

# TACTICAL COMBAT CASUALTY CARE COURSE

## MODULE 17: FRACTURES



Committee on  
Tactical Combat  
Casualty Care  
(CoTCCC)

**TCCC TIER 1**  
All Service Members

**TCCC TIER 2**  
Combat Lifesaver

**TCCC TIER 3**  
Combat Medic/Corpsman

**TCCC TIER 4**  
Combat Paramedic/Provider

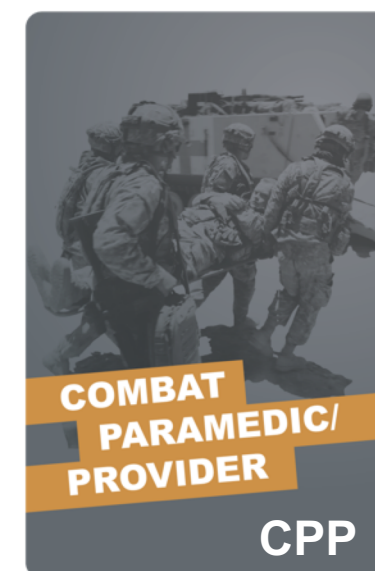
# TACTICAL COMBAT CASUALTY CARE (TCCC) ROLE-BASED TRAINING SPECTRUM

## ROLE 1 CARE

### NONMEDICAL PERSONNEL



### MEDICAL PERSONNEL



◀ **YOU ARE HERE**

STANDARDIZED JOINT CURRICULUM

# TERMINAL LEARNING OBJECTIVE

**19** Given a combat or noncombat scenario, perform assessment and initial treatment of fractures during Tactical Field Care in accordance with CoTCCC Guidelines

- **86** Identify signs of a suspected fracture (ASM T7:E29)
- **87** Demonstrate the basic care of fractures in accordance with CoTCCC Guidelines (ASM T7)
- **88** Demonstrate proper splint application using a malleable rigid or improvised splint to a suspected fracture in Tactical Field Care

## 3 ENABLING LEARNING OBJECTIVES (ELOs)

● = Cognitive ELOs ● = Performance ELOs

# Three PHASES of TCCC

## 1 CARE UNDER FIRE

**RETURN FIRE  
AND TAKE COVER**

Quick decision-making:

- Consider scene safety
- Identify and control life-threatening bleeding
- Move casualty to safety

## 2 TACTICAL FIELD CARE

**COVER AND  
CONCEALMENT**

Basic management plan:

- Maintain tactical situational awareness
- Triage casualties as required
- Conduct MARCH PAWS assessment



**YOU ARE HERE**

## 3 TACTICAL EVACUATION CARE

More deliberate assessment and treatment of unrecognized life-threatening injuries

- Pre-evacuation procedures
- Continuation of documentation

**NOTE: This is covered in more advanced TCCC training!**



# TACTICAL FIELD CARE

## MARCH PAWS

### *DURING* LIFE-THREATENING

- M** MASSIVE BLEEDING #1 Priority
- A** AIRWAY
- R** RESPIRATION (*breathing*)
- C** CIRCULATION
- H** HYPOTHERMIA/  
HEAD INJURIES

### *AFTER* LIFE-THREATENING

- P** PAIN
- A** ANTIBIOTICS
- W** WOUNDS
- S** SPLINTING



# ASSESS FOR A FRACTURE



**CLOSED** FRACTURE

No open wound  
(break in skin) for  
closed fracture



**OPEN** FRACTURE

Open fracture open  
wound (break in  
skin) major threat  
for infection

## WARNING SIGNS OF A FRACTURE:

- Significant pain and swelling
- An audible or perceived “snap”
- Different length or shape of limb
- Loss of pulse or sensation in the injured arm or leg
- Crepitus (hearing a crackling or popping sound under the skin)

# OBJECTIVES OF SPLINTING

**A splint is used to prevent movement and hold an injured arm/leg in place to:**

- 1 Identify the location of the fracture  
**NOTE:** Have the casualty or someone else manually stabilize the area
- 2 Check the distal pulse (pulse below the fracture) and capillary refill (color returning to the nail bed after pressing on it) on the injured extremity before applying the splint
- 3 Prepare the splint materials for application  
**NOTE:** Measure and shape the splint on the opposing uninjured extremity
- 4 Prepare securing materials (cravats, elastic wraps/bandages, etc.)
- 5 Apply the splint to the injured extremity with the limb, in the position of function (a normal resting position), if possible  
**NOTE:** If possible, lightly pad all voids within the splint to make it more comfortable
- 6 Secure the splint in place with appropriate materials
- 7 Ensure the joints above and below the fracture are immobilized in the splint whenever possible
- 8 Recheck the distal pulse following application of the splint. If the pulse is not palpable, loosen the splint, reposition, and reapply the splint
- 9 Administer the pain medications (from the Combat Wound Medication Pack) as needed and the antibiotic for any open fracture(s)
- 10 Document all treatment on a DD FORM 1380 TCCC Casualty Card and attach it to the casualty

# PRINCIPLES OF SPLINTING

- Check for other associated injuries
- Use malleable or rigid materials
- Try to pad all voids or wrap if using rigid splint
- Secure splint with elastic bandage, cravats, belts, tape
- Try to splint before moving the casualty
- Minimize manipulation of the extremity before splinting
- Incorporate one joint above and below the fracture
- Splint arm fractures to the shirt using the sleeve, if needed
- Check distal pulse and skin color before and after splinting

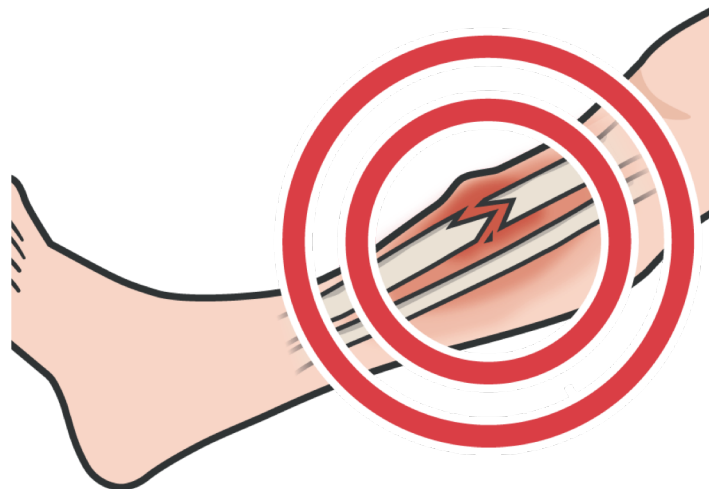


## THINGS TO AVOID WHEN SPLINTING



- Manipulating the fracture site too much resulting in pain, additional damage to blood vessels and nerves, etc.
- Securing too tightly, cutting off blood flow
- Failing to immobilize joint above and below fracture when possible
- Causing further injury
- Making casualty uncomfortable during transport/evacuation
- Splinting near or over a wound that has not be properly treated

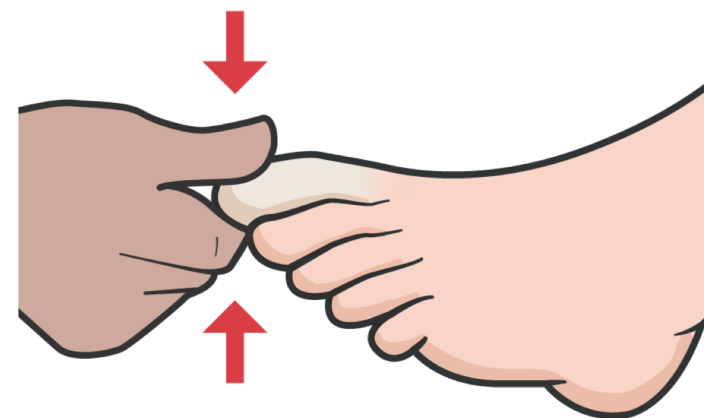
# GUIDELINES FOR **LEG** SPLINTS



Identify the location of the fracture



Before applying the splint, **CHECK** distal pulse (pulse below the fracture)

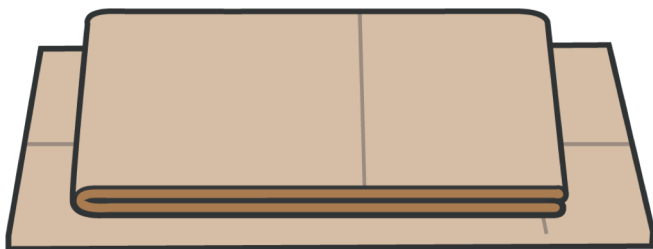


**CHECK** capillary refill (color returning to the nail bed after pressing on it) on the injured extremity before applying the splint

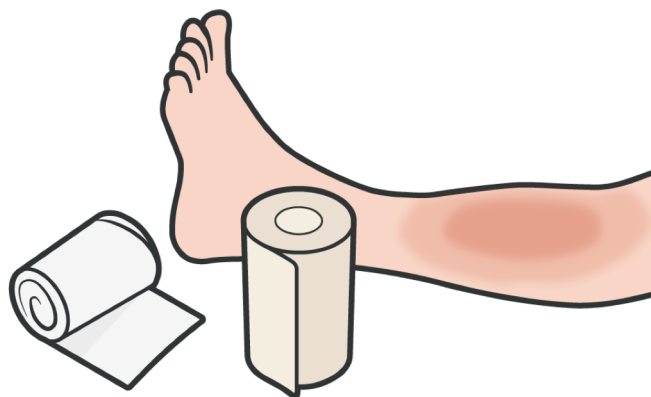


Have the casualty or someone else manually stabilize the area

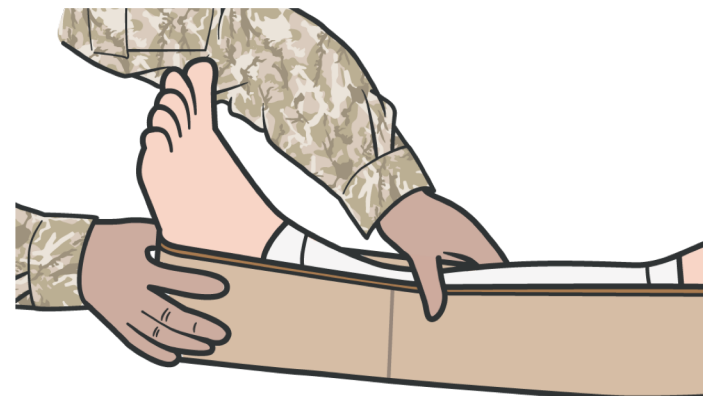
# GUIDELINES FOR **LEG** SPLINTS



**PREPARE** the splint materials for application



**PREPARE** securing materials (cravats, elastic wraps/ bandages, etc.)



**APPLY** the splint to the injured extremity with the limb, in the position of function, a normal resting position, if possible



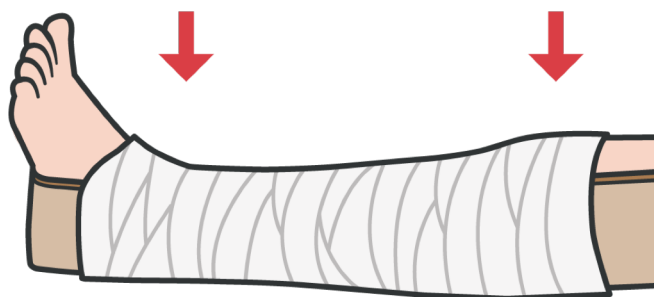
Measure and shape the splint on the opposing uninjured extremity



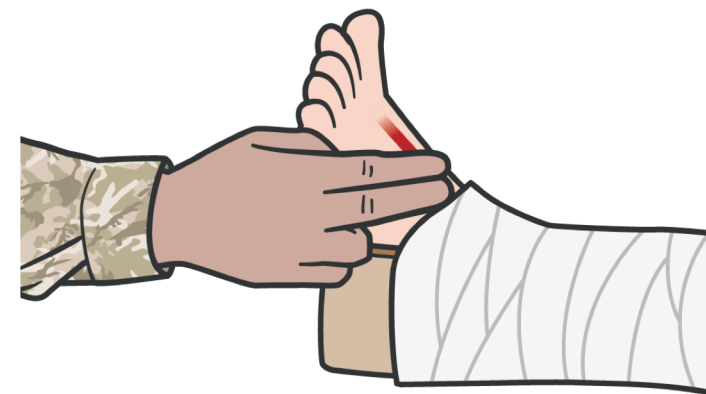
# GUIDELINES FOR **LEG** SPLINTS



**SECURE** the splint in place with appropriate materials



**ENSURE** the joints above and below the fracture are immobilized in the splint whenever possible

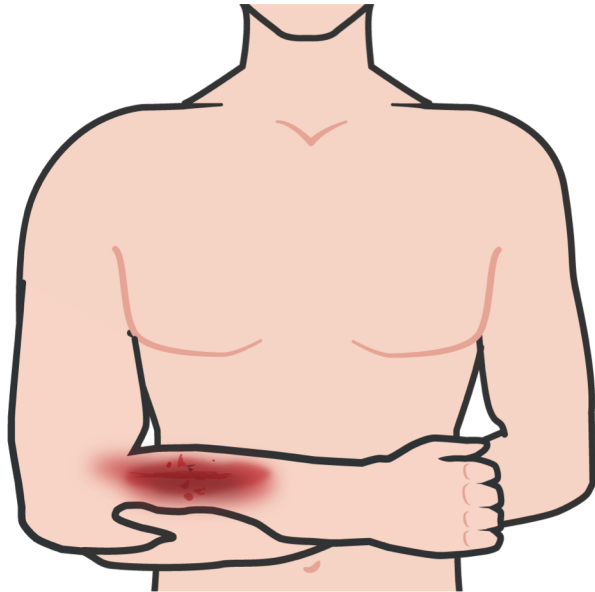


**RECHECK** the distal pulse following application of the splint

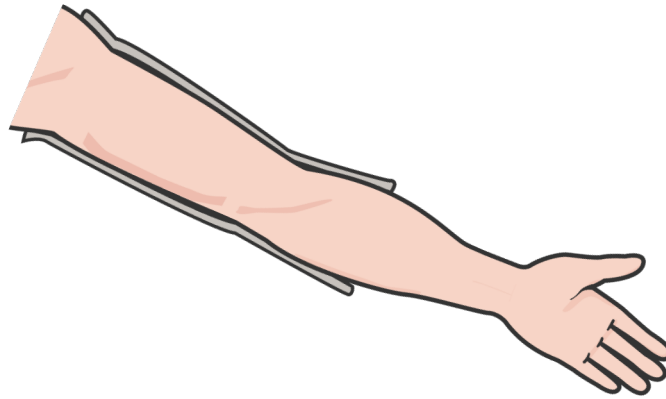
If the pulse is **not** palpable, loosen the splint, reposition, and reapply

# GUIDELINES FOR **ARM** SPLINTS

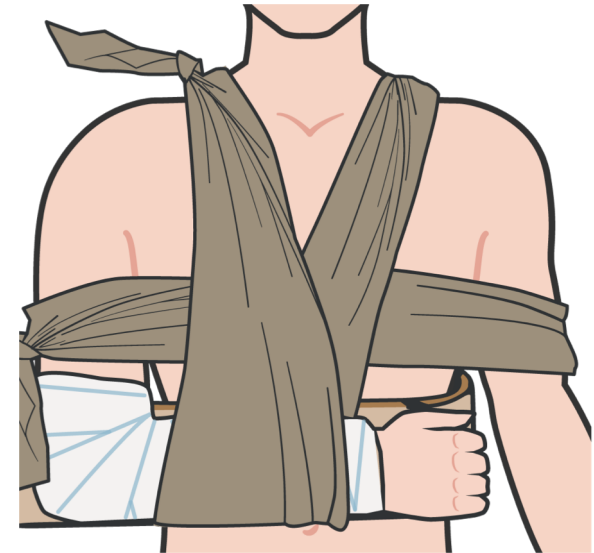
Splinting the arm is the same concept as splinting a leg with the following exceptions:



If possible, have casualty support their injury while preparing equipment



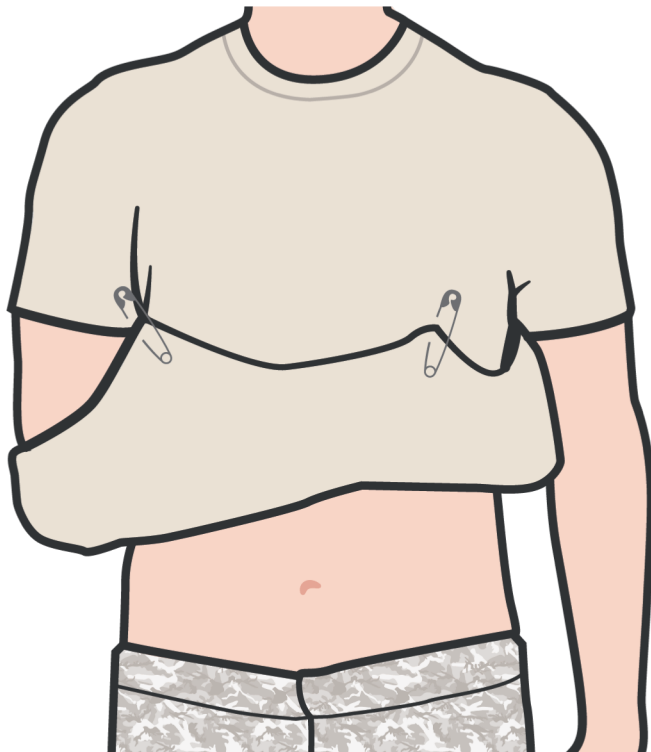
Mold padded splint using casualty's unaffected limb



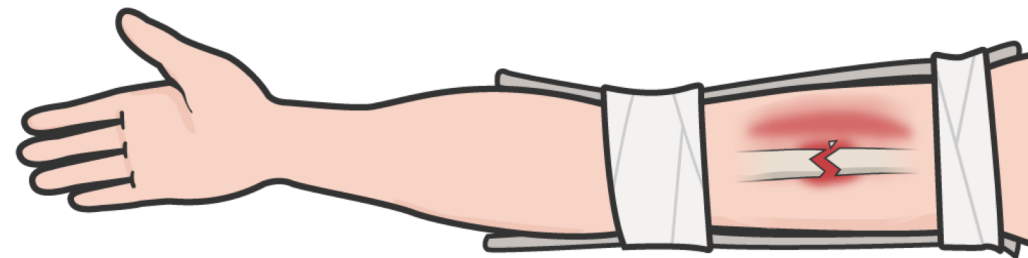
Use two triangular bandages to secure limb to body

Use third triangular bandage; place under injured arm and around neck to help support injured limb

# GUIDELINES FOR **ARM** SPLINTS



- Check for signs of impaired circulation
- Apply a sling to immobilize the forearm



- Apply a swathe to immobilize the upper arm
- Place two cravats above the fracture site and two below the fracture site (preferred)

# SPLINTING AN ARM



Video can be found on [DeployedMedicine.com](https://www.deployedmedicine.com)

# SKILL STATION

Splinting (Skill)

■ Splinting

# FRACTURES SUMMARY

The most important aspect of splinting is to splint in a way that does not harm the nerves or blood vessels in the splinted extremity

**Before** and **after** splinting, **assess** the following:



## CIRCULATION

Check pulses distal to the splint (between splint and end of limb)



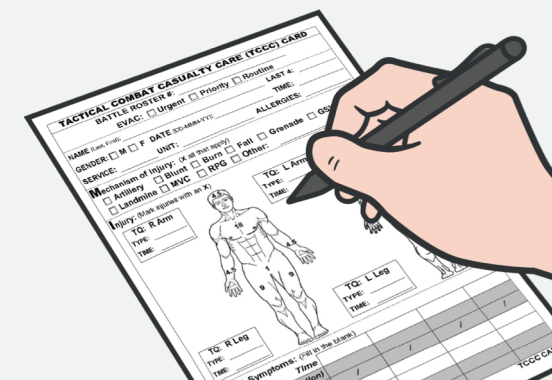
## MOTOR

Ask the casualty to move the body parts distal to the splint, e.g., fingers or toes



## SENSORY

See if the casualty can feel a gentle touch on the body parts distal to the splint



## AFTER SPLINTING

Document all assessment and treatment on the casualty's DD Form 1380

# CHECK ON LEARNING

- **True or False: When applying a splint, ensure the joints above and below the fracture are immobilized in the splint whenever possible.**
- **What should you assess before and after splinting?**



**ANY QUESTIONS?**