



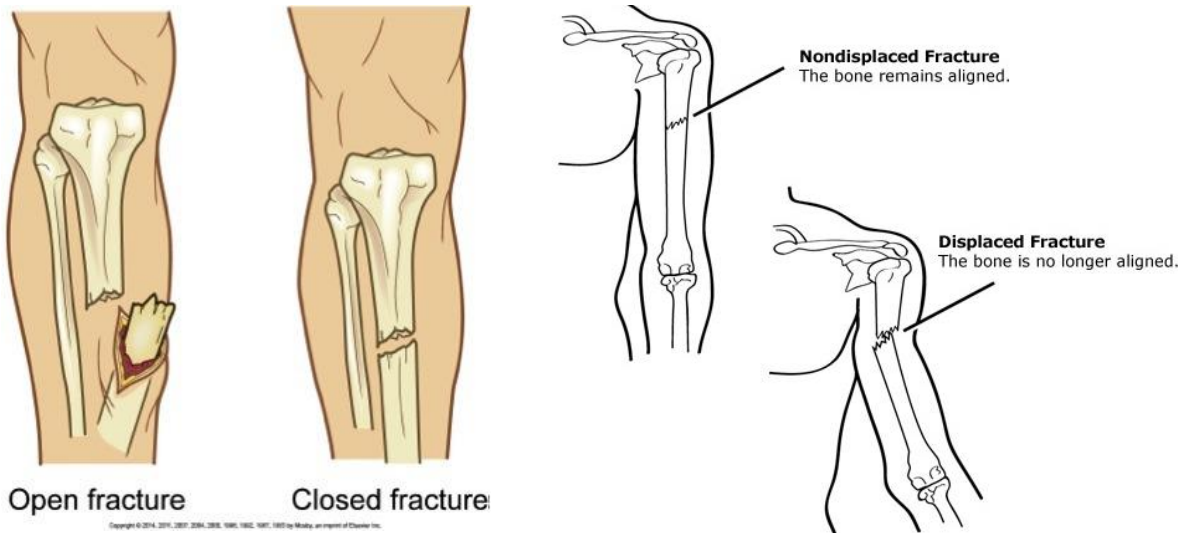
# Fractures, Dislocations, Sprains, & Strains

## Course Description:

- Immobilize injury and joints immediately above and below injury site.
- If uncertain of injury type, treat as fracture.

## The Two Types of Fractures:

1. An **open fracture** is when the skin is broken & bone is exposed, causing soft tissue injury.
2. A **closed fracture** is when the skin remains intact. Two subcategories of closed fractures.
  - a. A **nondisplaced** fracture can be difficult to identify, with the main signs being pain and swelling.
  - b. A **displaced** fracture will have an angled appearance to the limb, if not also an open skin wound.



## Treatments:

- Closed fractures require splinting.
- Open fracture needs a dressing to prevent further contamination, with splinting/**immobilization**.
  - These are more dangerous than closed fractures as increased risk of infection, bleeding, and nonunion of bone as it heals.
  - DO NOT draw the exposed bone ends back into the tissue.
  - DO NOT irrigate the wound.
  - DO cover with a sterile **dressing**. A moist 4x4 dressing covered with a sterile **dressing** over the bone end keeps it from drying out followed with **immobilization**.

## Dislocations

This is an injury to ligaments around a joint allowing the bone to move out of its normal position. It presents with pain, swelling, and deformity of the joint.

Treat as a fracture. **Immobilize**, DO NOT relocate.

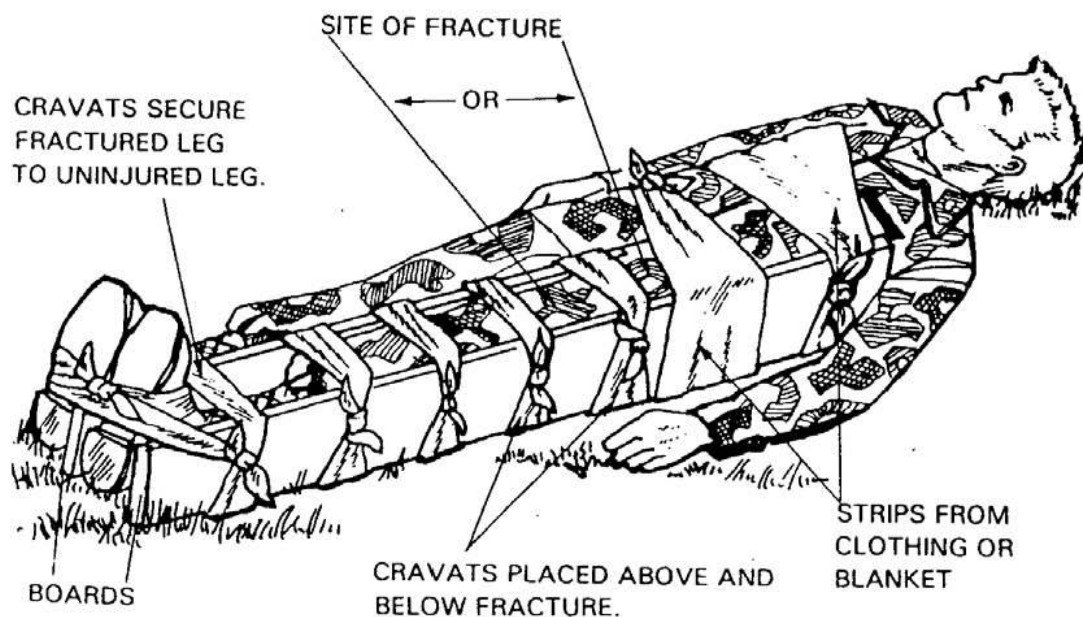
Check for PMS (pulse, movement, sensation) before and after splinting/**immobilization**.

## Sprains and Strains

A sprain is a stretching or tearing of ligaments at a joint and is usually caused by stretching or extending the joint beyond its normal range. The ligaments are injured. This shows tenderness at the site of the injury, swelling, bruising, restricted use of extremity.

Treatment is **immobilization** and elevation.

## Materials for **Immobilization**



Splinting materials are what is at hand, be creative if necessary.

- Soft materials: Towels, blankets, pillows tied with bandaging materials or cloths.
- Rigid materials: Boards, metal strips, magazine, cardboard (most common) tied with cloths.

Anatomical splints can be created by securing a fractured bone to an adjacent unfractured bone. Usually used for fingers and toes, but helpful for legs also. An arm can be secured to the chest.

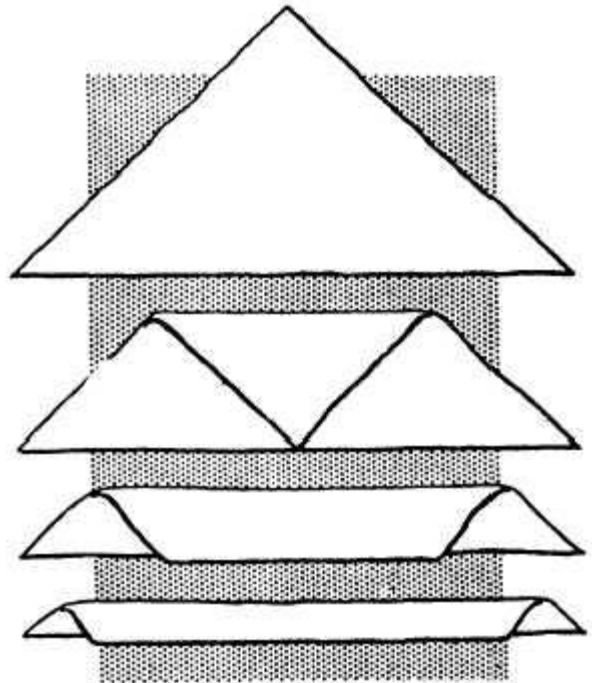
## DEMONSTRATION of Skills of Immobilizations & Dressings

Order of operation

1. Support injured area above and below injury.
2. Assess PMS in extremity
3. If applicable, dress an open wound.
4. Splint/Immobilize injury in position that you find it.
5. Reassess PMS

### Cravat (Dressing & Immobilizations)

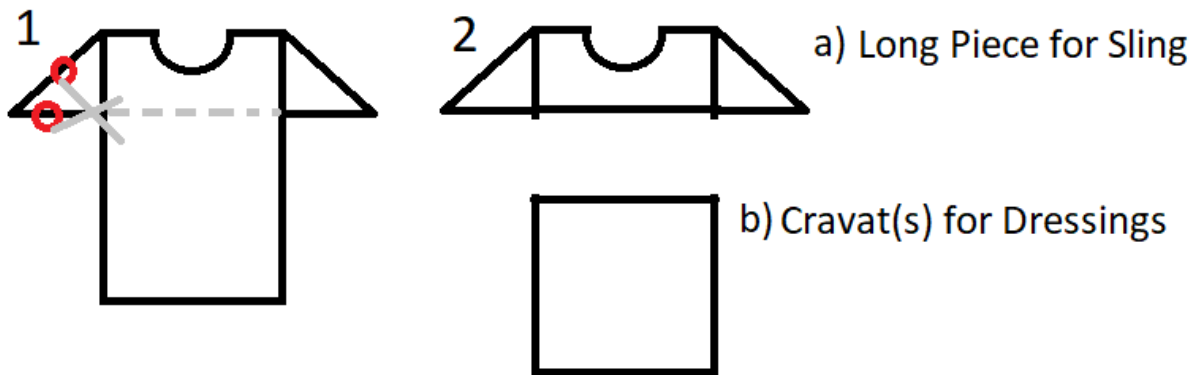
A Cravat is a triangular bandage (figure left), which can be folded for many applications. The best material is cotton. This is also the best material for dressings. Synthetics actually hold onto bacteria longer. The cravat is made by taking a 36 inch square of material and cutting along a diagonal line in the middle to make two triangles.



## Homemade Cravat

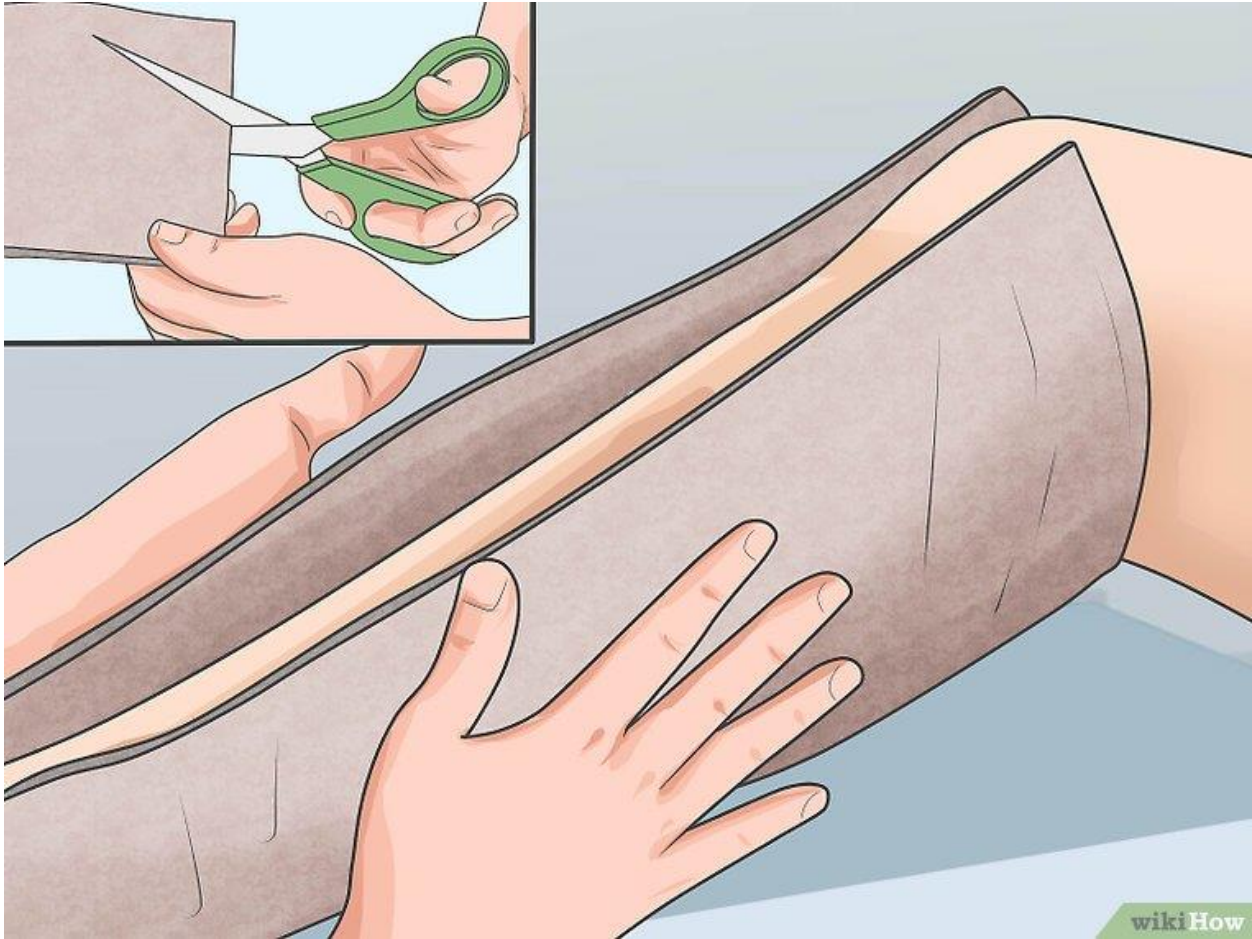
If a cravat is not available, an option for the field is to use a t-shirt.

1. Take a shirt and cut the lower portion of the shirt from armpit to armpit.
2. Take the square of the shirt (2b) and fold into a long strip to use for strapping
3. Use the remaining top long piece of fabric (2a) as a sling by placing one end under the injured arm and the other end over the head.



\_\_\_\_\_ Demonstrate making and folding a cravate

## Splinting/Immobilizing with Soft Materials



\_\_\_\_\_ Make a cardboard splint for an extremity. Tie extremity into position with cravats.

\_\_\_\_\_ Use a pillow or magazine to splint an upper extremity

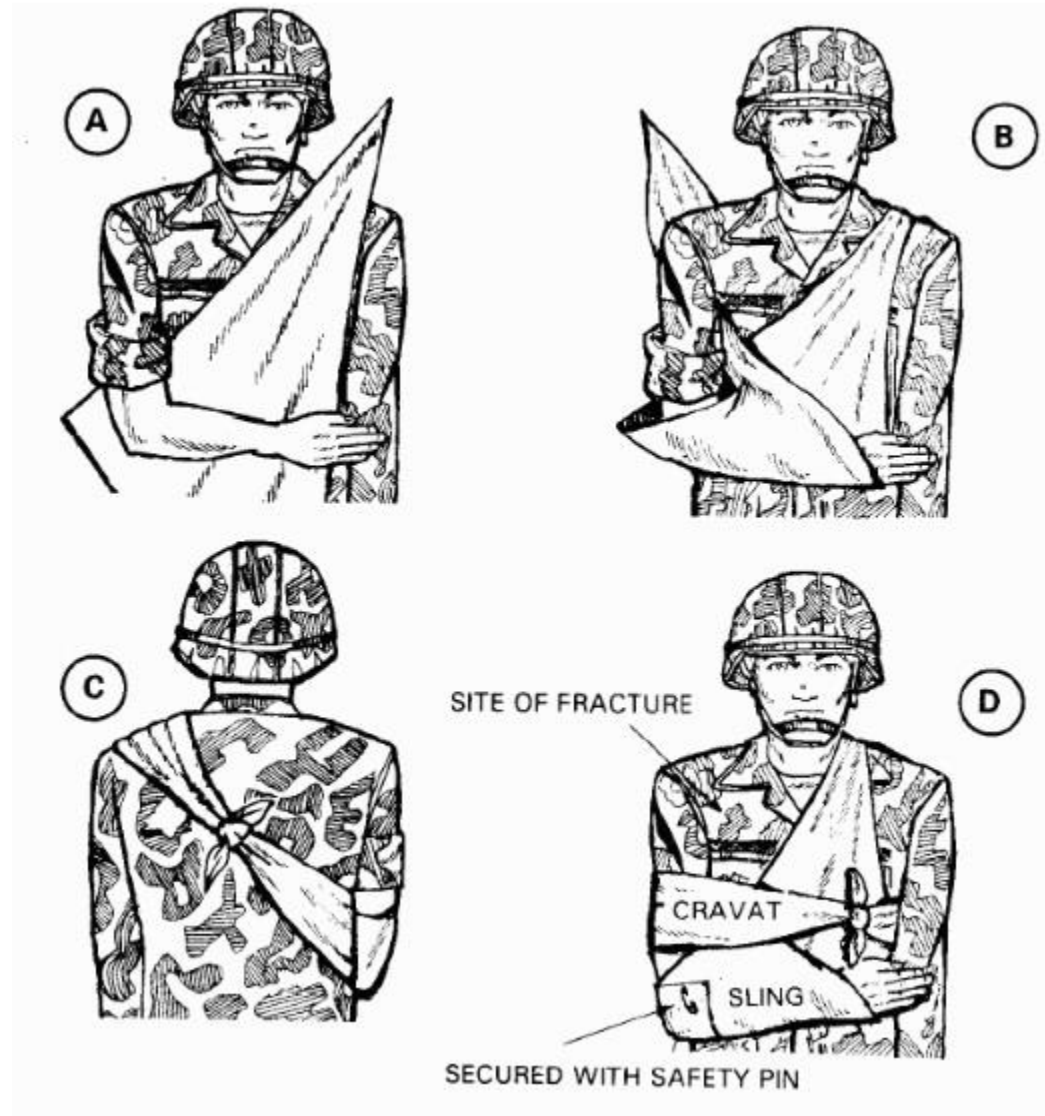
\_\_\_\_\_ Demonstrate anatomical splinting for a digit using tape or gauze.



## Splinting/Immobilizing with Soft Materials, cont'd.

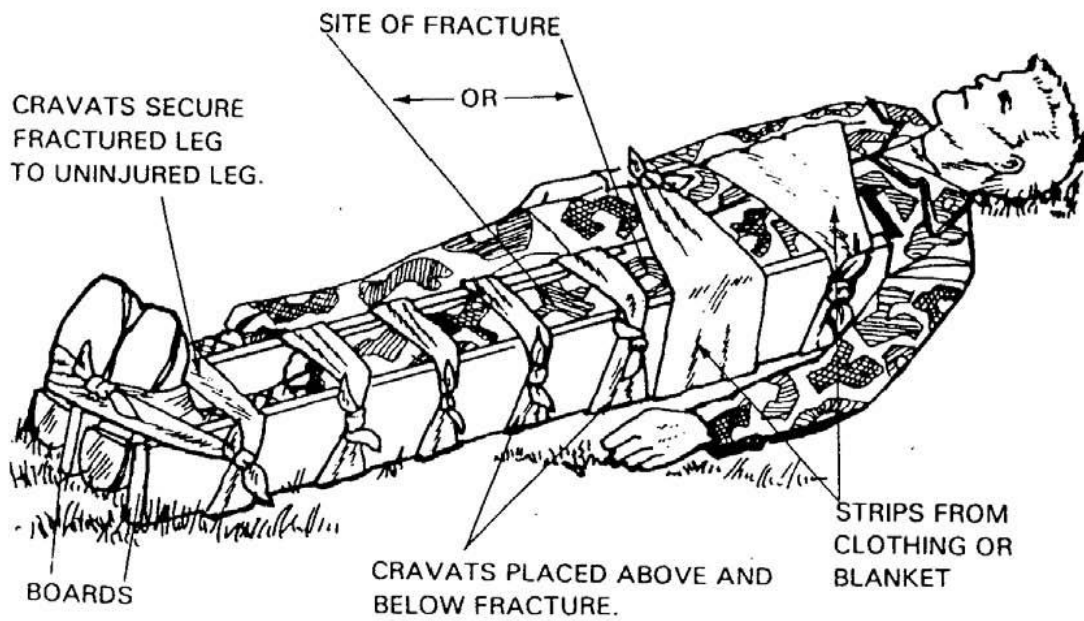
\_\_\_\_\_ apply a sling and swathe to an upper extremity

\_\_\_\_\_ Use a blanket roll to stabilize a shoulder dislocation along with a sling.



## Splinting/Immobilizing with Hard Materials

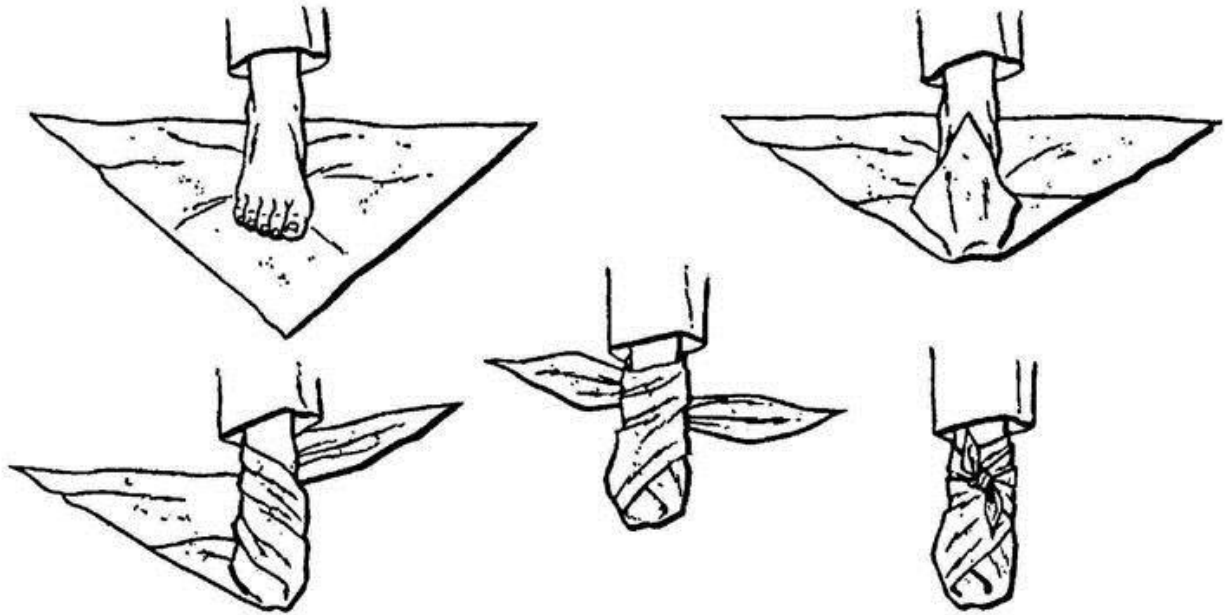
- \_\_\_\_\_ Splint a lower extremity
- \_\_\_\_\_ Splint an upper extremity
- \_\_\_\_\_ Apply a Splint to a back
- \_\_\_\_\_ Utilize anatomical splinting for a lower extremity



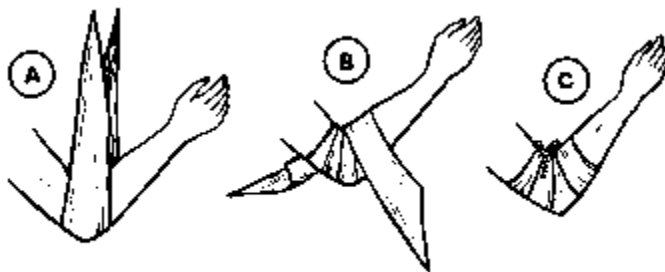
## Dressings

Materials to use are cotton gauze, homemade cotton squares, linen or wool padding. Applying band aids should be common knowledge, but knowing when to use additional support or a wet to dry dressing can be useful for open wounds.

\_\_\_\_\_ Dress a foot or hand with a cravat



\_\_\_\_\_ Demonstrate wrapping an elbow or knee



*Figure 3-37. Elbow bandage (Illustrated A thru C).*



**Dressings, cont'd.**

\_\_\_\_\_ Use a cravat for a jaw fracture or as cheek dressing



\_\_\_\_\_ Wrap a shoulder

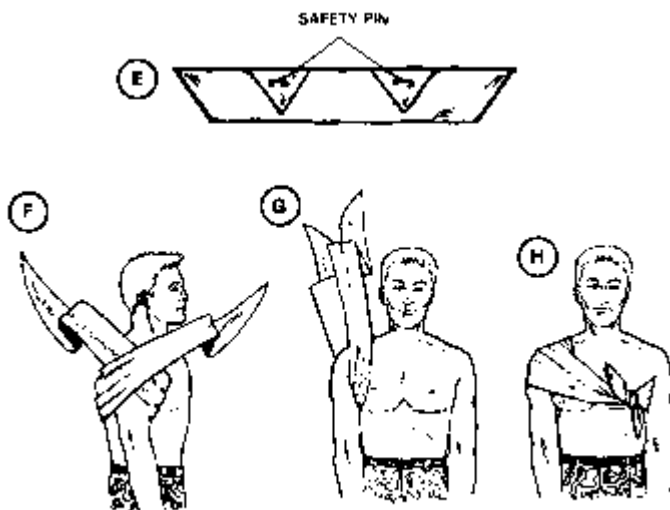


Figure 3-38 Continued.

## Dressings, cont'd.

\_\_\_\_\_ Wrap each digit with gauze individually for a dressing for wounds.



\_\_\_\_\_ Demonstrate a forehead or ear dressing



# Fractures, Dislocations, Sprains, & Strains

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For course certification, the form must be filled out.


Member Name (Print) \_\_\_\_\_ Instructor Name (Print) \_\_\_\_\_

Member Position Number \_\_\_\_\_ Instructor Position Number \_\_\_\_\_


Member FEMA SID \_\_\_\_\_ Instructor FEMA SID \_\_\_\_\_


Date of Instruction \_\_\_\_\_

 Definition and background on fractures, dislocations, sprains, and strains

 Definition and background on immobilization materials


 Demonstrate proper PMS vitals gathering

 Make and fold a cravat

 Demonstrate two different splints with soft materials on two different anatomical parts


Soft Material Used \_\_\_\_\_ Anatomical Part Splinted \_\_\_\_\_

Soft Material Used \_\_\_\_\_ Anatomical Part Splinted \_\_\_\_\_

 Demonstrate two different splints with hard materials on two different anatomical parts

Hard Material Used \_\_\_\_\_ Anatomical Part Splinted \_\_\_\_\_

Hard Material Used \_\_\_\_\_ Anatomical Part Splinted \_\_\_\_\_

 Demonstrate two different dressings with two different combination of materials on two different anatomical parts

Materials Used \_\_\_\_\_ Anatomical Part Splinted \_\_\_\_\_

Materials Used \_\_\_\_\_ Anatomical Part Splinted \_\_\_\_\_

With a complete sheet of initials, the instructor's signature signifies certification of completion for the Fractures, Dislocations, Sprains, and Strains course.

Instructor Signature \_\_\_\_\_