue request. Identify another participant to be the patient. Provide him or her with the scenario cue cards that describe the patient’s role. Have responders exit the room or close their eyes while you set up the scenario.
- Apply wound makeup (known as moulage) if desired. Directions for applying wound makeup can be found in Appendix 3-16.
- Have the patient sit or lie next to a wall or in a corner and have books or chairs along the floor by the patient. If in the wilderness, have the person sit at the bottom of a hill or ravine, if one is available. If not, place the patient on uneven ground. Choose a location that provides obstacles for giving care but does not compromise the safety of the group. Have the patient sit or lie in a position to guard the injury. Have the group start a short distance away so they begin the scenario by checking the scene for safety.
- Tell participants that they must find and refer to the appropriate material as part of this simulated emergency scenario, using everything they have learned up to this point in the course.
- Tell participants that they have themselves and what they brought as resources. If participants ask, they may use other items they find in the practice area.
- Prompt participants through the scenario as needed. Participant actions are in bold; instructor actions and actions found on the cue card are in italics. The participant role-playing the injured adult leader will have cue cards to advise the responder of his or her condition.
- Record each participant’s actions in the scenario on the Wilderness and Remote First Aid Competency Check Sheet.
**Setup:** You are all volunteers in a trail restoration project in a wilderness area. An adult leader falls on a downed branch and rolls down a 5-foot embankment. You are able to call a ranger station, but based on your location, help is at least an hour away.

**Participant Action:** A leader emerges from the group, recognizes an emergency, provides leadership and checks for scene safety.

**Instructor Action:** The scene is safe.

**Participant Action:** Decides how to safely reach the patient. Reaches the injured patient, and recognizes the emergency.

**Instructor Action:** A person is injured.

**Participant Action:** Calls ranger station. Establishes the MOI.

**Cue Card:** Fell 5 feet and landed in a ravine.

**Participant Action:** Checks for consciousness.

**Instructor Action:** The patient has a level of responsiveness (LOR) of A+O×4.

**Participant Action:** Checks for airway and breathing.

**Instructor Action:** The airway is open and the patient is breathing regularly.

**Participant Action:** Checks for circulation.

**Instructor Action:** The patient has a regular pulse.

**Participant Action:** Checks for disability.

**Cue Card:** The patient cannot move one ankle and one shoulder.

**Participant Action:** Checks the environment.

**Instructor Action:** There are no significant environmental factors.

**Participant Action:** Begins a secondary assessment with SAMPLE history. Asks about symptoms.

**Cue Card:** The patient has pain and cannot move extremities.

**Participant Action:** (If moulage is used, should locate injured area.) Asks about allergies.

**Cue Card:** The patient has no allergies.

**Participant Action:** Asks about medications.

**Cue Card:** The patient does not take medication.

**Participant Action:** Asks about pertinent past medical history.

**Cue Card:** The patient reports no pertinent past medical history.

**Participant Action:** Asks about last intake and output.

**Cue Card:** The patient has not been drinking and is very thirsty. He/she forgot his/her water bottle and did not want to tell anybody.

**Participant Action:** Asks about events leading up to the incident.

**Cue Card:** The patient did not see a branch because of sweat in his/her eyes.

**Participant Action:** Completes a hands-on physical exam.

**Cue Card:** There are no other injuries.

**Participant Action:** Checks breathing.

**Instructor Action:** The patient is breathing about 12 breaths per minute.

**Participant Action:** Checks pulse.

**Instructor Action:** The patient has a strong pulse of 90 beats per minute.
Participant Action: Gives care by giving a “usability assessment”; RICE; splints shoulder using sling-and-swathe and splints leg to ground; and gives small sips of water.

Instructor Action: Demonstrate and have participants go through glove removal skill.

Scenario Follow-Up

- Use the notes taken by the note taker and Wilderness and Remote First Aid Report Form/Rescue Request to remember specific care issues.
- Facilitate a discussion with participants by asking the following questions:
  - “How was scene safety managed? How was the patient protected during the assessment?”
    Answers: Answers will vary based on the group.
  - “How were LOR and airway, breathing, circulation, disability and environment (ABCDEs) checked?”
    Answers: Answers will vary based on the group.
  - “What relevant information did you find out during the physical exam and SAMPLE history?”
    Answers: Responses should include the following:
    - Shoulder strain
    - Ankle sprain
    - Possible dehydration
  - “What influenced your splinting decisions?”
    Answers: Responses could include the following:
    - Materials
    - The need to move the patient
  - “What are your evacuation plans?”
    Answers: Responses will vary based on the group.
  - “What did you learn? What would you change for the next scenario?”
    Answers: Responses will vary based on the group.
  - “If this were a real emergency, would you be prepared to respond? If not, what steps can you take to ensure that you are ready to respond to an emergency?”
    Answers: Responses will vary based on the group.
  - “If this were taking place in a wilderness setting, what additional issues would you need to be aware of?”
    Answers: Responses will vary based on the group.

**TOPIC: WRAP-UP**

Time: 2 minutes

- Answer participants’ questions about bone and joint injuries.
- Have participants brainstorm any additions to the first aid kit list based on this lesson.