

7.145 SPLINTING

7.14 GENERAL EXTREMITY SPLINTING

EMSAC JUNE 2026

BLS

INDICATION

- For suspected fractures/dislocations

TECHNIQUE

1. Assessment:
 - Vascular status of extremity: pallor, pulse, capillary refill, skin temperature
 - Obvious deformity, shortening, rotation or instability
 - Neurologic status of extremity: sensation to light touch, distal movement of extremity
2. Strongly consider pain management before attempting to move a suspected fracture
3. If distal vascular function is compromised, gently attempt to restore normal anatomic position, and reassess perfusion status
4. Use splints as appropriate to limit movement of suspected fracture. For suspected mid-femur fractures static splinting may be accomplished with rigid splints, vacuum splints, or secondary splinting to uninjured leg
5. Elevate extremity fractures above the heart level whenever possible to limit swelling
6. Apply ice/cool packs to limit swelling in suspected fractures or soft tissue injury, but do not apply ice directly to bare skin
7. Reassess distal neurovascular status after any manipulation of splinting of fracture/dislocation
8. Dress open wounds associated fracture with saline-moistened gauze
9. Remove wet or blood-soaked clothing and use measures to prevent heat loss
10. Remove jewelry and potentially constricting clothing from the injured limb
11. Do NOT remove impaled foreign bodies; stabilize in place

TRACTION SPLINTING

INDICATION

- ~~Stabilization of a closed mid-shaft femur fracture to reduce pain, prevent further injury, in a hemodynamically stable patient~~

CONTRAINDICATION

- ~~Open fracture or partial amputation on the same leg~~
- ~~Hip or pelvis injury~~
- ~~Knee or lower leg injury on the same leg~~
- ~~Static splinting using rigid materials may be used as a preferred alternative, if traction splint is contraindicated or if patient unable to tolerate~~

7.145 SPLINTING

TECHNIQUE

- ~~Completely expose the injured extremity—remove shoe and sock~~
- ~~Assess motor, sensory, and distal circulation in the injured leg~~
- ~~Assess and treat pain~~
- ~~Prepare and adjust splint to proper length~~
- ~~Position the splint at the injured leg~~
- ~~Apply proximal securing device (ischial strap), distal securing device (ankle hitch)~~
- ~~Apply appropriate mechanical traction~~
- ~~Position and secure support straps~~
- ~~Re-evaluate proximal/distal securing devices~~

DOCUMENTATION

- Indication for device placement
- EMS Personnel responsible for procedure (eprocures.09 and eprocures.10)
- Patient reassessment post-procedure
- Complications if applicable

Comments

- ~~As an alternative to traction splints, static splinting can be considered~~

INDICATION

- ~~Suspected or Obvious extremity fracture.~~
- ~~Appropriate splinting can reduce or minimize dislocation, motion, hemorrhage, swelling, and pain.~~

PROCEDURE

- ~~2. Remove or cut away clothing.~~
- ~~3. Dress and bandage significant wounds using a sterile dressing.~~
- ~~4. Check CMS distal to injury before and after splinting.~~
- ~~5. Immobilize joints above and below injured bones.~~
- ~~6. For joint injuries, leave in place and immobilize the bone above and below the joint~~
- ~~7. ***If extremity is pulseless*** it may be necessary on a mid-shaft (center 1/3) fracture to realign angulated injuries.~~
- ~~8. Pad splints well.~~
- ~~9. Elevate extremity after splinting, if possible.~~
- ~~10. Monitor CMS after splinting.~~

GUIDELINES FOR SPECIFIC INJURIES

Realignment of Long Bone Fractures

7.145 SPLINTING

- ~~If extremity is pulseless attempt to realign (open or closed) long bones that are angulated in the middle 1/3 then splint. If resistance to movement is encountered or pain is too severe, discontinue realignment efforts and immobilize in place.~~
- ~~Long bone fractures which occur in the proximal or distal 1/3, that may or may not involve a joint, may be realigned if compromise of distal circulation or nerve function is detected and transport is prolonged.~~
- ~~Realignment may sometimes be necessary to facilitate packaging for transport.~~
- ~~Check and document CMS before and after splinting and/or realignment.~~

Dislocations/Sprains

- ~~Splint dislocations or other joint injuries in the position found.~~
- ~~Exception: Loss of a distal pulse and neurological function and definitive care is delayed.~~
 - ~~In that case, attempt to straighten into anatomical position until the pulse returns, excessive pain is felt, or resistance is encountered.~~
 - ~~Support with blanket, pillow, or well padded splint.~~
 - ~~Elevate the limb.~~
 - Pack the injured area in ice or use an ice pack.

TRACTION SPLINTING

- ~~A lower extremity traction splint stabilizes fractures of the femur. This reduces motion, hemorrhage, swelling, and pain. Traction splints are indicated in midshaft femoral fractures without involvement of the hip joint, knee, or lower leg.~~
- ~~**PROCEDURE for Applying a Traction Splint**~~
 - ~~1. Two EMTs are needed to apply a traction splint.~~
 - ~~2. Remove or cut away clothing.~~
 - ~~3. Dress and bandage significant wounds using a sterile dressing.~~
 - ~~4. Manually immobilize the injured extremity prior to dressing/bandaging.~~
 - ~~5. Do not apply manual traction. Check distal CMS before and after manipulation.~~
 - ~~6. Determine SICK/NOTSICK~~
 - ~~7. Control Bleeding~~
 - ~~8. Size splint to uninjured leg~~
 - ~~9. Have one EMT stabilize the leg while the other applies the traction device.~~
 - ~~10. Apply splint~~
 - ~~Groin strap~~
 - ~~Ankle hitch~~
 - ~~Knee strap~~
 - ~~Extend~~
 - ~~Thigh and calf straps~~
 - ~~11. Reassess CMS and vital signs~~