CLS TCCC COMBAT LIFESAVER

DHA DEFENSE HEALTH AGENCY

TACTICAL COMBAT CASUALTY CARE COURSE

MODULE 17: FRACTURES

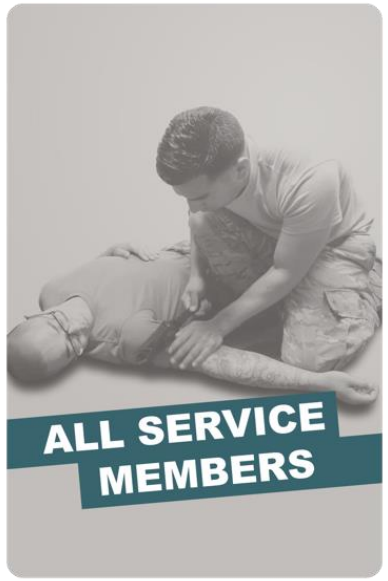
Committee on Tactical Combat Casualty Care (CoTCCC)

TCCC TIER 1	TCCC TIER 2	TCCC TIER 3	TCCC TIER 4
All Service Members	Combat Lifesaver	Medic/Corpsman	Combat Paramedic/Provider

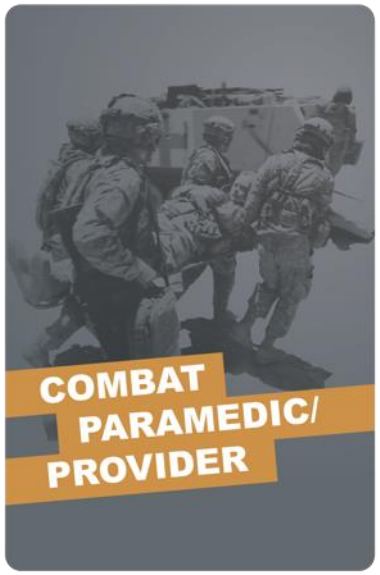
TACTICAL COMBAT CASUALTY CARE (TCCC)
ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL



MEDICAL PERSONNEL



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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

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

03 ENABLING LEARNING OBJECTIVES (ELOs)

= Cognitive ELOs = Performance ELOs

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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

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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!

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TACTICAL FIELD CARE

MARCH PAWS

DHA DEFENSE HEALTH AGENCY

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)

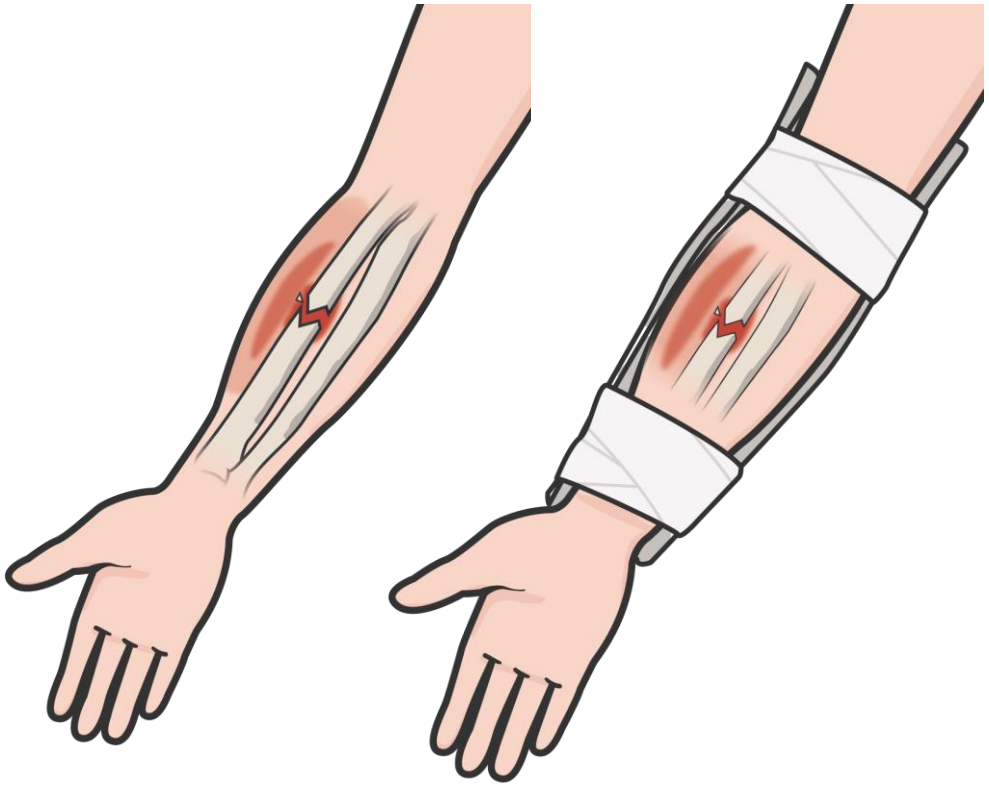
OBJECTIVES OF SPLINTING

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

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

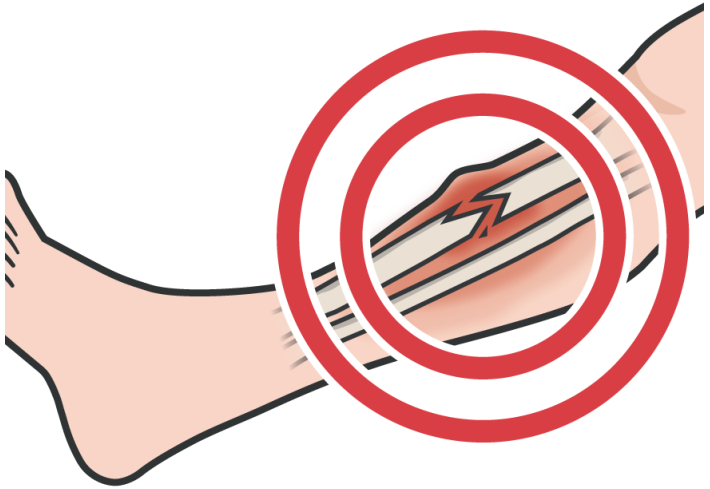
- Check for other associated injuries
- Use malleable or rigid materials
- Try to pad all voids or wrap if using rigid splint
- Secure splint with elastic bandage, cravats, belts, tape
- Try to splint before moving the casualty
- Minimize manipulation of the extremity before splinting
- Incorporate one 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

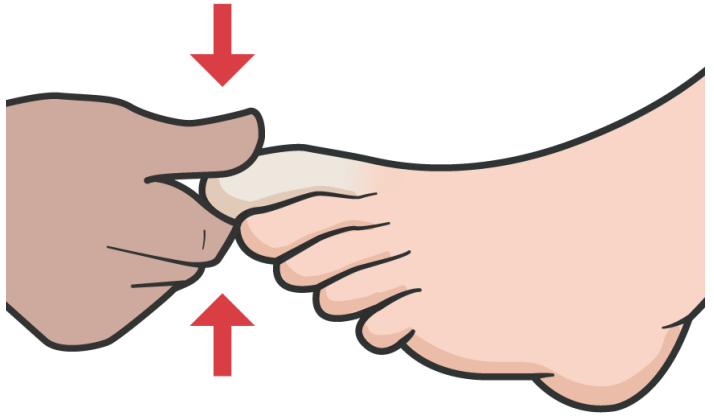
- Manipulating the fracture site too much resulting in pain, additional damage to blood vessels and nerves, etc.
- Securing too tightly, cutting off blood flow
- Failing to immobilize joint above and below fracture when possible
- Causing further injury
- Making casualty uncomfortable during transport/evacuation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

GUIDELINES FOR LEG SPLINTS



Identify the location of the fracture

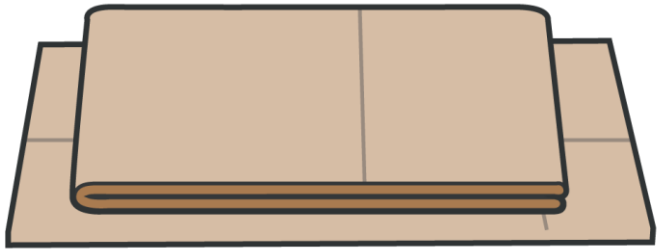
Before applying the splint, CHECK distal pulse (pulse below the fracture)

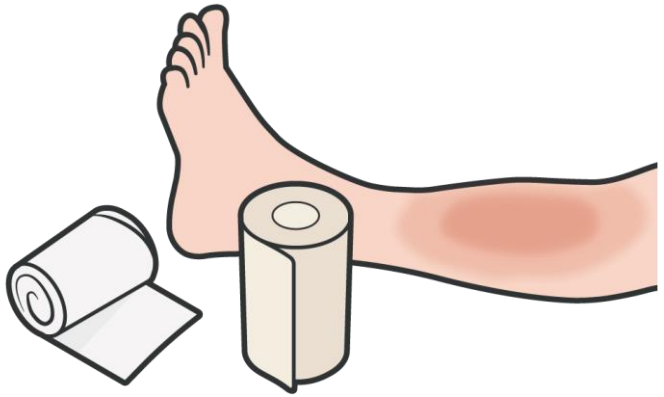


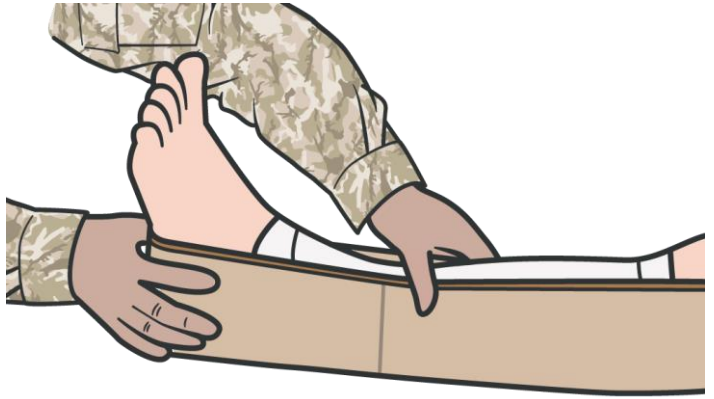
CHECK capillary refill (color returning to the nail bed after pressing on it) on the injured extremity

Have the casualty or someone else manually stabilize the area

GUIDELINES FOR LEG SPLINTS







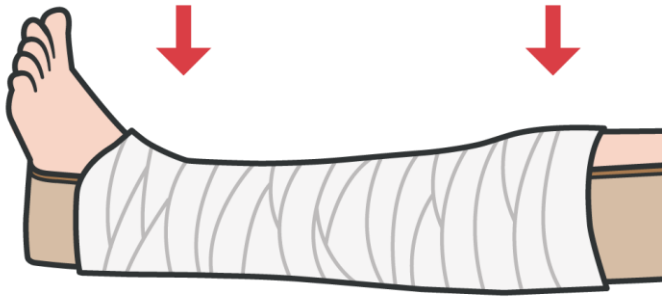
PREPARE the splint materials for application

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

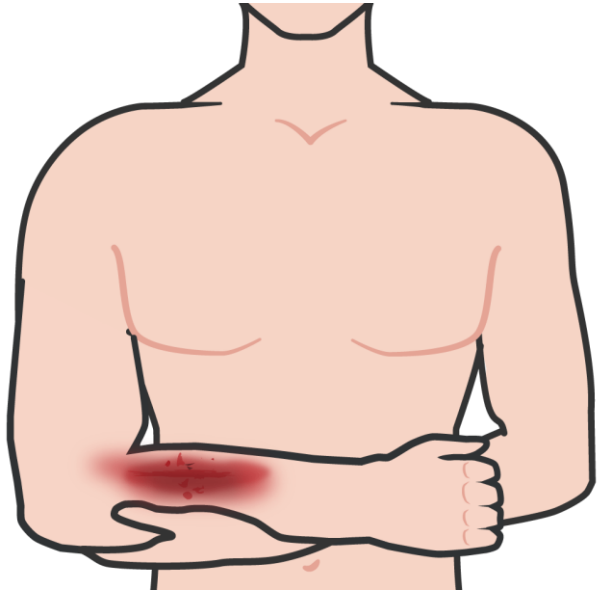
ENSURE the joints above and below the fracture are immobilized in the splint whenever possible

RECHECK the distal pulse following application of the splint

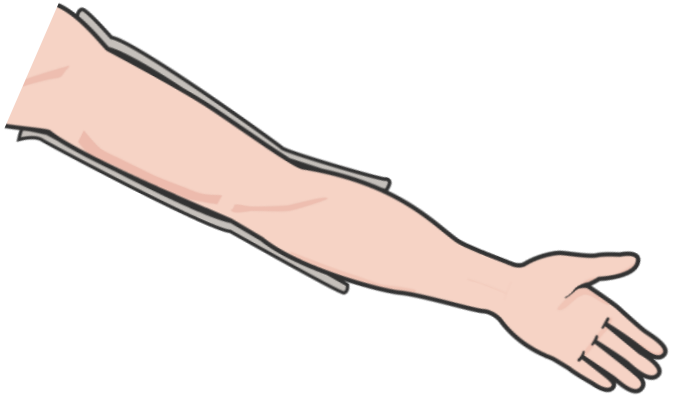
If the pulse is **not** palpable, loosen the splint, reposition, and reapply

GUIDELINES FOR ARM SPLINTS

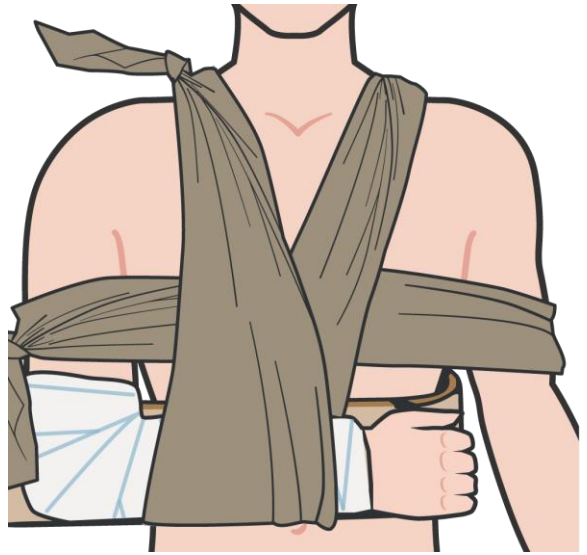
Splinting the arm is the same concept as splinting a leg with the following exceptions:



If possible, have casualty support their injury while preparing equipment



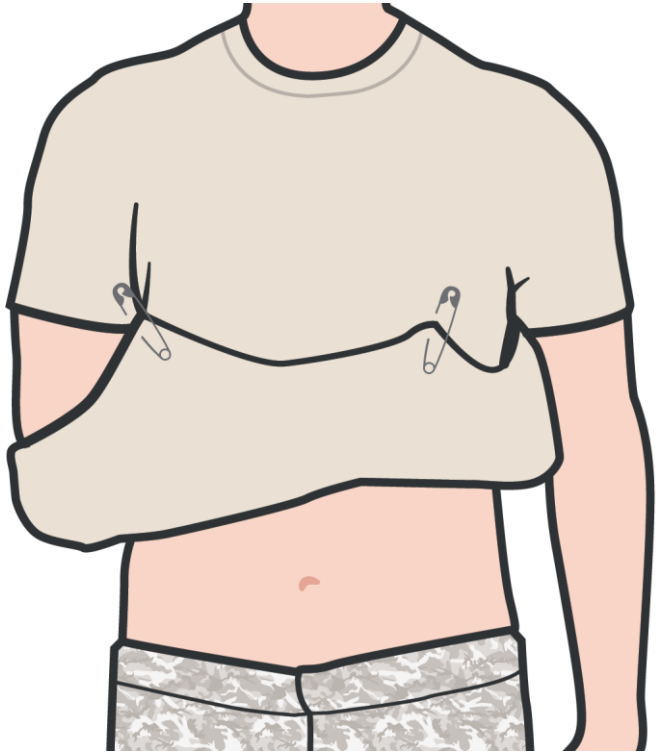
Mold padded splint using casualty's unaffected limb



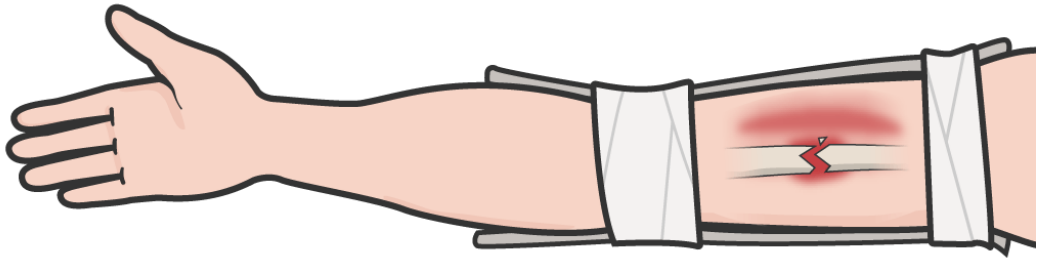
Use two triangular bandages to secure limb to body

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

SKILL STATION

Splinting (Skill)

- **Splinting**

SUMMARY

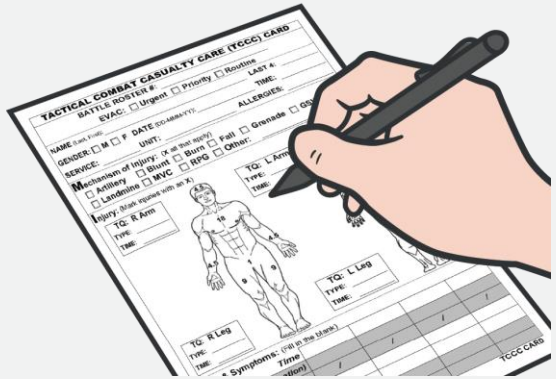
The most important aspect of splinting is to splint in a way that does not harm the nerves or blood vessels in the splinted extremity

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 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?