

Extremity Splinting

Optional , EMR



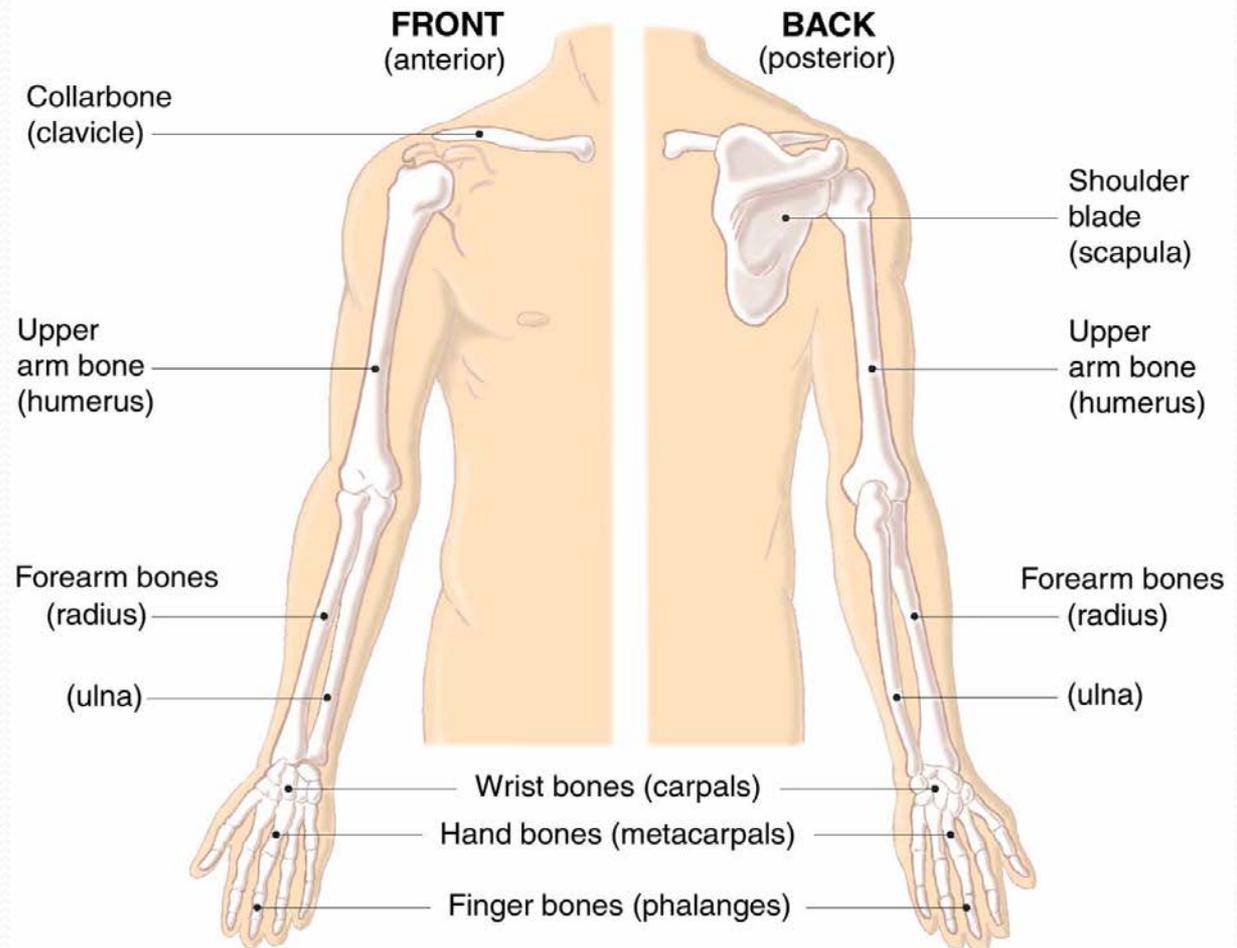
Course Objectives

- Describe the function of the musculoskeletal system.
- Differentiate between an open and a closed painful, swollen deformed extremity.
- List the emergency medical care for a patient with a painful, swollen deformed extremity.
- Demonstrate the emergency medical care of a patient with a painful, swollen deformed extremity.

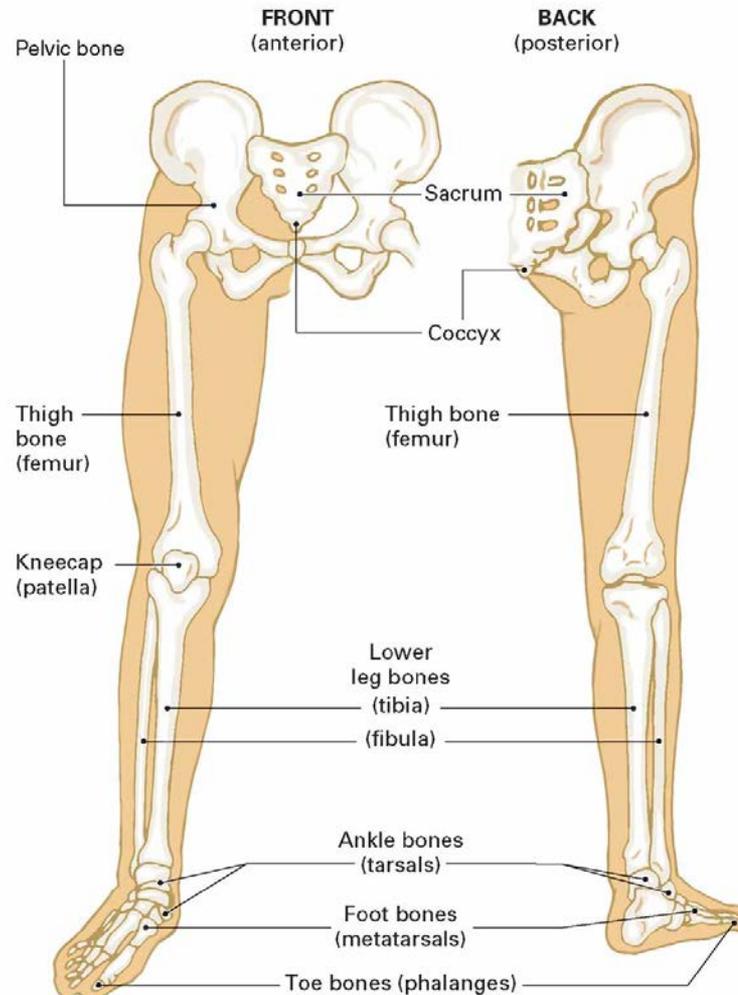
Musculoskeletal System Function

- Support
- Movement
- Protection
- Cell Production

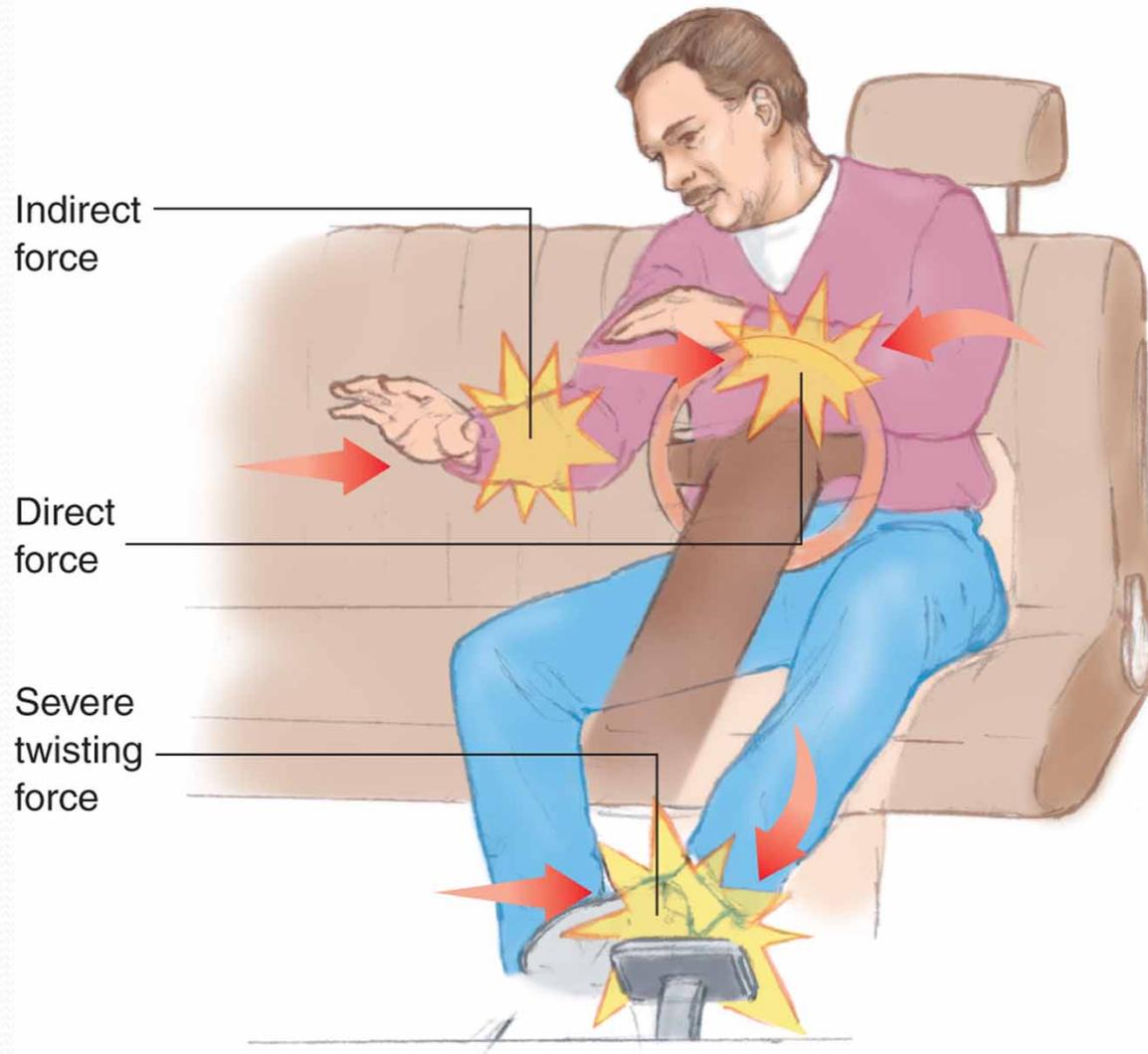
Bones of the Upper Extremities



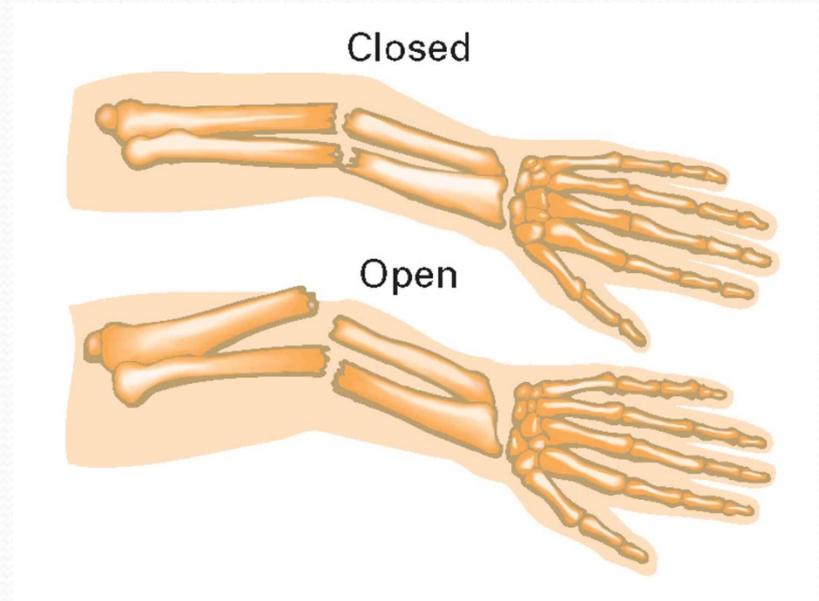
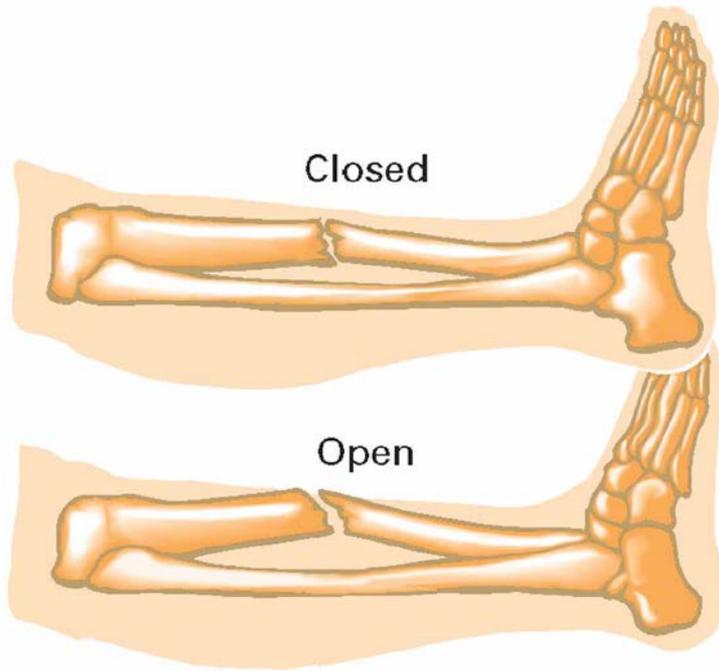
Bones of the Lower Extremities



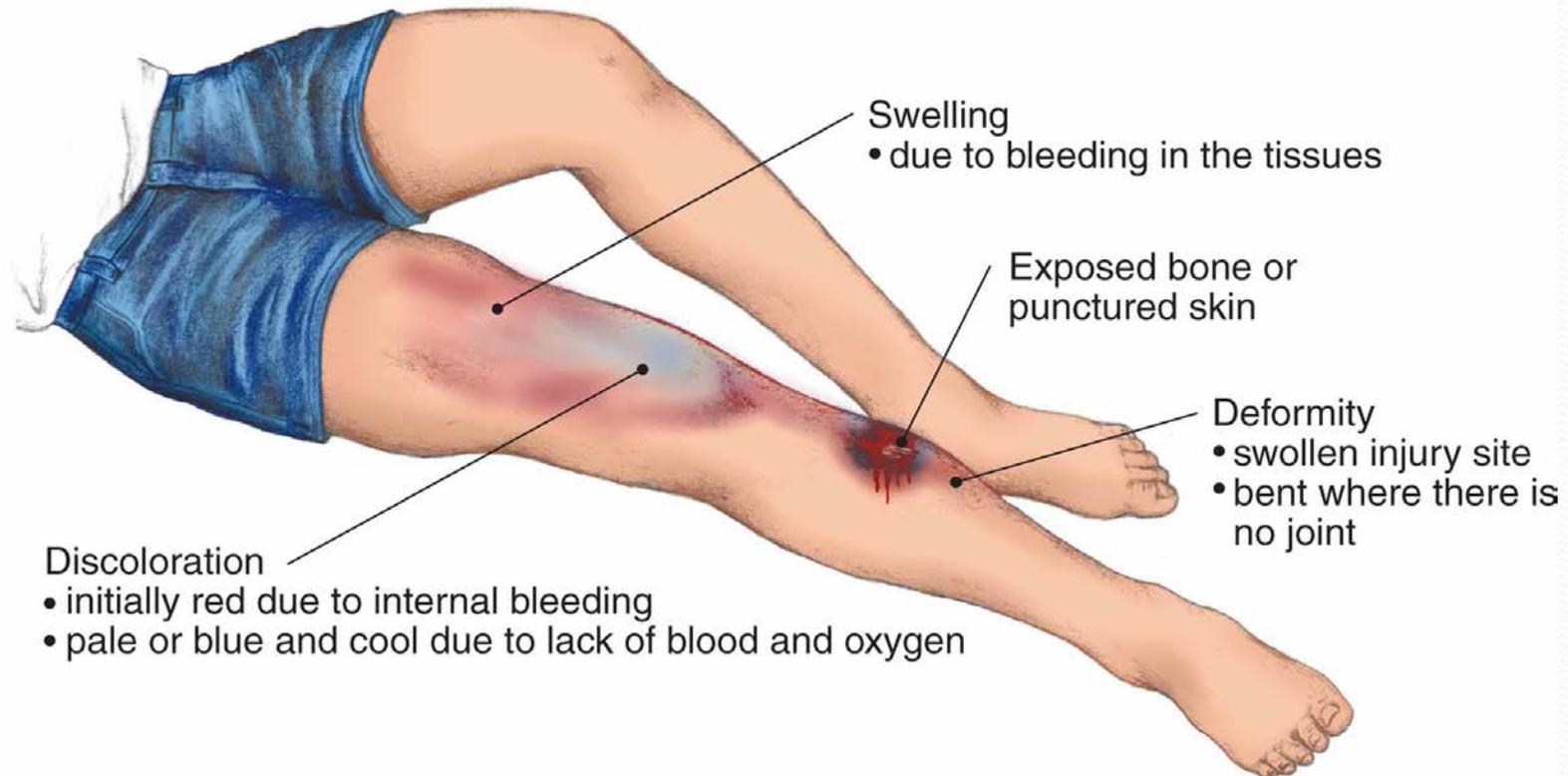
Causes of Extremity Injuries



Open and Closed Injuries



Signs and Symptoms of Extremity Injuries



Emergency Care

Follow these guidelines:

- Use proper BSI equipment.
- Ensure oxygen is already applied
- Maintain inline immobilization if warranted
- Immobilize appropriate for type of injury
- Transport and continue reassessment en route

After controlling bleeding, dress and bandage open wounds to the injured extremity



Check distal circulation, sensation, and motor function before splinting.



Select an appropriate size splint for the injury and pad the splint thoroughly.



Firmly secure the splint, leaving fingertips (or toes) exposed so you can monitor circulation.



After immobilization, reassess distal circulation, sensation, and motor function.



Elevate the extremity. For an arm, use the sling to immobilize it against the chest. For a leg, prop it on a pillow or rolled blanket (if there is no indication of spine injury).



A sling and swathe starts with a triangular bandage 50 inches at its base and about 36 inches on each side. Fold it to any width



After assessing circulation, sensation, and motor function, position the longest side of the bandage over the chest while holding on to the point and one corner.



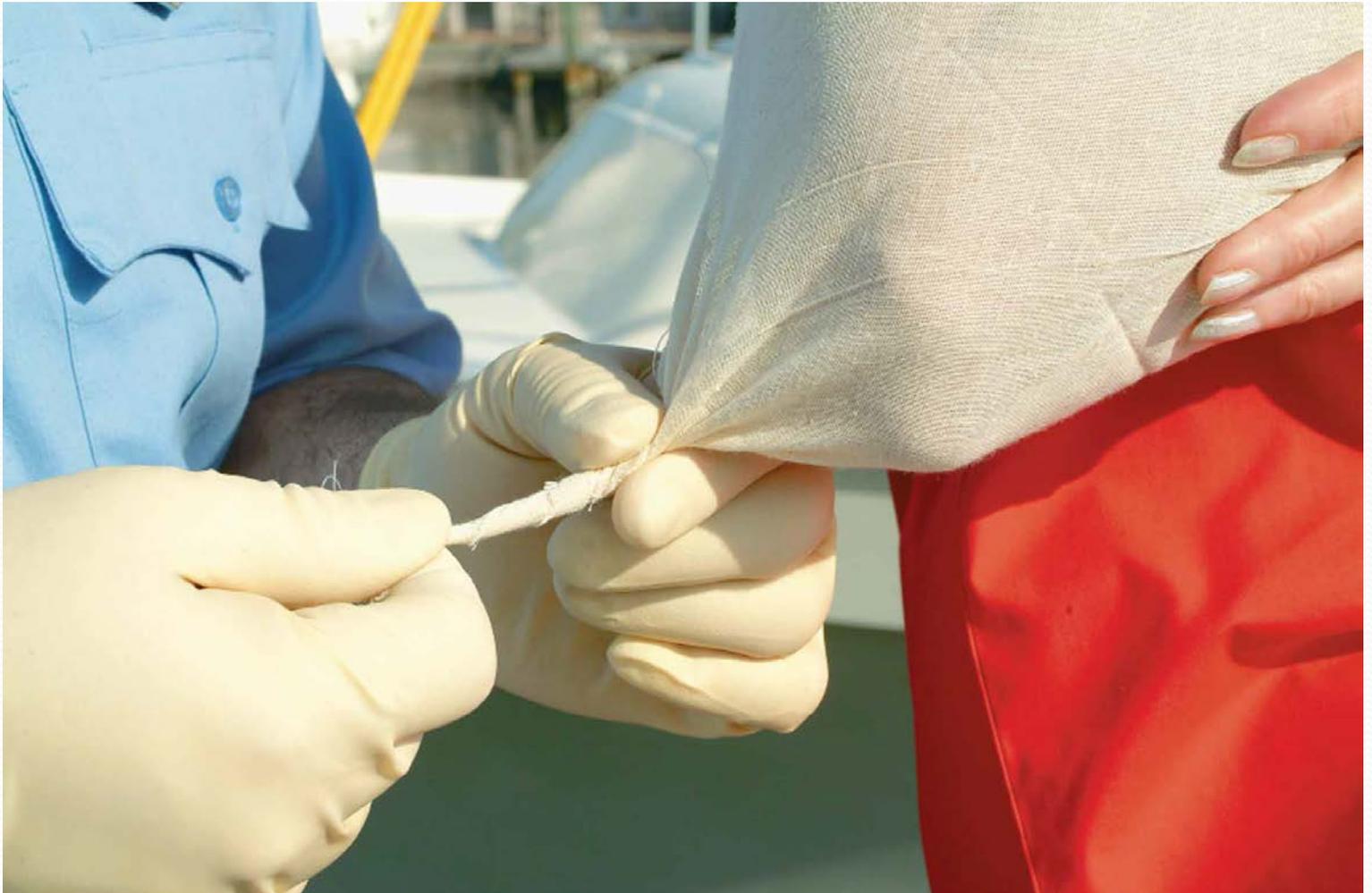
Bring the bottom end up and over the patient's injured arm. Keep the hand elevated above the elbow.



Tie the two ends together. Pad the knot and make sure it does not rest on the patient's neck. Reassess circulation, sensation, and motor function



Secure the point of the sling to form a pocket for the elbow.



Fold another triangular piece of material to form a swathe. Tie it around the patient to support the arm and to maintain elevation.



Splinting an Upper Extremity: Shoulder. Apply a sling and swathe. Elevate the wrist above the elbow and support it with the swathe.



Splinting an Upper Extremity: Upper arm. Immobilize with a rigid splint from the shoulder to the elbow. Apply a sling and swathe that will elevate and support the limb.



Splinting an Upper Extremity: Elbow (bent). Apply a sling and swathe to elevate and support the limb.



Splinting an Upper Extremity: Elbow (straight). Pad the armpit. Splint should extend from the armpit beyond the fingertips. Use roller bandages to secure the splint to the arm starting at the distal end. Secure the arm to the body with cravats.



Splinting an Upper Extremity: Forearm, wrist, hand. The splint should extend from the elbow to beyond the fingertips. Use a sling and swathe for elevation and support.



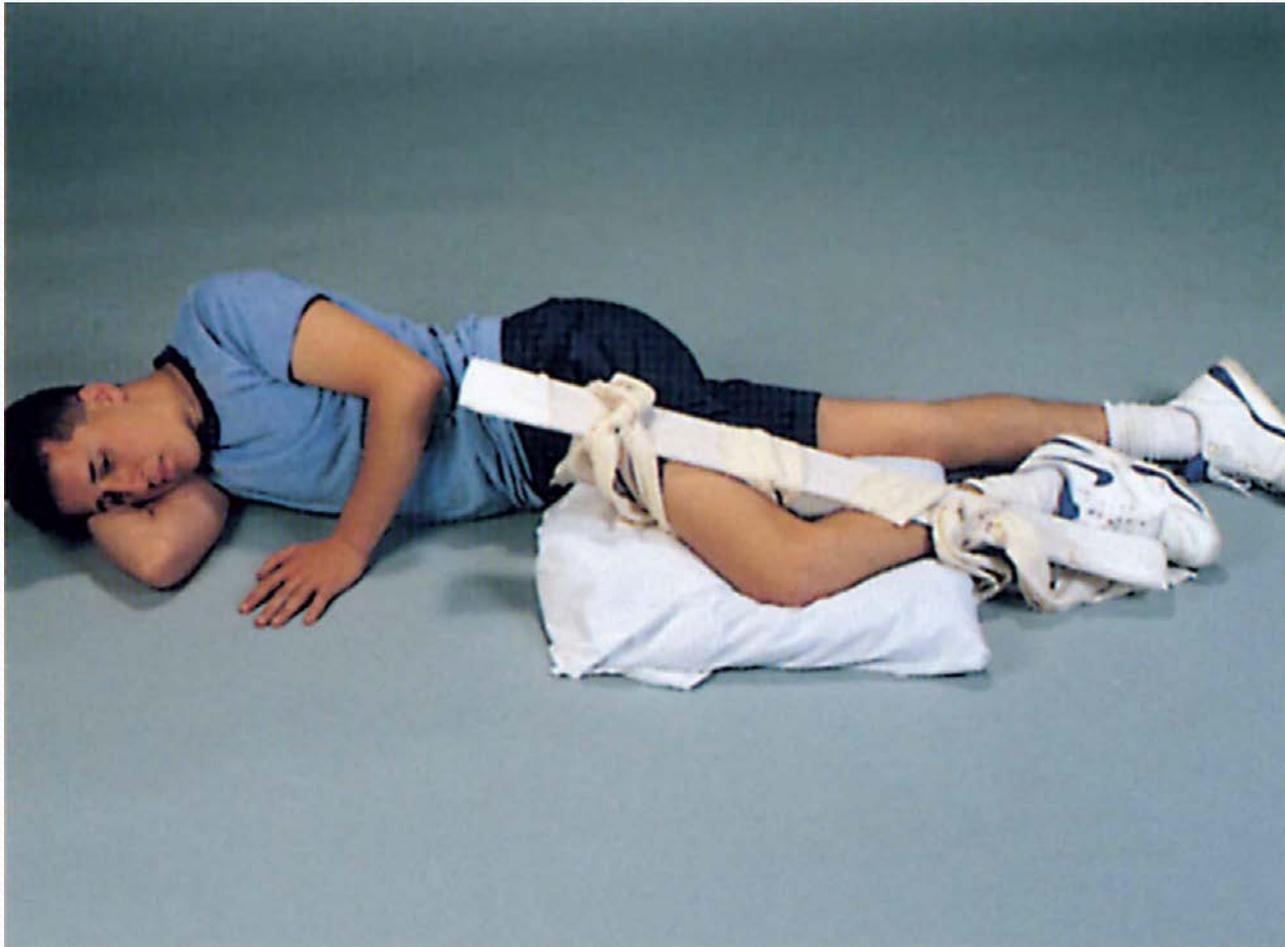
Rigid splints can be made from A. cardboard or B. rolled newspapers or magazines.



Splint an injured knee in the position in which it is found.



Splinting a Lower Extremity: Knee: If distal pulse present, then splint in position found. If no distal pulse, attempt to gently realign or reposition to regain pulse (if your EMS system allows). For a bent knee, secure splints behind knee, at the thigh, and at the lower leg. For a straight knee, splint using same steps as “Lower Leg.”



Lower Leg Splint: Assess circulation, sensation, and motor function before moving or splinting the extremity.



Choose a splint that extends from the heel to well above the knee.



Secure the splint above and below the knee.



Reassess circulation, sensation, and motor function after the splint is secure.

