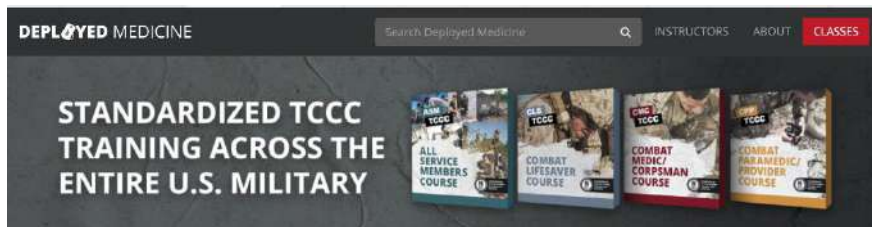


FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 01: PRINCIPLES AND APPLICATIONS OF TACTICAL FIELD MEDICAL AID (TFMA)

- This course is based heavily on the United States Defense Health Agency, Joint Trauma System, Tactical Combat Casualty Care (TCCC), Combat Lifesavers Course.
- Adjustments have been made to comply with United Nations Policy.



FIELD MEDICAL ASSISTANT COURSE (FMAC)

Changes between TCCC and UN FMAC

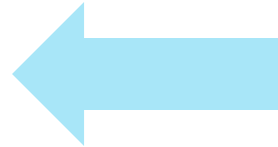
- The UN equivalent to **Tactical Combat Casualty Care (TCCC)** = **Tactical Field Medical Aid (TFMA)**
- The UN equivalent to **TCCC Combat Lifesaver** = **Field Medical Assistant (FMA)**
- The UN equivalent to the **TCCC 9-Liner Medical Evacuation** = **UN Evacuation 4 Liner**
- The UN equivalent to **TCCC DD Form 1380** = **UN Casualty Card**
- The UN equivalent to **TCCC CASEVAC (MEDEVAC & TACEVAC)** = **UN CASEVAC**
- The UN equivalent to **TCCC Joint First Aid Kit (JFAK)** = **Buddy First Aid Kit (BFAK)**
- The UN equivalent to **TCCC Combat Lifesaver Bag (CLS Bag)** = **UN Trauma Pack (UNTP)**
- The UN equivalent to **TCCC Combat / Combatant** = **Peacekeeping / Peacekeeper**
- The UN equivalent to **TCCC Combat Wound Medication Pack (CWMP)** = **Wound Medication Pack (WMP)**

TACTICAL FIELD MEDICAL AID (TFMA) ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

PRINCIPLES AND APPLICATIONS OF TACTICAL FIELD MEDICAL AID (TFMA)

TERMINAL LEARNING OBJECTIVES

TO1 Given a combat peacekeeping or non-combat peacekeeping scenario, perform Tactical Field Medical Aid (TFMA)

EO1 Demonstrate the application of TFMA skills in a combat peacekeeping or non-combat peacekeeping scenario (Comprehensive Module Practical Exercise)

TO2 Describe the practice of TFMA

EO2 Identify the leading causes of preventable death due to traumatic injuries, and the corresponding interventions to help increase chances of survival

EO3 Describe the TFMA Phases of Care, and how intervention priorities differ in each phase

EO4 Describe the application of TFMA in combat peacekeeping or non-combat peacekeeping settings across different environments

EO5 Describe the role and responsibilities of a nonmedical UN member in rendering TFMA care

EO6 Identify the key factors influencing TFMA

EO7 Identify the importance of TFMA training

EO8 Identify three objectives (or goals) of TFMA

UN MANDATE FOR STANDARDIZED TRAINING

- Standardizes Field Medical Aid for all members
- Covers the use of standardized trauma training platforms

TCCC ONLINE RESOURCES

TCCC training and education resource is available at: www.deployedmedicine.com

It contains:

- Videos, podcasts, and resources
- Downloadable Clinical Practice Guidelines (CPGs)

COURSE CONTENTS

WHAT THIS COURSE CONTAINS

- Principles and Applications of TFMA
- Medical Equipment
- Care Under Fire
- Principles and Application of Tactical Field Care
- Tactical Trauma Assessment
- Massive Hemorrhage Control
- Airway Management
- Respiration Assessment and Management
- Circulation/Hemorrhage Control
- Shock Recognition
- Hypothermia Prevention
- Head Injuries
- Eye Injuries
- Analgesics and Antibiotics
- Wound Management
- Burn Treatment
- Fractures
- Casualty Monitoring
- Pre-evacuation Procedures
- Evacuation Procedures

PRINCIPLES AND APPLICATIONS OF TFMA

Video can be found at: www.deployedmedicine.com

PRINCIPLES AND APPLICATIONS OF TFMA

ROLES AND RESPONSIBILITIES OF THE FIELD MEDICAL ASSISTANT (FMA)

In a **Care Under Fire** situation the FMA:

- Must respond to suppression of hostile fire to minimize the risk of injury to personnel and minimize additional injury to previously injured UN members

In **Tactical Field Care** the FMAs:

- Must maintain security and situational awareness while continuing to tend to casualties and prepare for evacuation

PRINCIPLES AND APPLICATIONS OF TFMA

ROLES AND RESPONSIBILITIES OF FMA

First Responder Care (Role 1)

The first medical care that UN personnel receive is provided at Role 1 (also referred to as unit-level medical care or self-aid, buddy aid, combat lifesaver, and/or medic care). This role of care includes:

- Immediate lifesaving measures and treatment for disease and non-battle injury (DNBI) or degradation of functional capability sustained by personnel and caused by factors other than those directly attributed to combat action

PRINCIPLES AND APPLICATIONS OF TFMA

THE KEY FACTORS INFLUENCING TFMA

- Hostile fire
- Tactical considerations
- Environmental considerations
- Wounding patterns
- Equipment constraints
- Delays in reaching higher levels of care
- Level of first responder training and experience

PRINCIPLES AND APPLICATIONS OF TFMA

IMPORTANCE OF TFMA TRAINING

TFMA focuses on identifying and treating the causes of preventable death on the battlefield

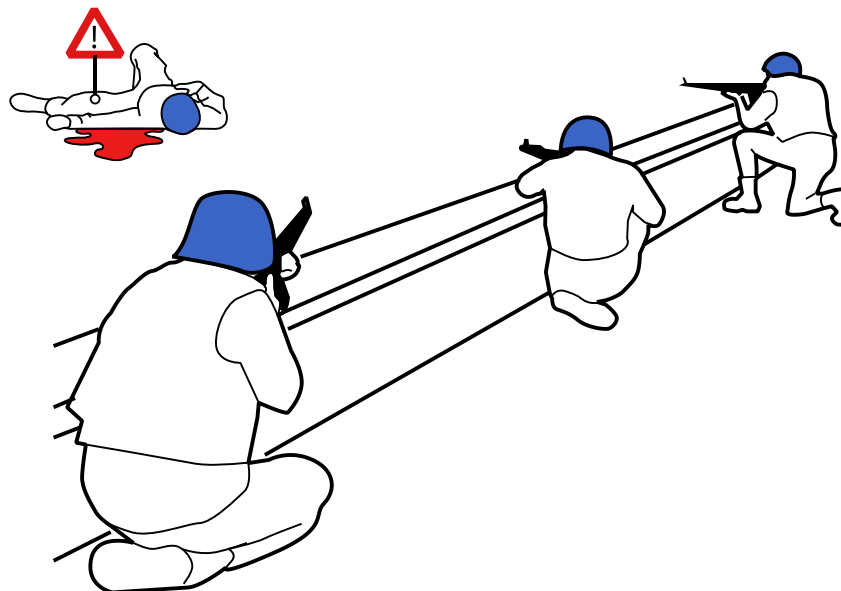


- Bleeding from arm and leg injuries
- Junctional bleeding where an arm or leg joins the torso such as the groin
- Noncompressible bleeding such as a gunshot wound to the abdomen
- Tension pneumothorax (**air trapped in the chest that prevents breathing and circulation**)
- Airway problems

PRINCIPLES AND APPLICATIONS OF TFMA

THREE GOALS OF TFMA

- Treat the casualty
- Prevent additional casualties
- Complete the mission



ENTER PEACEKEEPING OPERATIONS

Three PHASES of TFMA

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
- MARCH PAWS assessment

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 TFMA training!

PHASE 1: CARE UNDER FIRE

RETURN FIRE AND TAKE COVER

- Never attempt to rescue a casualty until hostile fire is suppressed
- Using available resources, ensure scene safety

DIRECT CASUALTY TO REMAIN ENGAGED

**APPLY SELF-AID AND
MOVE TO COVER** *(if able)*

GAIN FIRE SUPERIORITY

MOVE TO CASUALTY
*(if casualty is unable to
move to cover)*

PHASE 1: CARE UNDER FIRE

APPLY TOURNIQUET TO CONTROL LIFE-THREATENING BLEEDING

For life-threatening bleeding, place a tourniquet "high and tight" above the wound

CONTINUE TO MAINTAIN FIRE SUPERIORITY

MOVE CASUALTY



IMPORTANT CONSIDERATIONS:

Continuously assess risks and make a plan before moving a casualty

TACTICAL FIELD CARE

MARCH PAWS

DURING LIFE-THREATENING

MASSIVE BLEEDING

AAIRWAY

RESPIRATION

CIRCULATION

HYPOTHERMIA / HEAD INJURIES

AFTER LIFE-THREATENING

PAIN

ANTIBIOTICS

WOUNDS

SPLINTING

PHASE 2: OTHER CONSIDERATIONS OF TACTICAL FIELD CARE

TFC

- The casualty and the person rendering care are not under direct fire
- Intervention priorities should follow MARCH PAWS

LIMITED SUPPLIES

- Medical equipment and supplies awareness are limited to what is carried into the field by the FMA and the individual Service member

REMEMBER:

- Always use the casualty's Buddy First Aid Kit (BFAK) first
- TFC can turn into a CUF situation unexpectedly
- Personnel should maintain their situational awareness

PHASE 3: TACTICAL EVACUATION CARE

CASUALTY MONITORING

- Continue to reassess and monitor casualty

EVAC REQUEST

- Use UN Evacuation 4 Liner

COMPLETE REPORT

- **M**echanism of injury
- **I**njuries
- **S**ymptoms
- **T**reatment

CASUALTY PREP

- Prep Litter
- Prep Evac Equipment
- Pack Casualty
- Secure Items

PRE-EVAC PROCEDURES

- Complete Casualty Card

(4 Line Format)

Line	UN CASEVAC 4-LINE ALERT MESSAGE		
	DTG:		
1	LOCATION AND CALL SIGN	PLACE NAME / DESCRIPTION	A
		GPS GRID REFERENCE	B
		CALL SIGN OF INCIDENT SITE COMMANDER	C
2	INCIDENT DETAILS	WHAT HAS HAPPENED? (Shooting, road accident, explosion etc).	D
		HOW MANY CASUALTIES ARE THERE?	E
3	ACTIONS BEING TAKEN AT SCENE	TREATMENT BEING GIVEN AND PREPERATIONS FOR EVACUATION	
4	RESOURCES REQUIRED AT SCENE TO TREAT AND EVACUATE PATIENT	GROUND AMBULANCE, AIR EVACUATION, AMET	

IN SUMMARY

GOALS

Treat the casualty

Prevent additional casualties

Complete the mission

Three PHASES of TFMA

1 CUF

RETURN FIRE
AND TAKE COVER

- Quick decision-making:
- Consider scene safety
 - Identify and control life-threatening bleeding
 - Move casualty to safety

2 TFC

COVER AND
CONCEALMENT

- Basic Management Plan:
- Maintain tactical situational awareness
 - Triage casualties as required
 - MARCH PAWS assessment

3 TEC

- More deliberate assessment and treatment of unrecognized life-threatening injuries:
- Pre-evacuation procedures
 - Continuation of documentation

CHECK ON LEARNING

- What factors influence TFMA?
- What are the phases of care in TFMA?
- What is the most essential treatment task in CUF?
- What is every first responder's role in CUF?
- What does MARCH PAWS stand for?



ANY QUESTIONS?

FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 02: MEDICAL EQUIPMENT

TACTICAL FIELD MEDICAL AID (TFMA) ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

TO3 Describe the use of individual medical equipment components in accordance with TFMA Guidelines

EO9 Describe the use of a first aid kit in accordance with UN policy.

EO10 Identify the contents of an individual Buddy First Aid Kit (BFAK), and/or other UN specific first aid kits.

EO11 Describe the general maintenance and resupply procedures for trauma materials in a first aid kit in accordance with UN guidelines.

EO12 Identify the contents of a UN Trauma Pack (UNTP), and/or other UN specific first aid kits.

EO13 Describe the use of the components of a UN Trauma Pack (UNTP) in accordance with UN policy

MEDICAL EQUIPMENT

MEDICAL SUPPLIES

WHAT YOU WILL NEED TO PROVIDE AID AND SAVE A LIFE:

Medic Pack

UN Trauma Pack (UNTP)



Individual

Buddy First Aid Kit (BFAK)



BE FAMILIAR WITH YOUR INDIVIDUAL AND
UN/UNIT-SPECIFIC MEDICAL EQUIPMENT!

MEDICAL EQUIPMENT CONTENT LIST

Medic Pack

UN Trauma Pack (UNTP)

See Handbook

Individual

Buddy First Aid Kit (BFAK)

See Handbook

MEDICAL EQUIPMENT CONTENT OVERVIEW

TOURNIQUET

A device to stop **massive** bleeding



HEMOSTATIC GAUZE

Gauze rolls used to stop **major life-threatening** bleeding



EMERGENCY BANDAGE/ TRAUMA DRESSING

Elastic bandage used as a **pressure** dressing and/or **standard** dressing



MEDICAL EQUIPMENT CONTENT OVERVIEW

NASOPHARYNGEAL AIRWAY (NPA) WITH WATER-BASED LUBRICANT

Nonsterile, rubber tube-shaped device that can be inserted into the casualty's nostril



VENTED CHEST SEAL

Vented and adhesive chest seal for treating penetrating wounds to the chest



NDC 10-14 GAUGE 3.25” NEEDLE CATHETER

Catheter-over-needle device that can be inserted into the casualty's chest to treat tension pneumothorax



MEDICAL EQUIPMENT CONTENT OVERVIEW

1. Moxifloxacin 400mg tablet
2. Meloxicam 15mg tablet
3. Acetaminophen x2 650mg



NOTE:

- **Each** of the three medications (in unit dosages) is contained in a **single blister pack**
- The Combat Wound Medication Pack (**CWMP**) is an **example of medication that might** be used **ONLY** for traumatic injuries and **ALL** penetrating injuries.
- **Drugs should only be administered by trained medical personnel**

MEDICAL EQUIPMENT CONTENT OVERVIEW

GAUZE/PACKING DRESSING

Gauze rolls used to **stop minor bleeding** or as **bulky material** for packing wounds



ELASTIC BANDAGE

Stretchable bandage that **creates localized pressure** used for pressure dressings



MEDICAL EQUIPMENT CONTENT OVERVIEW

ACTIVE



PASSIVE



ACTIVE/PASSIVE HYPOTHERMIA BLANKET

Used to prevent and manage hypothermia



MEDICAL EQUIPMENT DOCUMENTATION



Use **MACE 2** as close to time of injury as possible.

Service Member Name: _____

DoD/IED/PI/SSN: _____ Branch of Service & Unit: _____

Date of Injury: _____ Time of Injury: _____

Examiner: _____

Date of Evaluation: _____ Time of Evaluation: _____

Purpose: MACE 2 is a multimodal tool that assists providers in the assessment and diagnosis of concussion. The scoring, coding and steps to take after completion are found at the end of the MACE 2.

Timing: MACE 2 is most effective when used as close to the time of injury as possible. The MACE 2 may be repeated to evaluate recovery.

RED FLAGS

Evaluate for red flags in patients with Glasgow Coma Scale (GCS) 13-15.

- Deteriorating level of consciousness
- Double vision
- Increased restlessness, combative or agitated behavior
- Repeat vomiting
- Results from a structural brain injury detection device (if available)
- Seizures
- Weakness or tingling in arms or legs
- Severe or worsening headache

Defer MACE 2 if any red flags are present. Immediately consult higher level of care and consider urgent evacuation according to evacuation precedence/Tactical Combat Casualty Care (TCCC).

- **Negative for all red flags**
Continue MACE 2, and observe for red flags throughout evaluation.

MILITARY ACUTE CONCUSSION EVALUATION (MACE2)

Used for identifying **possible traumatic brain injury (TBI)**

MEDICAL EQUIPMENT CONTENT OVERVIEW

RIGID EYE SHIELD

A shield that provides a domed **protection** of **eye injuries WITHOUT** applying pressure



MALLEABLE SPLINTING

Semirigid material that can be formed to the injured limb to assist in immobilizing



CRAVATS

Used to assist in immobilizing the injured limb or protrusion



MEDICAL EQUIPMENT DOCUMENTATION

(4 Line Format)

Line	UN CASEVAC 4-LINE ALERT MESSAGE		
	DTG:		
1	LOCATION AND CALL SIGN	PLACE NAME / DESCRIPTION	A
		GPS GRID REFERENCE	B
		CALL SIGN OF INCIDENT SITE COMMANDER	C
2	INCIDENT DETAILS	WHAT HAS HAPPENED? (Shooting, road accident, explosion etc).	D
		HOW MANY CASUALTIES ARE THERE?	E
3	ACTIONS BEING TAKEN AT SCENE	TREATMENT BEING GIVEN AND PREPERATIONS FOR EVACUATION	
4	RESOURCES REQUIRED AT SCENE TO TREAT AND EVACUATE PATIENT	GROUND AMBULANCE, AIR EVACUATION, AMET	

UN Evacuation 4 Liner

Call procedure that is divided into 4 lines of information for evacuation crews

TACTICAL COMBAT CASUALTY CARE (TCCC) CARD

BATTLE ROSTER #:

EVAC: Urgent Priority Routine

NAME (Last, First): _____ LAST 4: _____

GENDER: M F DATE (DD-MMM-YY): _____ TIME: _____

SERVICE: _____ UNIT: _____ ALLERGIES: _____

Mechanism of Injury: (X all that apply)

Artillery Blunt Burn Fall Grenade GSW IED
 Landmine MVC RPG Other: _____

Injury: (Mark injuries with an X)

TQ: R Arm

TYPE: _____

TIME: _____

TQ: L Arm

TYPE: _____

TIME: _____

TQ: R Leg

TYPE: _____

TIME: _____

TQ: L Leg

TYPE: _____

TIME: _____

Signs & Symptoms: (Fill in the blank)

	Time			
Pulse (Rate & Location)				
Blood Pressure	/	/	/	/
Respiratory Rate				
Pulse Ox % O2 Sat				
AVPU				
Pain Scale (0-10)				

DD Form 1380, MAR 2014 TCCC CARD

BATTLE ROSTER #:

EVAC: Urgent Priority Routine

Treatments: (X all that apply, and fill in the blank) Type

C: TQ- Extremity Junctional Truncal _____

Dressing- Hemostatic Pressure Other _____

A: Intact NPA CRIC ET-Tube SGA _____

B: O2 Needle-D Chest-Tube Chest-Seal _____

C:

	Name	Volume	Route	Time
Fluid				
Blood Product				

MEDS:

	Name	Dose	Route	Time
Analgesic (e.g., Ketamine, Fentanyl, Morphine)				
Antibiotic (e.g., Moxifloxacin, Ertapenem)				
Other (e.g., TXA)				

OTHER: Combat-Pill-Pack Eye-Shield (R L) Splint
 Hypothermia-Prevention Type: _____

NOTES:

FIRST RESPONDER
NAME (Last, First): _____ LAST 4: _____

DD Form 1380, MAR 2014 (Back) TCCC CARD

Cas Card

UN Approved casualty card

MEDICAL EQUIPMENT MAINTENANCE AND RESUPPLY



REMEMBER:

Regularly inspect your **BFAK**, **UNTP** and other service-specific medical kits:

- **BEFORE**
- **DURING**
- **AFTER**

ALL training events and missions

MEDICAL EQUIPMENT MAINTENANCE AND RESUPPLY



Check to be sure all equipment is in the kit

Check **seals** and **wrappers**

- REPLACE items with **broken** or **unsealed** wrappers

Check **expiration** dates

- REPLACE if **expired** or the expiration date **DOES NOT** exceed your expected deployment timeframe

BEWARE OF EQUIPMENT THAT IS **NOT UN APPROVED!**

DO NOT DEPLOY WITH **MISSING, **PREVIOUSLY USED FOR TRAINING**,
OR **EXPIRED EQUIPMENT****

UN TRAUMA PACK



Always use the **casualty's** BFAK first

UN Trauma Pack

When supplies are exhausted from the casualty's BFAK, resort to using supplies from the UNTP

SKILL STATION

Familiarization with BFAK and UNTP



BUDDY AID

UN Trauma Pack (UNTP)



INDIVIDUAL

Buddy First Aid Kit (BFAK)

MEDICAL EQUIPMENT SUMMARY

Familiarize yourself with the content of the UNTP and BFAK.

Ensure you are aware of the resupply procedures and how to maintain your equipment.

Regularly inspect your BFAK, UNTP, and other UN specific medical kits:

- **BEFORE**
- **DURING**
- **AFTER**

ALL training events and missions.

Be sure to use proper documentation when needed; MACE2, 4-Line, and Casualty Card.

CHECK ON LEARNING

- When providing “buddy aid,” should you use your BFAK or the casualty’s BFAK?
- What is the most important lifesaving item in the BFAK?
- When should medications and medical-grade equipment be replaced in the BFAK?



ANY QUESTIONS?



FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 03: CARE UNDER FIRE

TACTICAL FIELD MEDICAL AID (TFMA) ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

TO4 Given a combat peacekeeping or non-combat peacekeeping scenario, perform Care Under Fire in accordance with TFMA Guidelines

EO14 Describe the role of fire superiority and threat containment on TFMA.

EO15 Describe the actions required before engaging with a casualty to prevent harm or additional casualties in accordance with TFMA guidelines.

EO16 Identify appropriate actions and priorities to treat and move casualties in CUF.

EO17 Identify the importance of early application of limb tourniquets to control life-threatening bleeding in CUF.

EO18 Demonstrate one-handed tourniquet application to self in CUF.

EO19 Demonstrate two-handed tourniquet application to a casualty in CUF.

EO20 Describe the principles, advantages, and disadvantages of one-person drag/carry or two-person drag/carry in CUF.

EO21 Demonstrate the one-person drags and carries of a casualty in CUF.

EO22 Demonstrate two-person drags and carries of a casualty in CUF.

Three PHASES of TFMA

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
- MARCH PAWS assessment

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 TFMA training!


YOU ARE HERE

PHASE 1: CARE UNDER FIRE

RETURN FIRE AND TAKE COVER

- Never attempt to rescue a casualty until hostile fire is suppressed
- Using available resources, ensure scene safety

DIRECT CASUALTY TO REMAIN ENGAGED

APPLY SELF-AID AND MOVE TO COVER *(if able)*

GAIN FIRE SUPERIORITY

MOVE TO CASUALTY *(if casualty is unable to move to cover)*

IMPORTANT CONSIDERATIONS:

- **Order of actions** will be dictated by the situation
- A casualty **may** be able to perform **self-aid**
- **Constantly ASSESS risks** and make a plan **before** moving a casualty

CARE UNDER FIRE

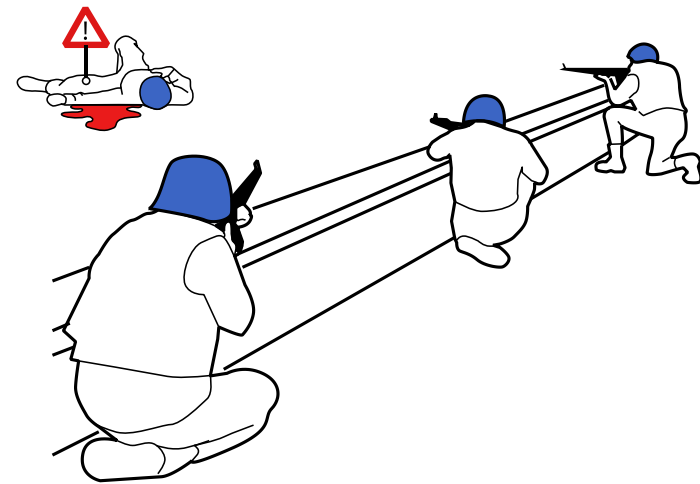
ROLE OF FIRE SUPERIORITY



CARE UNDER FIRE

FIRE SUPERIORITY PRINCIPLES

- **Order of actions** will be dictated by the situation
- Return fire **AND** take cover
- **Direct casualty** to remain engaged
- **Direct casualty** to apply self-aid and move to cover
- DO NOT approach casualty while casualty is **inside of a KILL ZONE**
- **Suppress** hostile fire to gain fire superiority

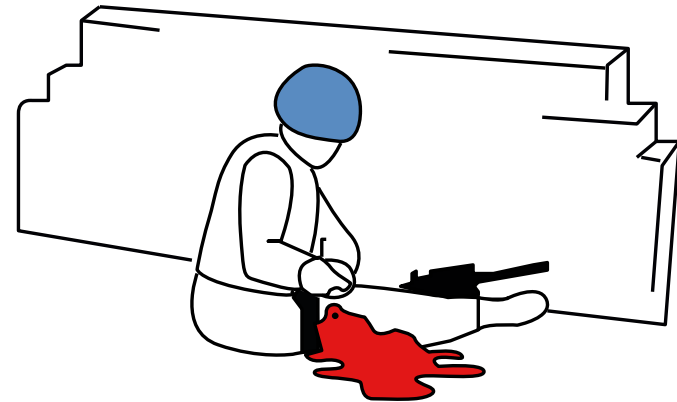


Place a tourniquet on life-threatening bleeding and get the casualty **OUT** of the **KILL ZONE** if they are unable to move

CARE UNDER FIRE CASUALTY SELF-AID



Direct casualty to
return fire, if able



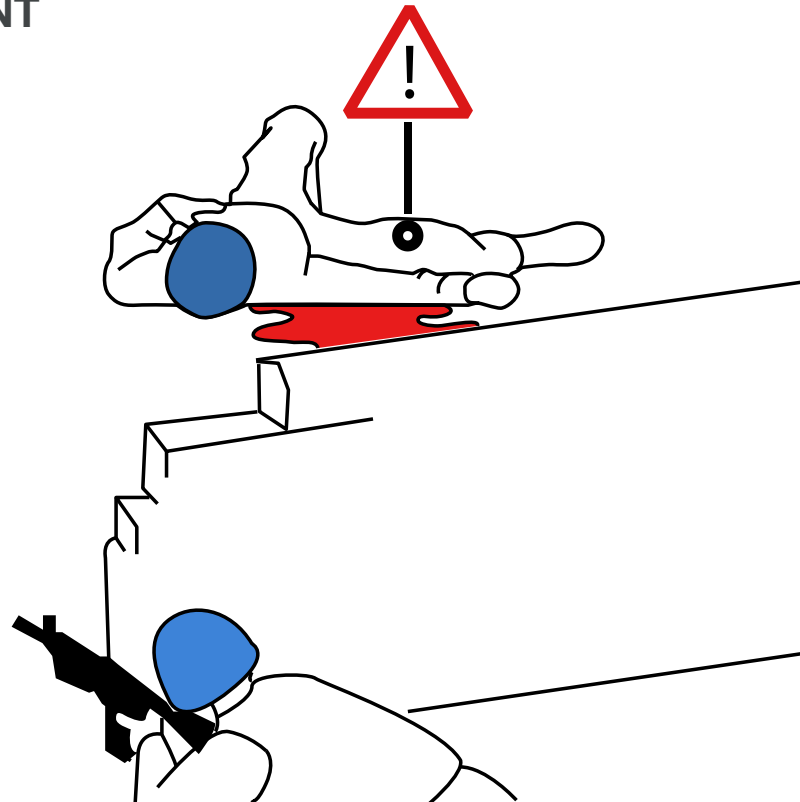
Have casualty move to cover
and apply self-aid

CARE UNDER FIRE

IF CASUALTY IS UNABLE TO MOVE

If casualty is unable to move to cover, when **tactically feasible**, go to them when fire has been **SUPPRESSED** and fire superiority has been **GAINED** and **AID THEM IN MOVEMENT**

- Use rope, dragging straps, etc.



CARE UNDER FIRE

PHASE 1: CARE UNDER FIRE

APPLY TOURNIQUET TO CONTROL LIFE-THREATENING BLEEDING

- For life-threatening bleeding, place a tourniquet (TQ) "**high and tight**" above the wound

MOVE CASUALTY

- Drag or carry based on **tactical situation**



MASSIVE BLEEDING IN CARE UNDER FIRE

CARE UNDER FIRE

CARE UNDER FIRE OVERVIEW

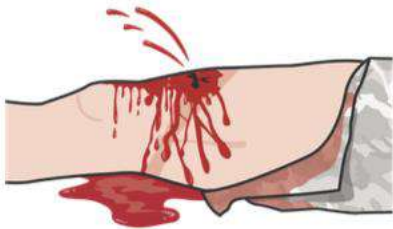
CARE UNDER FIRE BLEEDING CONTROL

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

CARE UNDER FIRE

IDENTIFY LIFE-THREATENING BLEEDING

- **Bright red blood** is pooling on the ground
- The overlying clothes are **soaked** with blood



- There is a traumatic **AMPUTATION** of an **arm** or **leg**



- There is a There is **pulsatile** (pulsing) or **steady** bleeding from the wound

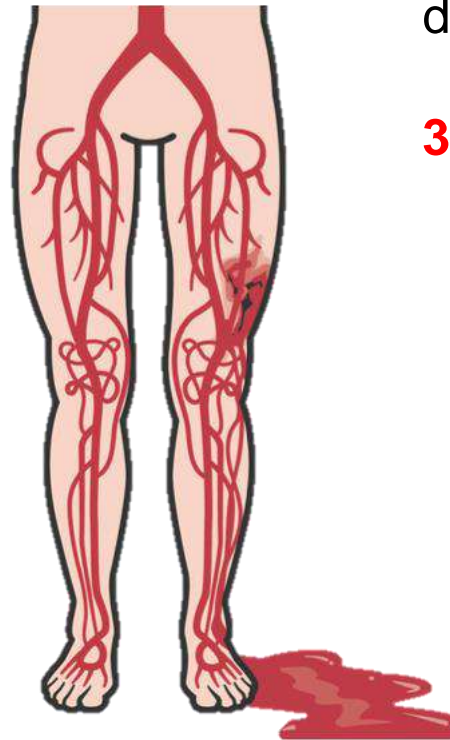
QUESTION

TIME TO BLEED OUT

How long does it take to **bleed to death** from a **major artery injury**?

Casualties with such an injury can bleed to death in *as little as*

3 MINUTES



CARE UNDER FIRE

KNOW YOUR ACCESS TO A TOURNIQUET

Have TQ available for self-application should you need one, **QUICK ACCESS IS KEY!**

- **DON'T** leave your TQ at the bottom of your pack!

CASUALTY'S BFAK FIRST

- When helping a buddy, **NEVER USE YOUR OWN TQ** before the casualty's
- Look for the TQ in the **casualty's BFAK**
- If the casualty does **NOT** have a TQ available, **then** use the TQ from the UNTP or the next available one



BFAK

CARE UNDER FIRE

ONE-HANDED TOURNIQUET SELF-APPLICATION

One-Handed Application

The one-handed application is normally used to apply a TFMA-recommended windlass TQ to the **upper extremities** (upper arm or forearm)

WINDLASS TQ

- A **windlass** TQ is the TQ of choice; it is effective and can be applied quickly
- Use the windlass TQ from the BFAK



CARE UNDER FIRE

ONE-HANDED WINDLASS

TOURNIQUET APPLICATION

ONE-HANDED WINDLASS

TOURNIQUET

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

CARE UNDER FIRE

ONE-HANDED TOURNIQUET APPLICATION

CRITICAL POINTS

WINDLASS TQ

- TQ's are used to control massive or severe hemorrhage (bleeding) of an extremity (arms and legs)
- TQs are **effective** and can be **applied quickly**
- TQs are the most important lifesaving item in the BFAK and should be kept easily accessible

When helping a buddy, **NEVER USE YOUR OWN tourniquet** before the casualty's



CARE UNDER FIRE

BUDDY AID

IF CASUALTY IS UNRESPONSIVE OR UNABLE TO MOVE

Approach casualty and
**conduct visual blood
sweep** (looking for major
bleeding)

If you see bleeding, apply
a hasty (high and tight) TQ
using a **two-handed
method**



IMPORTANT CONSIDERATION:
Be sure to use equipment (TQ)
in the casualty's BFAK and not your own

CARE UNDER FIRE

TWO-HANDED WINDLASS
TOURNIQUET APPLICATION

TWO-HANDED WINDLASS
TOURNIQUET

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

CARE UNDER FIRE

SKILL STATION

CUF Tourniquet (Skills)

- One-Handed (Windlass) TQ Application in CUF
- Two-Handed (Windlass) TQ Application in CUF

TACTICAL FIELD CARE

EXTRACTION OF CASUALTIES

- Casualty to be extracted from vehicles and buildings per UN Standard Operating Procedure (SOP)
- **If casualties are on fire, put out the fire IMMEDIATELY**
- Move casualty to **relative safety** following the unit SOP



CRITICAL OBJECTIVES FOR THE ONE- OR TWO- PERSON DRAG/CARRY



- Once bleeding is controlled, move the casualty to cover using a one- or two-person drag/carry
- At the point of injury you must move your casualty to the closest position of cover
- If you must move a casualty under fire, then quickly develop a casualty movement rescue plan
- When moving casualties, spinal injuries are not to be a concern during Care Under Fire movements

DRAG/CARRY

ONE-PERSON DRAG/CARRY

SUPPORT CARRY

should be used for a conscious casualty only



NECK DRAG also limits the casualty and rescuer from exposure to enemy fire



KIT OR ARM DRAG

Some body armour is equipped with a drag handle; therefore, no additional equipment is required



CRADLE-DROP DRAG is effective in moving a casualty **up or down the stairs, steps, or short distances**

CARE UNDER FIRE
ONE-PERSON
CASUALTY DRAG/CARRY

ONE-PERSON DRAGS & CARRIES

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

DRAG/CARRY

TWO-PERSON DRAG/CARRY



The **TWO-MAN SUPPORTING CARRY** can be used in transporting **both** conscious and unconscious casualties



KIT OR ARM DRAG can cause Injury to either the rescuer or casualty during training drills; keep safety in mind



FORE AND AFT CARRY Exposes two rescuers to hostile fire instead of one

CARE UNDER FIRE
TWO-PERSON
CASUALTY DRAG/CARRY

TWO-PERSON DRAGS & CARRIES

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

DRAG/CARRY

SKILL STATION

Drag/Carry (Skills)

- One-Person Drag/Carry
- Two-Person Drag/Carry

CARE UNDER FIRE SUMMARY

- We defined Care Under Fire
- We discussed the importance of fire superiority
- We defined massive hemorrhage control methods
- We discussed casualty movement in CUF
- We discussed the advantages and disadvantages of one- and two-person drag/carry methods

CHECK ON LEARNING

- What is Care Under Fire?
- What are the signs of life-threatening bleeding?
- How long does it take to bleed to death from a complete femoral artery and vein disruption?
- What are the advantages and disadvantages of one-person drags?
- What are the advantages and disadvantages of two-person carries?



ANY QUESTIONS?

FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 04: PRINCIPLES AND APPLICATION OF TACTICAL FIELD CARE (TFC)

TACTICAL FIELD MEDICAL AID (TFMA) ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

TO5 Given a combat peacekeeping or non-combat peacekeeping scenario, perform Tactical Field Care in accordance with TFMA Guidelines

- EO23** Identify the importance of security and safety in Tactical Field Care (TFC)
- EO24** Identify basic principles of removal/extraction of casualties from a unit-specific platform
- EO25** Identify the importance and techniques of communicating casualty information with unit tactical leadership and/or medical personnel
- EO26** Identify the relevant tactical and casualty data involved in communicating casualty information
- EO27** Identify Demonstrate communication of casualty information to tactical leadership and/or medical personnel (in accordance with UN and/or unit standard operating procedures in TFC)
- EO28** Identify triage considerations in TFC

Three PHASES of TFMA

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
- MARCH PAWS assessment

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 TFMA training!


YOU ARE HERE



CASUALTY AND RESPONDER NO
LONGER UNDER EFFECTIVE ENEMY
FIRE OR THREAT
**ENTER INTO THE
TACTICAL FIELD CARE
(TFC) PHASE**

TACTICAL FIELD CARE

PHASE 2: TACTICAL FIELD CARE

TFC IS CARE RENDERED WHEN NO
LONGER UNDER EFFECTIVE ENEMY FIRE
OR THREAT

Having transitioned from
Care Under Fire (CUF), further
assessment and **care** can be
more **deliberate** following the
MARCH PAWS sequence

This does **NOT** mean that
the danger is over – the
tactical situation could
change back to CUF **AT
ANY TIME**

IMPORTANT CONSIDERATIONS:

Mission personnel should
constantly maintain their
situational awareness of
the **potential threat** from
hostile forces

Tactical Field Care also encompasses
combat/tactical environment not involving enemy
fire (e.g., parachute injury in combat zone)

TACTICAL FIELD CARE

SECURITY AND SAFETY IN TACTICAL FIELD CARE

Establish a security perimeter in accordance with unit tactical standard operating procedures and/or battle drills

Maintain tactical situational awareness



CASUALTIES WITH ALTERED MENTAL STATUS SHOULD HAVE

- Weapons **cleared** and **secured**
- **Communications** secured
- **Sensitive** items redistributed
- **Weapons** and **radios DO NOT** mix well with shock or narcotics



TACTICAL FIELD CARE

OTHER CONSIDERATIONS

TFC is when the casualty and the person rendering care are NOT under direct fire



LIMITED SUPPLIES

Medical equipment and supplies are **LIMITED** to what is **carried** into the field by the FMA and the individual UN member



REMEMBER:

- Always use the **casualty's BFAK FIRST**
- TFC can turn into a CUF situation **unexpectedly**
- Personnel should **maintain** their situational awareness

TACTICAL FIELD CARE

CASUALTY REMOVAL/EXTRACTION PRINCIPLES

- The first principle is safety. Safety is critical.
- The second principle of MARCH still applies. If possible, you may want to initiate lifesaving measures like applying a tourniquet before the extraction, and monitor them throughout the process.
- The third principle is training.



Extractions will vary based on the mission and vehicles located in your Area of Responsibility (AOR)

TACTICAL FIELD CARE

MARCH PAWS

DURING LIFE-THREATENING

MASSIVE BLEEDING #1 Priority

AIRWAY

RESPIRATION

CIRCULATION

HYPOTHERMIA / HEAD INJURIES

AFTER LIFE-THREATENING

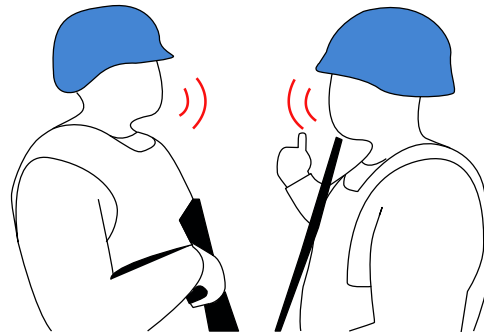
PAIN

ANTIBIOTICS

WOUNDS

SPLINTING

TACTICAL FIELD CARE COMMUNICATION



Communicate with the casualty, if possible

- **Encourage**
- **Reassure**
- **Explain care** each step of the way

Communicate with tactical leadership **IMMEDIATELY** on evacuation requirements

Continue to communicate with leadership on casualty treatment as needed

(4 Line Format)

UN CASEVAC 4-LINE ALERT MESSAGE			
Line	DTG:		
1	LOCATION AND CALL SIGN	PLACE NAME / DESCRIPTION	A
		GPS GRID REFERENCE	B
2	INCIDENT DETAILS	CALL SIGN OF INCIDENT SITE COMMANDER	C
		WHAT HAS HAPPENED? (Shooting, road accident, explosion etc).	D
		HOW MANY CASUALTIES ARE THERE?	E
3	ACTIONS BEING TAKEN AT SCENE	TREATMENT BEING GIVEN AND PREPARATIONS FOR EVACUATION	
4	RESOURCES REQUIRED AT SCENE TO TREAT AND EVACUATE PATIENT	GROUND AMBULANCE, AIR EVACUATION, AMET	

COMMUNICATE WITH EVACUATION AND MEDICAL ASSETS

Communicate with the evacuation system to coordinate evacuation using the **4-Line CASEVAC request**

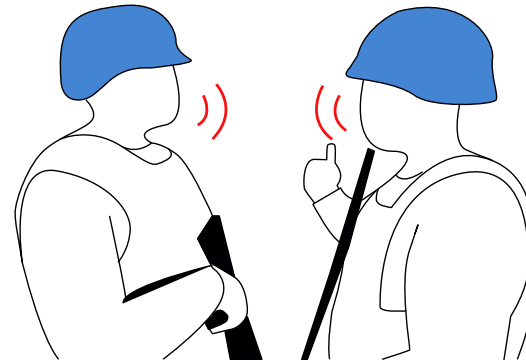
Keep each casualty's Cas Card up to date

TACTICAL FIELD CARE

COMMUNICATE RELEVANT CASUALTY DATA



Document ALL assessment and medical care (including interventions and medications) on the Casualty Card



Communicate with CASEVAC using the:

4-Line CASEVAC request form

MIST Report

Mechanism of injury

Injuries

Symptoms

Treatment

Relay the information following your standard operating procedures

COMMUNICATE CASUALTY DATA IN HAND-OFF WITH MEDIC OR CASEVAC

When handing casualty off to medic or CASEVAC, read off the Casualty Card, including any additional information as needed

MIST report may **change** as the **casualty status** and **interventions** performed change

TACTICAL FIELD CARE

TRIAGE – PRIORITIZING MULTIPLE CASUALTIES

Casualties with these injuries must be treated first:

- #1 **Massive bleeding**
- #2 **Penetrating** trauma into the box (torso)
- #3 **Airway** compromise
- #4 **Respiratory** distress
- #5 Altered mental status



TACTICAL FIELD CARE

TRIAGE CONSIDERATIONS

- Casualties may need to be sorted into prioritized treatment groups
- The FMA may be required to assist medical personnel with urgent casualties, monitor casualties after emergency interventions, and may be tasked with preparing casualties for evacuation



TACTICAL FIELD CARE SUMMARY

- Ensure you are aware of all security and safety procedures for TFC
- Tactical Field Care is when the casualty and the responder are both no longer under effective enemy fire or threat
- Security and safety in TFC is a priority; clear and secure weapons and communications
- Understand the principles of casualty extractions in accordance with unit standard operating procedures
- Always follow the MARCH PAWS procedure during life-threatening and after life-threatening injuries

CHECK ON LEARNING

- What is the difference between the TFC and CUF phases?
- True or False: During TFC, the tactical situation could change back to CUF again at any time.
- What is MARCH PAWS?

ANY QUESTIONS?

FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 05: TACTICAL TRAUMA ASSESSMENT (TTA)

TACTICAL FIELD MEDICAL AID (TFMA)

ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

TO6 Given a combat peacekeeping or non-combat peacekeeping scenario, perform Tactical Field Care in accordance with TFMA Guidelines

EO29 Demonstrate the techniques used to assess a casualty for responsiveness.

EO30 Identify the common causes of altered mental status in combat peacekeeping or non-combat peacekeeping environments

EO31 Identify the importance of disarming and securing communications equipment of a casualty with altered mental status

EO32 Identify the importance and techniques of communicating with a casualty in TFC

EO33 Demonstrate communicating with a casualty in TFC

EO34 Demonstrate application of body substance isolation (BSI) in TFC

EO35 Demonstrate a TTA in the proper order using the MARCH PAWS sequence in accordance with TFMA Guidelines

EO36 Demonstrate the appropriate actions and interventions used during a casualty assessment to render aid to the casualty in accordance with TFMA Guidelines

TACTICAL FIELD CARE

MARCH PAWS

DURING LIFE-THREATENING

MASSIVE BLEEDING #1 Priority

AAIRWAY

RESPIRATION

CIRCULATION

HYPOTHERMIA / HEAD INJURIES

AFTER LIFE-THREATENING

PAIN

ANTIBIOTICS

WOUNDS

SPLINTING

TACTICAL TRAUMA ASSESSMENT HOW-TO

TACTICAL TRAUMA ASSESSMENT

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

COMBAT SPEED TTA “FIRE FIGHT CONSCIOUS CASUALTY”

TACTICAL TRAUMA ASSESSMENT “Fire Fight Conscious Casualty”

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

COMBAT SPEED TTA “FIRE FIGHT UNCONSCIOUS CASUALTY”

TACTICAL TRAUMA ASSESSMENT ‘Explosion’ Unconscious Casualty”

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

TACTICAL TRAUMA ASSESSMENT

BODY SUBSTANCE ISOLATION (BSI)



Whenever possible, the responder should don latex-free gloves as a precaution

CASUALTY BLOOD SWEEP

Your initial casualty evaluation should be a rapid head-to-toe check for any unrecognized life-threatening bleeding

- Check the neck, axillary (armpit), inguinal (groin)
- Check the legs, arms, abdomen, chest (in a raking motion) and back



MASSIVE BLEEDING

QUICKLY IDENTIFY

MASSIVE, LIFE-THREATENING BLEEDING

BRIGHT RED BLOOD

is pulsing or spurting, or there is steady bleeding from the wound



Overlying clothing or ineffective bandaging is becoming **SOAKED WITH BLOOD**



BRIGHT RED BLOOD

is pooling on the ground



AMPUTATION of the arm or leg

IMPORTANT! Casualties with severe injuries can bleed to death in *as little as 3 minutes*

MARCH

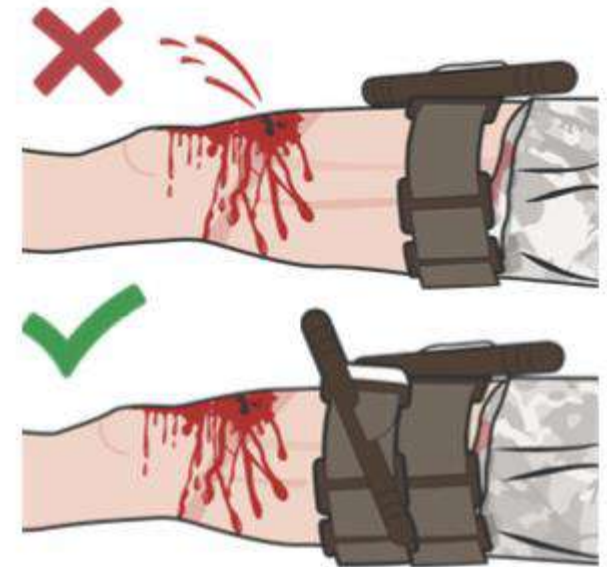
MASSIVE HEMORRHAGE CONTROL IN TFC

HEMORRHAGE CONTROL

Assess for other sources of hemorrhage, and control all life-threatening bleeding



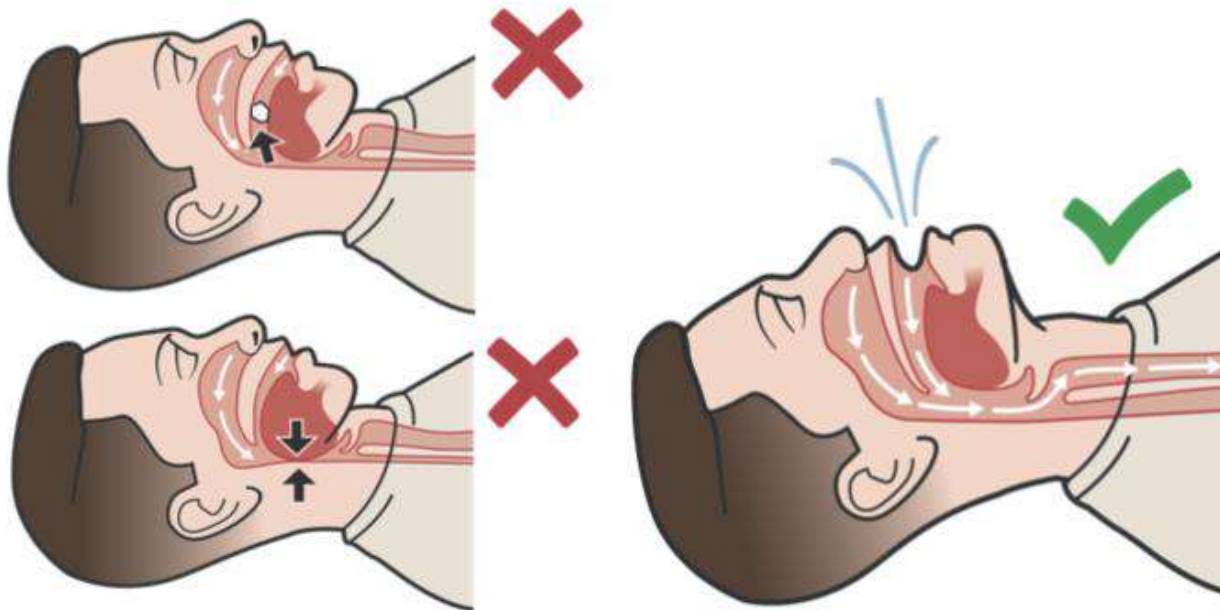
If not already done, where appropriate, use a TFMA recommended limb tourniquet (TQ) to control life-threatening external hemorrhage, applying it 2-3 inches above the source of bleeding, directly on the skin



Reassess CUF interventions, and If bleeding is not controlled with the first TQ, apply a second TQ side-by-side with the first

AIRWAY MANAGEMENT

IDENTIFYING OBSTRUCTED AIRWAY



SIGNS AND SYMPTOMS AIRWAY MAY BE BLOCKED:

- Casualty is in distress and indicates they can't breathe properly
- Casualty is making snoring or gurgling sounds
- Visible blood or foreign objects are present in the airway
- Maxillofacial trauma (severe trauma to the face) is observed

IMPORTANT! Remove any visible objects, but do not perform a blind finger sweep

MARCH

OPENING THE AIRWAY

IN A CASUALTY WITHOUT AN AIRWAY OBSTRUCTION, YOU CAN PERFORM THE FOLLOWING MANEUVERS:

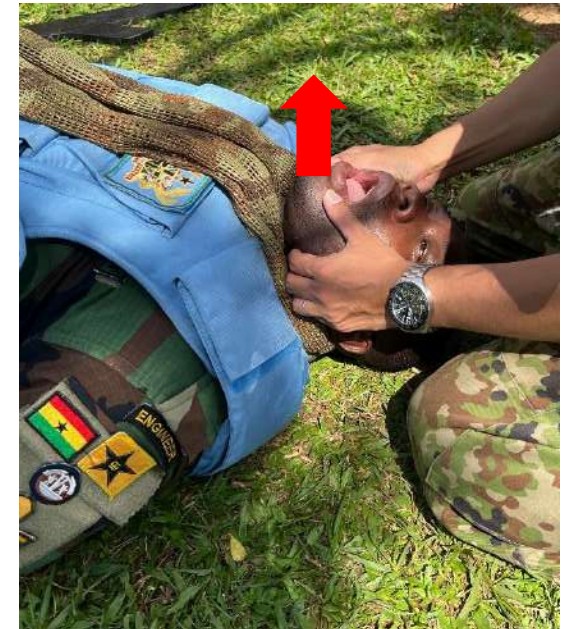
Unconscious casualty's tongue may have relaxed, causing the tongue to block the airway by sliding to the back of the mouth and covering the opening to the Windpipe

If you suspect that the casualty has suffered a neck or spinal injury, use the jaw-thrust method

HEAD-TILT CHIN-LIFT



JAW THRUST



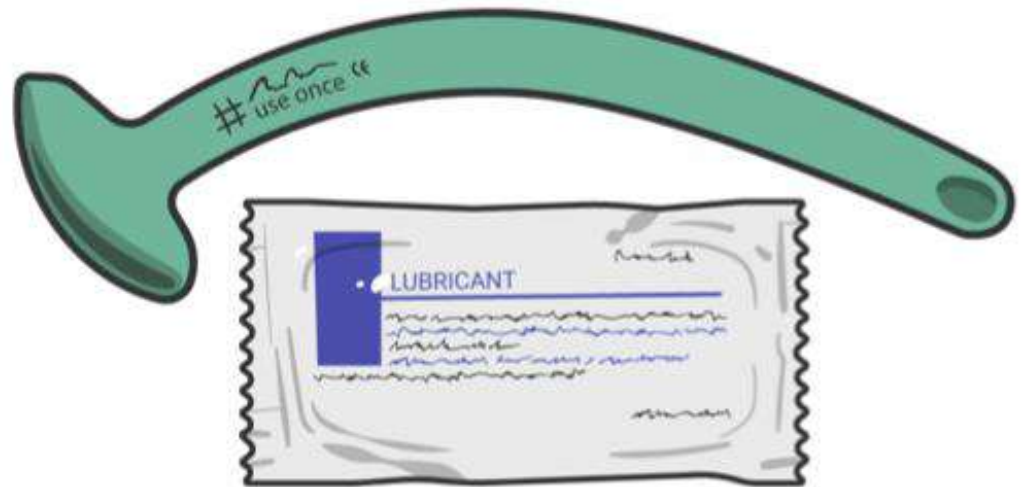
MARCH

OPENING THE AIRWAY

MANAGING THE AIRWAY

IF the casualty is breathing on their own but unconscious or semiconscious **AND** there is no airway obstruction, further airway management is best achieved with a nasopharyngeal airway (NPA)

An NPA can be used on a conscious or unconscious casualty to help open/maintain an open airway



MARCH

MANAGING THE AIRWAY

MANAGEMENT/RECOVERY POSITION



Casualties with **severe facial trauma** can often protect their own airways by sitting up and leaning forward



Assist a conscious casualty by helping them assume any comfortable sitting-up position that **ALLOWS THEM TO BREATHE EASILY**



For an unconscious casualty not in shock, place them into the **RECOVERY POSITION**

MARCH

TACTICAL TRAUMA ASSESSMENT

RESPIRATIONS



Breathing rate
(Monitor respirations)

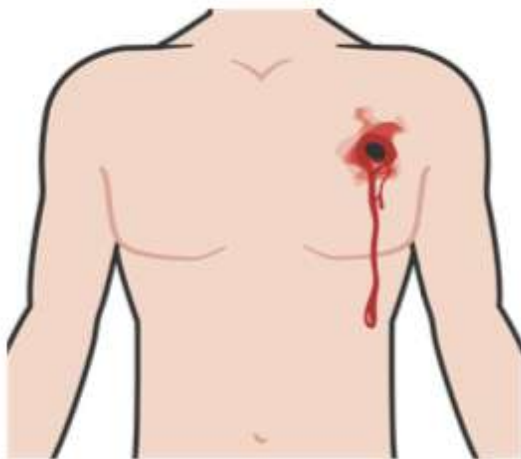


Level of consciousness

M A R C H

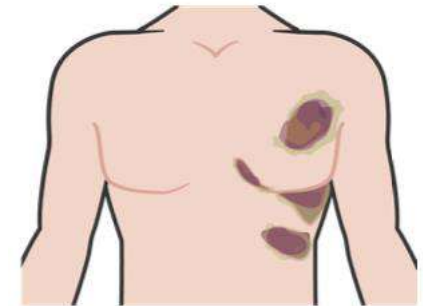
TRE SPIRATION ASSESSMENT AND MANAGEMENT IN TFC

LIFE- THREATENING CHEST INJURY



Expose the chest to assess for:

- Gunshot or shrapnel wound
- Blunt-force trauma
- Bruising or contusions
- Any deformities of the chest



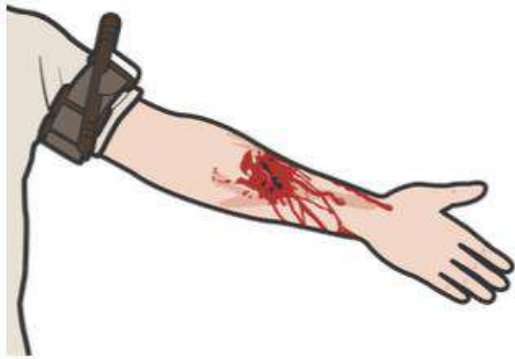
If penetrating trauma is found or identified, apply a chest seal (vented, if available)

M A R C H

CIRCULATION

REASSESS TREATMENTS

M



Reassess **ALL** treatment
for **M**assive hemorrhage

A



Reassess **A**irway

R



Reassess **R**espirations

MARCH

CIRCULATION

GENERAL INDICATOR OF SHOCK

SIGNS AND SYMPTOMS OF SHOCK INCLUDE:

- Mental confusion
- Rapid breathing
- Sweaty, cool, clammy skin
- Pale/grey skin
- Weak or absent radial pulse
- Nausea
- Excessive thirst
- Previous severe bleeding



M A R C H

HYPOTHERMIA

HYPOTHERMIA PREVENTION

Place the casualty on an insulated surface as soon as possible



- Hypothermia is much easier to prevent than to treat! Begin hypothermia prevention as soon as possible
- Decreased body temperature interferes with blood clotting and increases the risk of bleeding
- Blood loss can cause a significant drop in body temperature, even in hot weather

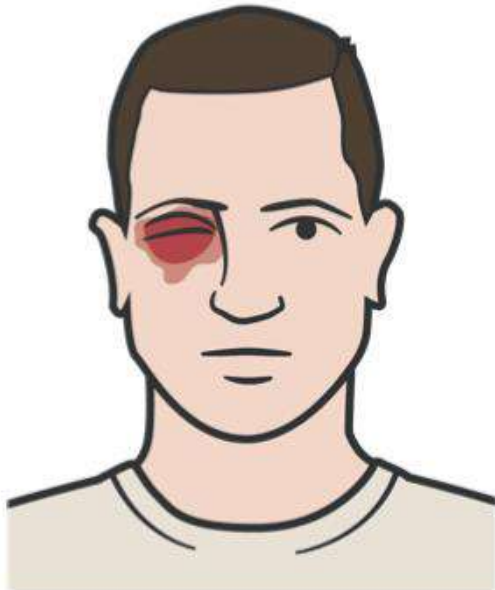
REMEMBER:

Hypothermia is an issue even in hot environments and must be prevented

M A R C H

EYE INJURIES

IF A PENETRATING EYE INJURY IS NOTED OR SUSPECTED



Do not cover both eyes unless both eyes are injured

- In the absence of an eye shield, consider using tactical eyewear



PENETRATING INJURIES

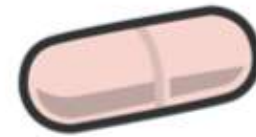
WOUND MEDICATION PACK (WMP)



Acetaminophen is used for pain management



Meloxicam can give significant pain relief and will not alter the casualty's mental status



Moxifloxacin contains oral antibiotic medication

MARCH
PAWS

MARCH
PAWS

Remember:

- Medics carry medications
- Document all medications administered on the UN Casualty Card

TACTICAL FIELD CARE GUIDELINES

INSPECT AND ADDRESS KNOWN WOUNDS

Dress all known wounds and then assess all applied bandages for:

- Increased pain
- Skin discoloration
- Irregular pulse

If any of these conditions are found, they might indicate an emergency!

Ensure the applied bandage **isn't too tight**; loosen as needed while keeping the bleeding controlled



DO NOT EVER APPLY IT AND FORGET IT!

MARCH PAWS

SECONDARY INJURIES

BURN CARE



EXTRACT

Extract from burning vehicle, building, or area

STOP THE BURNING PROCESS



COVER

Cover the burn area with dry, sterile dressings for general burns



WHITE PHOSPHORUS = WET DRESSING

Eliminate wound contact with oxygen

Be sure to assess MARCH before burn care

SECONDARY INJURIES

ASSESS FOR A FRACTURE

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 (check pulse before and after treatment)
- Crepitus (hearing a crackling or popping sound under the skin)

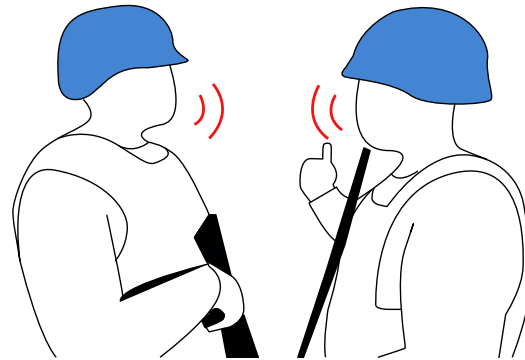


CLOSED FRACTURE



OPEN FRACTURE

TACTICAL FIELD CARE COMMUNICATION



Communicate with the casualty and if possible

- Encourage
- Reassure
- Explain care each step of the way

Communicate with tactical leadership as soon as possible with status and evacuation requirements throughout casualty treatment as needed

COMMUNICATE WITH EVACUATION AND MEDICAL ASSETS

- Communicate with the evacuation system to coordinate CASEVAC using the 4-Line CASEVAC request
- Keep the Casualty Card

TACTICAL EVACUATION

PHASE 3: TACTICAL EVACUATION CARE

CASUALTY MONITORING

Continue to reassess and monitor casualty

EVAC REQUEST

Use 4-Line format

CASUALTY PREP

- Secure items
- Prep litter
- Prep evac equipment
- Pack casualty

COMPLETE MIST REPORT

M Mechanism of injury

I Injuries

S Symptoms

T Treatment

PRE-EVAC PROCEDURES

- Complete Casualty Card

TRAINER-LED DEMONSTRATION

Tactical Trauma Assessment

TACTICAL TRAUMA ASSESSMENT SUMMARY

- We defined Tactical Trauma Assessment
- We discussed assessing the casualty using MARCH PAWS
- We discussed proper communication and documentation

CHECK ON LEARNING

- During which phase of care is the TTA performed?
- What mnemonic is used to prioritize care during the TTA?
- What is a blood sweep?



ANY QUESTIONS?

FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 06: MASSIVE HEMORRHAGE CONTROL

TACTICAL FIELD MEDICAL AID (TFMA) ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

TO7 Given a combat peacekeeping or non-combat peacekeeping scenario, perform massive hemorrhage control during Tactical Field Care in accordance with TFMA Guidelines

- EO37** Identify life-threatening hemorrhage (bleed)
- EO38** Identify the importance of early application of limb tourniquets to control life-threatening bleed
- EO39** Identify anatomical sites for applying direct and indirect pressure to control bleeding
- EO40** Demonstrate the appropriate application of a TFMA-recommended limb tourniquet
- EO41** Identify risks associated with applying an improvised limb tourniquet
- EO42** Demonstrate the application of a TFMA-recommended hemostatic dressing
- EO43** Demonstrate an evaluation of previously applied tourniquets for hemorrhage control effectiveness
- EO44** Demonstrate improvised junctional hemorrhage control with hemostatic dressing and direct pressure

Three PHASES of TFMA

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
- MARCH PAWS assessment

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 TFMA training!


YOU ARE HERE

TACTICAL FIELD CARE

MARCH PAWS

DURING LIFE-THREATENING

 **MASSIVE BLEEDING** #1 Priority

AIRWAY

RESPIRATION

CIRCULATION

HYPOTHERMIA / HEAD INJURIES

AFTER LIFE-THREATENING

PAIN

ANTIBIOTICS

WOUNDS

SPLINTING

HEMORRHAGE OVERVIEW IN TFC

HEMORRHAGE CONTROL IN TACTICAL FIELD CARE

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

TACTICAL FIELD CARE

SECURITY AND SAFETY IN TACTICAL FIELD CARE

- **Establish** a security perimeter in accordance with UN tactical standard operating procedures (SOPs) and/or battle drills
- **Maintain** tactical situational awareness



CASUALTIES WITH ALTERED MENTAL STATUS SHOULD HAVE

- **Weapons** cleared and secured
- **Communications** secured
- **Sensitive items** redistributed
- **NOTE:** Weapons and radios **DO NOT** mix well with **shock** or **narcotics**



TACTICAL FIELD CARE

PRIORITIZING **MULTIPLE** CASUALTIES

Casualties with these injuries must be treated first:

- #1 **Massive bleeding**
- #2 **Penetrating** trauma into the box (torso)
- #3 **Airway** compromise
- #4 **Respiratory** distress
- #5 **Altered** mental status



WHEN IS BLEEDING LIFE-THREATENING? EARLY CONTROL OF SEVERE HEMORRHAGE IS **CRITICAL**



- **BRIGHT RED BLOOD** is pooling on the ground
- The **overlying clothes** are **SOAKED** with blood



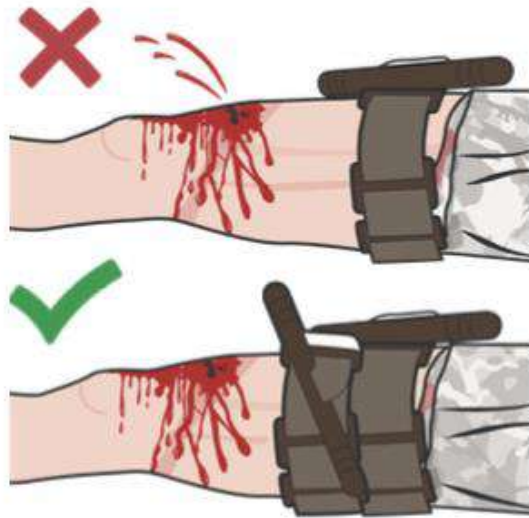
- There is **pulsatile** (pulsing) or **steady** bleeding from the wound



- Bandages or makeshift bandages used to cover the wound are **INEFFECTIVE** and steadily becoming **soaked** with blood
- There is a traumatic **amputation** of an arm or leg

MASSIVE HEMORRHAGE CONTROL

MASSIVE HEMORRHAGE REASSESSMENT



- **Reassess** any interventions performed in CUF
- If a tourniquet was previously applied, **assess** for effectiveness (bleeding has stopped and distal pulses are absent)
- If **ineffective**, apply a second tourniquet **side-by-side** with the first
- Perform a **blood sweep** and **expose** the casualty to look for other **life-threatening bleeding**, stopping to immediately treat anything identified, and look for non-life-threatening bleeding to address later

MASSIVE HEMORRHAGE CONTROL

TOOLS FOR LIFE-THREATENING HEMORRHAGE CONTROL

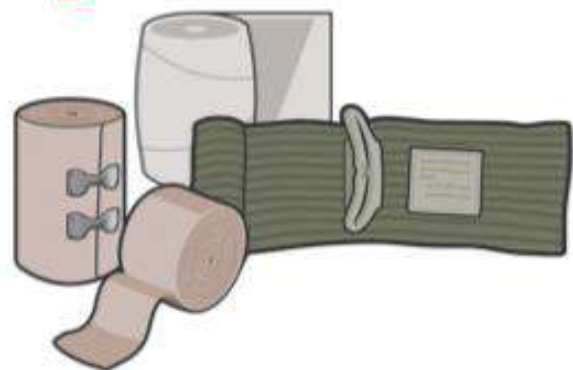
Direct pressure



- TFMA-recommended tourniquet



hemostatic dressing and pressure bandages



- Gauze/other dressings and pressure bandages

Pressure Delivery Device (PDD)



MASSIVE HEMORRHAGE CONTROL

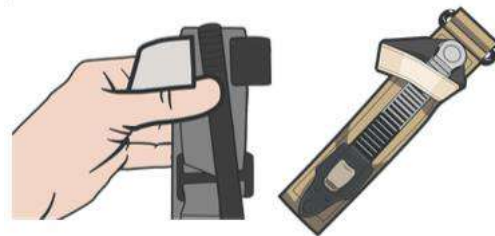
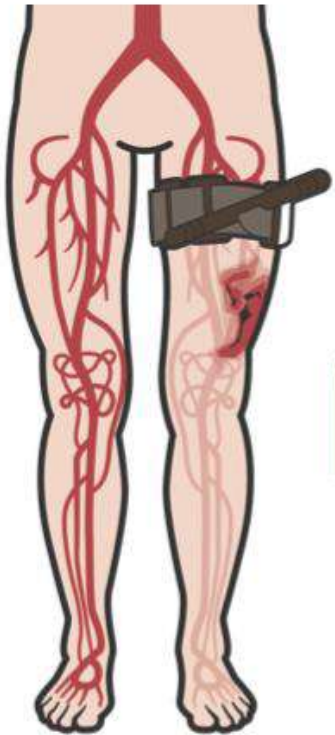
INITIAL DIRECT PRESSURE

BEFORE INTERVENTION

- **Direct pressure** can and **should be used** as a temporary measure **until** a **tourniquet or dressing is in place**
- It is difficult to use direct pressure alone to control significant bleeding or while moving the casualty
- Direct pressure can be **used** if a treatment no longer maintains control of the bleeding **while a new treatment is started**



MASSIVE HEMORRHAGE CONTROL TOURNIQUETS



- The TQ that should be used as the **FIRST option** is the **CASUALTY'S TQ** from **THEIR own BFAK**
- If this is not possible, or more than one tourniquet is needed, then you may apply the TQ from your own BFAK or a TQ from unit mission equipment
- You should have a **new TQ** in your BFAK. It is designed as a **ONE-TIME USE DEVICE**

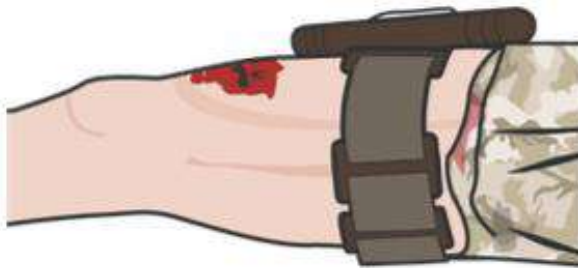
- A device stopping the flow of blood to an arm or leg by applying circumferential (around) pressure to the limb



MASSIVE HEMORRHAGE CONTROL

DELIBERATE TOURNIQUETS

- A TQ applied in **CUF** should be **reassessed**



- A TQ applied in TFC will be a **deliberate** TQ, applied **2-3 inches above the wound**, directly on the skin (not over clothing)
- In TFC the **source of bleeding** can be **identified** to ensure that TQs are properly placed



- TQs applied during **CUF** are **sometimes inadequate** due to the inability to properly expose and assess the wound, and application of an additional **side-by-side** TQ may be necessary

MASSIVE HEMORRHAGE CONTROL

TOURNIQUETS IN TACTICAL FIELD CARE

- Use a TQ to control life-threatening external hemorrhage that is anatomically amenable to TQ use or for **ANY traumatic amputation**



- Apply directly to the skin 2-3 inches above the bleeding site
- If bleeding is **NOT** controlled with the first TQ, apply a second TQ **side-by-side** with the first

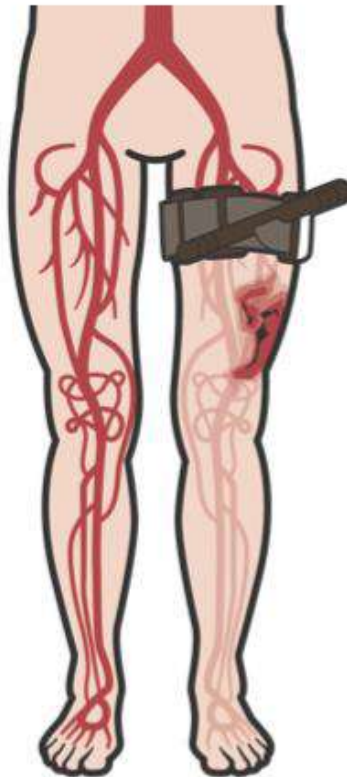
- Time should be documented during the TFC phase, not the CUF phase



- **TQs need to be applied rapidly.** The bleeding should be stopped **WITHIN ONE MINUTE** and the TQ fully secured within three minutes
- TQ application time is **important** in helping medical personnel manage TQs

MASSIVE HEMORRHAGE CONTROL

TOURNIQUETS **EFFECTIVENESS** CHECKS



TQs can be assessed for effectiveness by:

- Ensuring that the **BLEEDING HAS STOPPED**
- Checking a pulse **distally** (further out) on the limb where the TQ is applied to ensure there is **NO PULSE**

MASSIVE HEMORRHAGE CONTROL
TWO-HANDED WINDLASS TFC

**TWO-HANDED
WINDLASS TOURNIQUET**

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

MASSIVE HEMORRHAGE CONTROL

TOURNIQUET PITFALLS/MISTAKES

- **NOT** using one when you should or waiting too long to put it on
- **NOT** pulling all the slack out before tightening
- **NOT** making it tight enough – the TQ should stop the bleeding AND eliminate the distal pulse
- **NOT** using a second TQ, if needed
- Using a TQ for minimal bleeding; however, **when in doubt**, apply a TQ
- Putting it on too proximally (too high) if the bleeding site is clearly visible
- Loosening TQs for a period to allow recirculation of a limb
- Taking it off (this should be performed **ONLY** by **medical personnel** at a **higher level of care**)
- **DON'T** put TQs over joints!



RISKS WHEN USING IMPROVISED TOURNIQUETS

DON'T USE AN IMPROVISED TOURNIQUET!



- If no TQ is available, **pack the wound** and hold **direct pressure** over the main source of bleeding

RISKS ASSOCIATED WITH IMPROVISED TOURNIQUETS:

- **DAMAGE** may occur to skin if the band is too narrow
- Bleeding may **WORSEN**
- Bleeding **MAY NOT BE COMPLETELY CONTROLLED**
- An improvised TQ may likely **LOOSEN** over time from not being properly secured

MASSIVE HEMORRHAGE CONTROL

SKILL STATION

TFC Hemorrhage Control (Skills)

- Two-Handed Windlass Tourniquet Application in TFC

MASSIVE HEMORRHAGE CONTROL

HEMOSTATIC DRESSING

- TFMA-recommended hemostatic dressing is safe and contains active ingredients that assist with blood-clotting at the bleeding site
- Hemostatic dressing can also be used for controlling bleeding in conjunction with tourniquets
- A BFAK contains one hemostatic dressing and one dry sterile gauze



MASSIVE HEMORRHAGE CONTROL

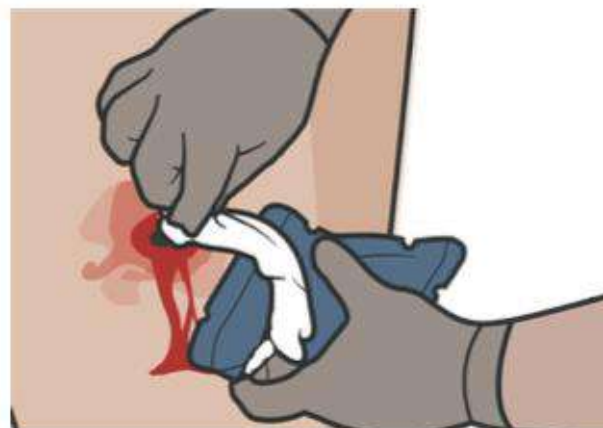
HEMOSTATIC DRESSING



- **Hemostatic dressing with or without** a pressure bandage **CAN** be used to control compressible junctional hemorrhage

Remember:

- **DO NOT** pack hemostatic dressing into the abdomen or chest
- A BFAK contains one hemostatic dressing and one dry sterile gauze



- For compressible (external) hemorrhage not amenable to limb TQ (places where a tourniquet cannot be effectively applied) or for bleeding from wounds not requiring a TQ, use a UN recommended hemostatic dressing

MASSIVE HEMORRHAGE CONTROL

WOUND PACKING

- Identify the **exact source** of bleeding and **APPLY direct pressure** as a **temporary** measure **UNTIL** gauze is placed
- Pack the wound, **maintaining CONSTANT** direct pressure at the source of bleeding within **90 SECONDS** for it to be effective
- **HOLD** direct pressure on the gauze over the wound for at least **3 MINUTES** (**this is necessary**, even with the active ingredient in hemostatic dressing)
- When packing a large wound, more than one hemostatic dressing and/or **additional** gauze may be **needed**
- Carefully **observe** to determine if bleeding has been **controlled**



- Once you are sure the bleeding has **stopped**, apply a pressure bandage

MASSIVE HEMORRHAGE CONTROL

WOUND PACKING FOR FAILED CONTROL



- If packed with hemostatic dressing, **remove** before packing material and **repack** with a new hemostatic dressing, as available
- It may be a **fresh** dressing of the **same** or **different type**
- Alternatively, additional **hemostatic** or **nonhemostatic dressing CAN** be applied on top of the first gauze
- If hemostatic dressing is **NOT** readily available, use dry sterile gauze or some other materials to pack the wound

MASSIVE HEMORRHAGE CONTROL

PRESSURE BANDAGES



- **ALL** dressings for **significant** bleeding **should be secured** with pressure bandages
- Place the bandage pad **directly** on the dressing, **continuing to apply direct pressure**
- Wrap the pressure/elastic bandage **tightly**, focusing pressure directly over the wound
- **SECURE** the hooking **ends** of the Velcro or closure bar onto the last wrap of the bandage

MASSIVE HEMORRHAGE CONTROL

PRESSURE BANDAGE ASSESSMENT



Key Points:

- Check for **circulation BELOW** the pressure bandage by **feeling for distal pulse** (a pulse below the bandage)
- If the **skin BELOW** the pressure bandage becomes **cool** to the touch, **bluish**, or **numb**, or if the **pulse** below the pressure dressing is **no longer present**, the pressure bandage may be **too tight**
- If circulation is **BLOCKED** or **STOPPED**, **loosen** and retie the bandage
- Dressings and bandages should be **reassessed** and checked routinely and **EVERY TIME** a casualty is moved

MASSIVE HEMORRHAGE CONTROL

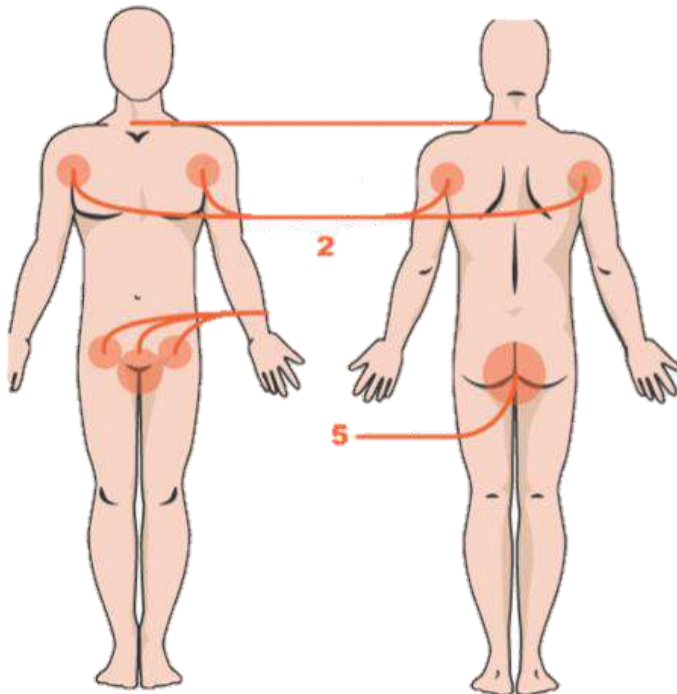
PRESSURE BANDAGES

PRESSURE BANDAGE

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

JUNCTIONAL HEMORRHAGE

JUNCTIONAL ANATOMY



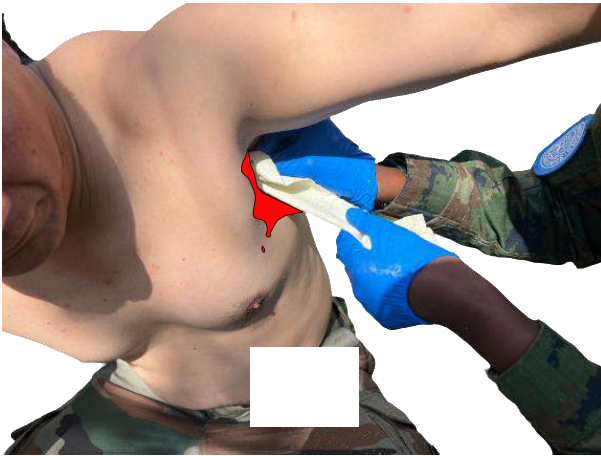
- Junctional areas are located at the **junction of the extremities** and **neck** with the torso
- Junctional hemorrhage can also occur on the extremities if the **injury is TOO CLOSE to the torso** for a tourniquet to be applied



- Blood vessels at **junctional areas** are **LARGER** than in the limbs but **can still be COMPRESSED** with direct pressure

JUNCTIONAL HEMORRHAGE

NECK JUNCTIONAL HEMORRHAGE CONTROL



- **Pack** the wound



- **Apply pressure** for **3 MINUTES**



- **Secure** with bandage
- If the bandage has a pressure bar, **pull the bandage TIGHT**, and reverse it back over the top of the pressure bar, **forcing it down** onto the pad

MASSIVE HEMORRHAGE CONTROL

NECK JUNCTIONAL HEMORRHAGE CONTROL

NECK JUNCTIONAL HEMORRHAGE CONTROL

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

JUNCTIONAL HEMORRHAGE

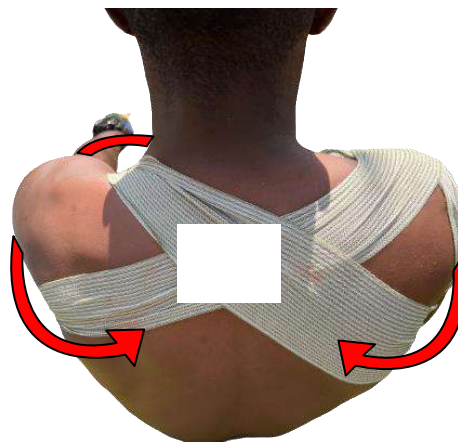
AXILLARY JUNCTIONAL HEMORRHAGE CONTROL



- **Expose** the wound



- **Pack** the wound



- **Secure** the dressing in place



- **Swath** the (injured side) upper arm to the side of the chest using a **cravat**

MASSIVE HEMORRHAGE CONTROL

AXILLARY JUNCTIONAL HEMORRHAGE CONTROL

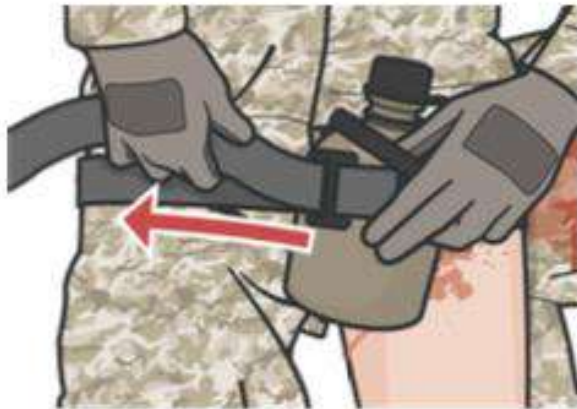
**AXILLARY JUNCTIONAL
HEMORRHAGE CONTROL**

Video can be found on DeployedMedicine.com

JUNCTIONAL HEMORRHAGE

JUNCTIONAL HEMORRHAGE CONTROL WITH A PRESSURE DELIVERY DEVICE (PDD)

- A PDD is made by using such materials as a **shoe/boot**, **full water bottle**, or **canteen**



- For groin injuries packed with hemostatic dressing, use an improvised junctional PDD to **SECURE** the **gauze**

- The PDD is placed in the inguinal gutter while **CONTINUOUSLY MAINTAINING** pressure to the gauze
- The PDD is then **secured** with a tourniquet and **tightened** to add **ADDITIONAL** pressure
- You may need to put **two TQs TOGETHER** when improvising a PDD

MASSIVE HEMORRHAGE CONTROL

INGUINAL IMPROVISED JUNCTIONAL WITH PDD

PRESSURE DELIVERY DEVICE (for Junctional Hemorrhage)

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

MASSIVE HEMORRHAGE CONTROL

SKILL STATION

TFC Hemorrhage Control (Skills)

- Wound Packing with hemostatic dressing and Pressure Bandage
- Neck Junctional Hemorrhage Control
- Axillary (Armpit) Junctional Hemorrhage Control
- Inguinal (Groin) Hemorrhage Control with Improvised Junctional Pressure Delivery Device (PDD)

MASSIVE HEMORRHAGE CONTROL

SUMMARY

Pressure bandages over areas like the:

- Base of the neck
- Axilla
- Groin
- Buttocks
- Perineum
- Junctional areas have **specific** application techniques that **MAXIMIZE** the amount of pressure they exert on the gauze
- **Recheck** the dressing **FREQUENTLY**, especially while transporting the casualty to **next level of care**
- **WATCH FOR RE-BLEEDING**

CHECK ON LEARNING

- What is the proper distance a deliberate tourniquet should be placed from the bleeding site in TFC?
- What is the difference between the need for high & tight/hasty tourniquets in CUF as opposed to deliberately placed tourniquets in TFC?
- How long should direct pressure be applied on packed hemostatic dressings?
- Why is it important to check the pulse after applying a pressure bandage?
- What additional intervention beyond packing with hemostatic dressing and wrapping with a pressure bandage is necessary to stop the bleeding from a groin wound?

ANY QUESTIONS?



FIELD MEDICAL ASSISTANT COURSE (FMAC)

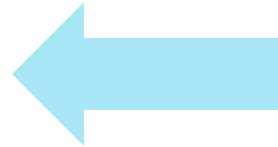
MODULE 07: AIRWAY MANAGEMENT

TACTICAL FIELD MEDICAL AID (TFMA) ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

TO8 Given a combat peacekeeping or non-combat peacekeeping scenario, perform airway management during Tactical Field Care in accordance with TFMA Guidelines

EO45 Identify signs of an airway obstruction

EO46 Demonstrate opening the airway with the head-tilt chin-lift or jaw-thrust maneuver

EO47 Demonstrate the placement of a casualty in the recovery position in Tactical Field Care

EO48 Demonstrate the insertion of a nasopharyngeal airway (NPA) into a casualty in Tactical Field Care

EO49 Describe the technique for ventilating a casualty with a bag valve mask (BVM) in Tactical Field Care

TACTICAL FIELD CARE

MARCH PAWS

DURING LIFE-THREATENING

MASSIVE BLEEDING #1 Priority

 **AIRWAY**

RESPIRATION

CIRCULATION

HYPOTHERMIA / HEAD INJURIES

AFTER LIFE-THREATENING

PAIN

ANTIBIOTICS

WOUNDS

SPLINTING

AIRWAY

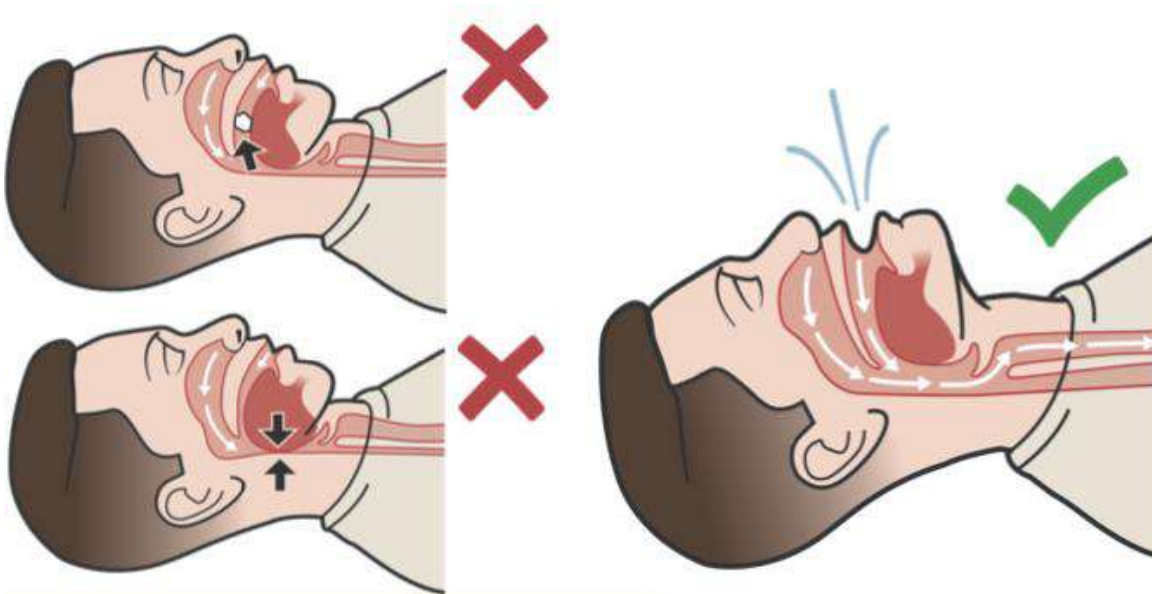
AIRWAY MANAGEMENT



- Airway obstruction on the battlefield is often due to maxillofacial trauma
- If the casualty is breathing on their own but **unconscious** or **semi-conscious**, and there is no airway obstruction, further airway management is achieved through a **Nasopharyngeal Airway (NPA)**
- **Unconscious** casualties can also lose their airway as the muscles of their tongue may have relaxed, causing the tongue to block the airway by sliding to the back of the mouth and covering the opening to the windpipe

IDENTIFYING AN OBSTRUCTED AIRWAY

IDENTIFYING OBSTRUCTED AIRWAY



IMPORTANT! Remove any visible objects, obstructing the airway, but do not perform a blind finger sweep

SIGNS AND SYMPTOMS

AIRWAY MAY BE BLOCKED:

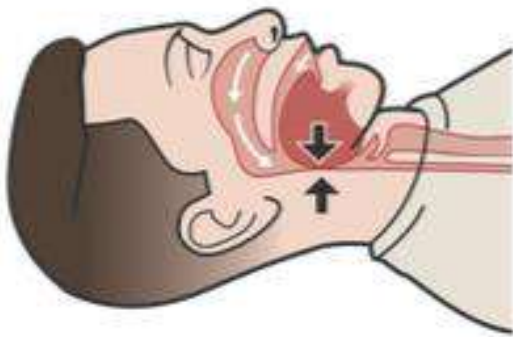
- Casualty is in distress and indicates they can't breathe properly
- Casualty is making snoring or gurgling sounds
- Visible blood or foreign objects are present in the airway
- Maxillofacial trauma (severe trauma to the face) is observed

MARCH

OPENING THE AIRWAY

IN A CASUALTY WITHOUT A FOREIGN BODY AIRWAY OBSTRUCTION, YOU CAN PERFORM THE FOLLOWING MANEUVERS:

Unconscious casualty's tongue may have **relaxed**, causing the tongue to **BLOCK** the airway by sliding to the back of the mouth and **covering the opening to the windpipe**



HEAD-TILT CHIN-LIFT



JAW THRUST



If you suspect that the casualty has suffered a neck or spinal injury, use the jaw-thrust method

MARCH

AIRWAY MANAGEMENT

HEAD-TILT/CHIN-LIFT AND JAW-THRUST MANEUVER

HEAD-TILT/CHIN-LIFT AND JAW-THRUST MANEUVER

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

SKILL STATION

Airway (Skills)

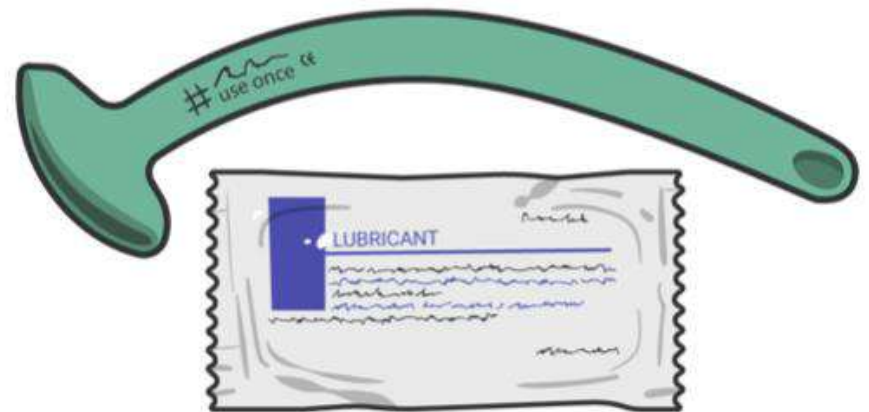
- Head-Tilt/Chin-Lift
- Jaw-Thrust Maneuver

OPENING THE AIRWAY

MANAGING THE AIRWAY

IF the casualty is breathing on their own but **unconscious** or **semi-conscious** **AND** there is no airway obstruction, further airway management is best achieved with a **nasopharyngeal airway (NPA)**

An **NPA** can be used on a **conscious** or **unconscious** casualty to help open/maintain an open airway



DO NOT attempt to insert an NPA if there is clear fluid coming from the nose or ears. This may be cerebrospinal fluid (CSF) and may be an indication of possible skull fracture.

MARCH

AIRWAY MANAGEMENT
NPA HOW-TO VIDEO

NASOPHARYNGEAL AIRWAY

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

MAINTAINING THE AIRWAY

CASUALTY POSITIONING

- If a casualty **can breathe on their own**, let them assume the best position that allows them to breathe, including sitting up
- If a casualty **can breathe on their own in a position of choice**, **DO NOT** force them into a position or perform airway procedures that causes them difficulties in breathing



MANAGING THE AIRWAY

MAINTAINING THE AIRWAY/RECOVERY POSITION



Casualties with **severe facial injuries** can often protect their own airways by sitting up and leaning forward



Assist a **conscious** casualty by helping them assume **any position** that **ALLOWS THEM TO BREATHE EASILY**, including sitting up

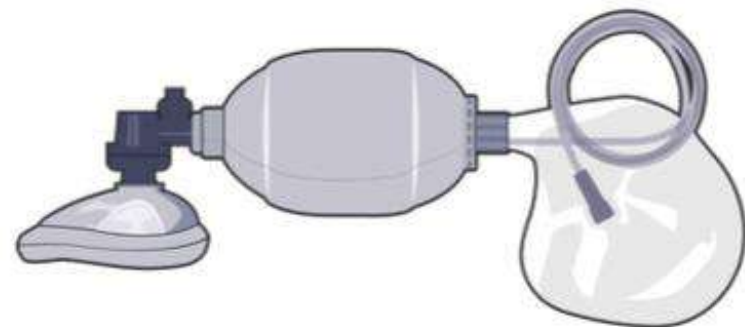


For an **unconscious** casualty not in shock, place them into the **RECOVERY POSITION**

MARCH

CASUALTY UNABLE TO BREATHE ON THEIR OWN

- **Medical personnel** may ask you to assist them in ventilating a patient using a **bag valve mask (BVM)**
- If respirations are noted to be reduced, provide ventilator support with BVM ventilations
- A BVM is a device that can assist a casualty with breathing (ventilation) if they are **NOT** breathing adequately on their own



MANAGING THE AIRWAY

BAG VALVE MASK (BVM)

ONE & TWO-PERSON BAG VALVE MASK (BVM) VIDEO



Video can be found on DeployedMedicine.com

- Ventilations can be performed alone or with two people working together
- The mask is **sealed** over the casualty's mouth so that air **doesn't** escape
- Squeeze **firmly** for **1-2 seconds** and **5-6 seconds** apart

MARCH

SKILL STATION

Airway (Skills)

- Recovery Position
- Nasopharyngeal Airway (NPA)
- One-Person Bag Valve Mask (BVM)/Two-Person BVM

SUMMARY

- **We identified**
- **We opened**
- **We maintained and managed**
- For casualties in which airway positioning and/or nasopharyngeal airways **DO NOT** successfully maintain an open airway, **notify medical personnel IMMEDIATELY**



CHECK ON LEARNING

- What is the best position for a conscious casualty who is breathing on their own?
- Why are casualties placed in the recovery position?
- What are the two methods that can be used to open an airway?
- How does an NPA provide an open (patent) airway?

ANY QUESTIONS?



FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 08: RESPIRATION ASSESSMENT AND MANAGEMENT

TACTICAL FIELD MEDICAL AID (TFMA) ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

TO9 Given a combat peacekeeping or non-combat peacekeeping scenario, perform assessment and management of respiration and chest trauma during Tactical Field Care in accordance with TFMA Guidelines

- E050** Identify the signs and symptoms of respiratory distress
- E051** Identify the signs and symptoms of a life-threatening chest injury
- E052** Identify the signs and symptoms of open pneumothorax (sucking chest wound) in Tactical Field Care
- E053** Identify the importance and implications of vented and non-vented chest seals
- E054** Demonstrate the application of a chest seal to an open chest wound
- E055** Identify the signs, symptoms, and initial treatment of tension pneumothorax in Tactical Field Care
- E056** Demonstrate a needle decompression of the chest at the second intercostal space in midclavicular line
- E057** Demonstrate a needle decompression of the chest at the fifth intercostal space in the anterior axillary line
- E058** Identify the signs of recurring or unsuccessful treatment of tension pneumothorax

TACTICAL FIELD CARE

MARCH PAWS

DURING LIFE-THREATENING

MASSIVE BLEEDING #1 Priority

AIRWAY

 **RESPIRATION**

CIRCULATION

HYPOTHERMIA / HEAD INJURIES

AFTER LIFE-THREATENING

PAIN

ANTIBIOTICS

WOUNDS

SPLINTING

RESPIRATION ASSESSMENT AND MANAGEMENT IN TFC

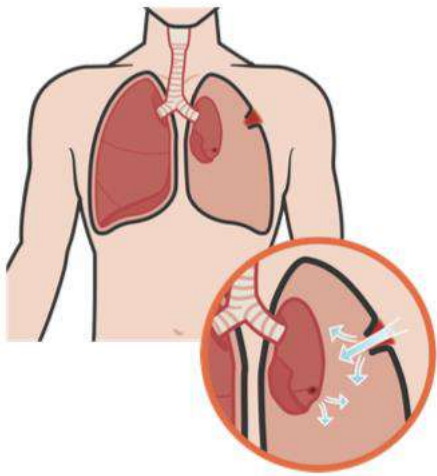
RESPIRATION OVERVIEW

RESPIRATION ASSESSMENT AND MANAGEMENT IN TACTICAL FIELD CARE

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

RESPIRATION ASSESSMENT AND MANAGEMENT IN TFC

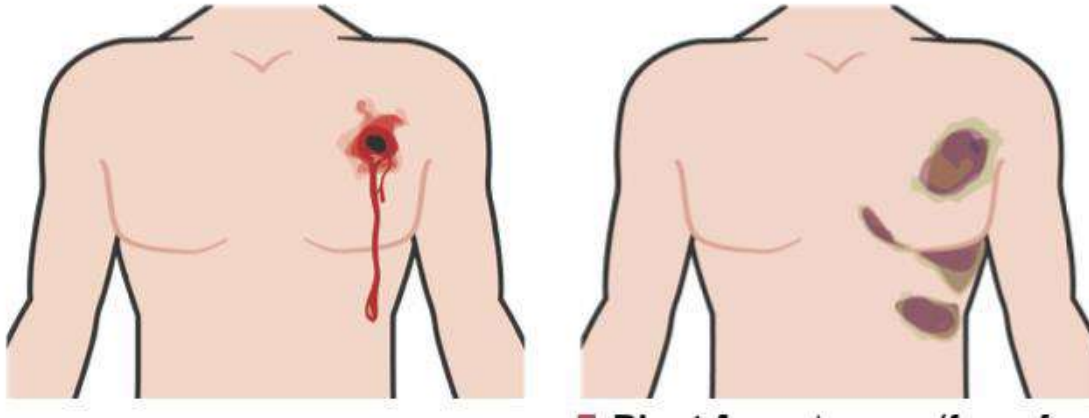
LIFE-THREATENING CHEST INJURY



- Respiratory distress means **DIFFICULTY BREATHING** (rapid or abnormally slow breathing), in other words, it is difficult for the casualty to **get air in or out**
- The pleural space between the lungs and chest wall naturally has negative pressure, which helps the lungs to collapse (exhale) and expand (inhale)
- With either a **BLUNT** or **PENETRATING INJURY** to the chest wall or lungs, air may counteract the lung's natural tendency to expand and collapse
- This is due to positive pressure replacing negative pressure
- It results in air being trapped in the pleural space, putting pressure on the affected lung
- This forces the lung to collapse and reduces the ability to get oxygen to the body

RESPIRATION ASSESSMENT AND MANAGEMENT IN TFC

LIFE-THREATENING CHEST INJURY



Gunshot or shrapnel wound to the chest
(penetrating trauma)

- **Blunt force** trauma (force from an IED explosion, high-impact vehicle accident (chest hitting steering wheel), etc.)
- **Bruising, contusions** (swelling around the chest, back or rib cage), **crepitus** that is felt or heard (crackling, popping, grating)
- **ANY** deformities of the chest

REMEMBER:

- These injuries can lead to a tension pneumothorax
- This is the **second leading cause** of preventable death

M A R C H

RESPIRATION ASSESSMENT AND MANAGEMENT IN TFC

IDENTIFYING TENSION PNEUMOTHORAX



Remember! Airway and Respiration are NOT addressed in CUF and must be addressed in TFC

SIGNS AND SYMPTOMS OF **PROGRESSIVE** RESPIRATORY DISTRESS:

- **Progressive** difficulty breathing (labored and rapid breathing worsening overtime)
- **Shortness** of breath
- Confusion/lightheaded and/or agitation due to lack of oxygen
- Bluish discoloration around mouth and lips
- Rapid pulse
- Distended jugular veins

M A R C H

RESPIRATION ASSESSMENT AND MANAGEMENT IN TFC

SIGNS AND SYMPTOMS OF OPEN PNEUMOTHORAX OR SUCKING CHEST WOUND IN TFC

A casualty with an open chest wound will exhibit **ONE OR MORE** of the following signs and symptoms:

- A “**sucking**” or “**hissing**” sound when the casualty **inhales**
- Difficulty breathing
- A **puncture wound** of the chest
- **Froth** or **bubbles** around the injury
- Coughing up blood
- Blood-tinged sputum (spit)



Open Pneumothorax

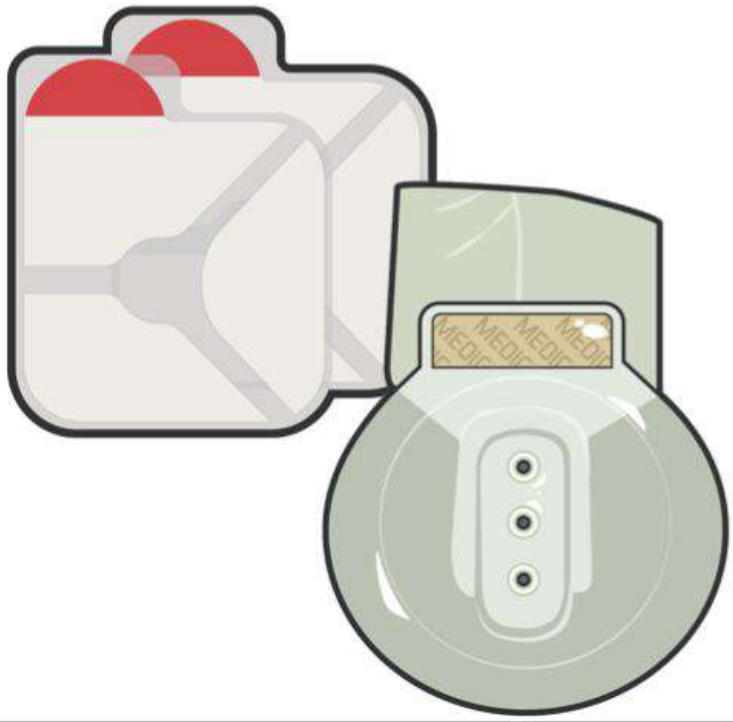
REMEMBER:

- If you are **not sure** if the wound has **penetrated** the chest wall completely, **treat the wound** as though it were an **open chest wound**
- If **multiple** wounds are found, treat them **in the order in which you find them**

M A R C H

RESPIRATION ASSESSMENT AND MANAGEMENT IN TFC

VENTED CHEST SEALS



- Vented chest seals are for **treating penetrating wounds** to the chest
- Vented chest seals allow air to **escape** out of the chest while non-vented chest seals **do not**
- The injured lung will remain partially collapsed, **but the mechanics of respiration will be better**

RESPIRATION ASSESSMENT AND MANAGEMENT IN TFC

VENTED **AND** NONVENTED CHEST SEALS

Recommended treatment for **open** or **sucking** chest wounds is **prompt application** of a vented chest seal:

- If vented chest seal is **NOT** available, a nonvented chest seal should be used
- Vented chest seals allow air to **escape** out of the chest while nonvented chest seals **do not**
- When the casualty inhales, the plastic should be sucked against the wound, **preventing the entry of air**
- When the casualty exhales, trapped air should be able to escape from the wound and out the valve

MONITOR the casualty **closely** and if their condition MA RR C H **worsens**, you should **suspect a tension pneumothorax**

Treat this by burping or temporarily removing the dressing



M A R C H

RESPIRATION ASSESSMENT AND MANAGEMENT IN TFC

POSITION AFTER OCCLUSIVE DRESSING TREATMENT

- If the casualty is unconscious, place the casualty in the recovery position



- If the casualty is conscious, allow the casualty to adopt the sitting position if breathing is more comfortable



RESPIRATION ASSESSMENT AND MANAGEMENT IN TFC

CHEST SEAL

CHEST SEAL

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

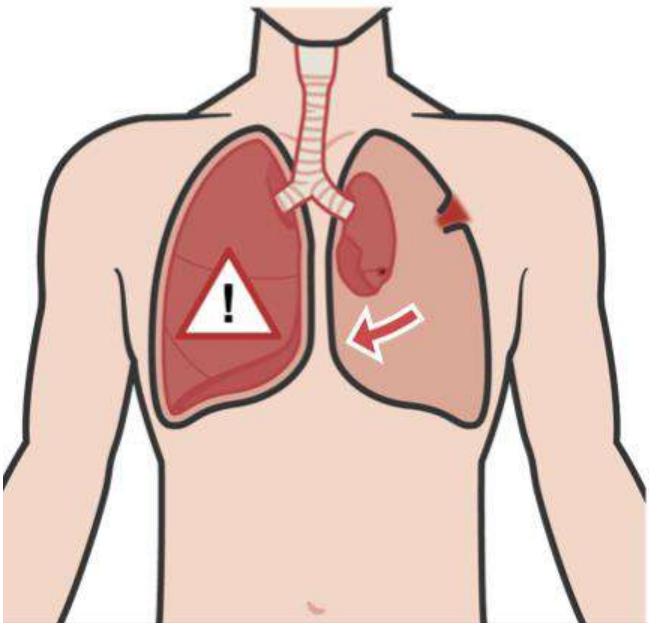
SKILL STATION

Respiration (Skill)

- Chest Seal

RESPIRATION ASSESSMENT AND MANAGEMENT IN TFC

TENSION PNEUMOTHORAX



- A tension pneumothorax is the **second-leading cause** of preventable deaths on the battlefield
- As a tension pneumothorax develops, air enters the chest cavity **through the wound WITH EVERY BREATH**
- Injured lung tissue acts as a **one-way valve, TRAPPING more and more air between the lung and the chest wall**

**PRESSURE BUILDS UP AND COMPRESSES
BOTH LUNGS AND THE HEART**

M A R C H

RESPIRATION ASSESSMENT AND MANAGEMENT IN TFC

CONSIDER TENSION PNEUMOTHORAX IN TACTICAL FIELD CARE



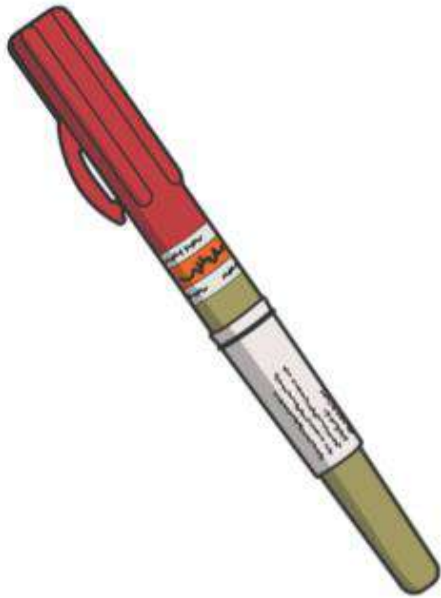
Caused by **SIGNIFICANT TORSO TRAUMA** or primary blast injury followed by **severe/progressive respiratory distress** (a respiratory rate **>20 breaths per minute**)

- The recommended treatment of suspected tension pneumothorax is **Needle Decompression of the Chest (NDC)**

M A R C H

RESPIRATION ASSESSMENT AND MANAGEMENT IN TFC

UNSUCCESSFUL TREATMENT OR RECURRENCE OF TENSION PNEUMOTHORAX



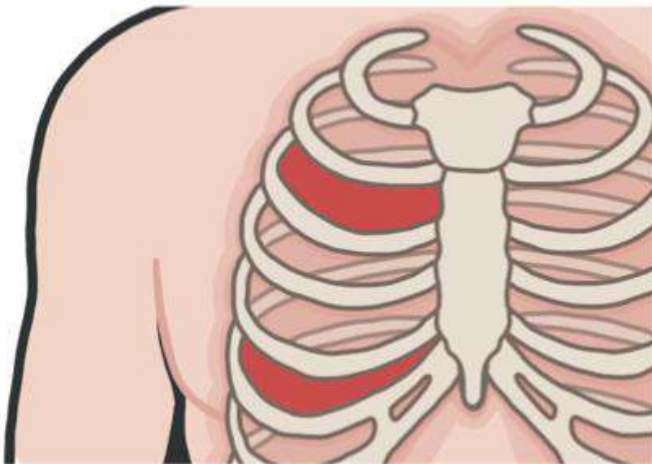
- Burp the chest seal if one is in place
- If **initial** NDC **does not** result in improvement, a second NDC should be attempted at the **alternate recommended site**
- If tension pneumothorax initially responds to NDC, but symptoms later **recur**, then **repeat NDC at the same site right beside the original NDC**
- If **no improvement** is noted with the second NDC, **proceed with** circulation assessment and treatment following the **MARCH protocol**

DO NOT put NDC through a chest seal!
Use alternate site instead

MARCH

RESPIRATION ASSESSMENT AND MANAGEMENT IN TFC

NDC **SITE SELECTION**



- Site selection is based on the **mechanism of injury AND physical findings**
- Use either the **second (A)** or **fifth (B)** intercostal space (**either is preferred**)
- If the needle is used at the second intercostal space, **ensure** the site selection is **OUTSIDE** the nipple line

M A R C H

RESPIRATION ASSESSMENT AND MANAGEMENT IN TFC

POSITION AFTER NDC TREATMENT

- If the casualty is unconscious, place the casualty in the recovery position
- If the casualty is conscious, allow the casualty to adopt the sitting position if breathing is more comfortable



RESPIRATION ASSESSMENT AND MANAGEMENT IN TFC

NEEDLE DECOMPRESSION OF THE CHEST

NEEDLE DECOMPRESSION OF THE CHEST

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

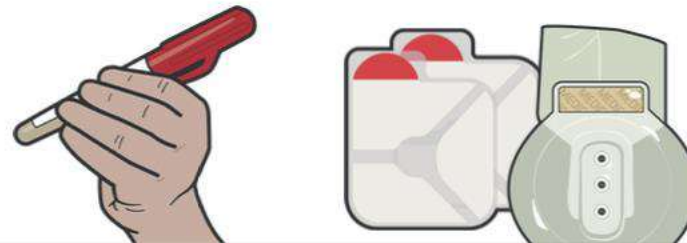
SKILL STATION

Respiration (Skill)

- Needle Decompression of Chest (NDC)

SUMMARY

- We **identified** the **signs and symptoms** of an open pneumothorax
- We **discussed** the **treatment** options for an open pneumothorax
- We **identified** the **signs and symptoms** of a tension pneumothorax
- We **discussed** the treatment for a tension pneumothorax
- **Both types** of chest injuries (sucking chest wounds and tension pneumothorax) **WILL REQUIRE** advanced evaluation by **medical personnel** and **evacuation**
- Tension pneumothorax is a **PREVENTABLE** cause of death



CHECK ON LEARNING

- What is a tension pneumothorax?
- How should you treat an open chest wound?
- What should you do if you suspect a casualty has a tension pneumothorax?



ANY QUESTIONS?

FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 09: **CIRCULATION / HEMORRHAGE CONTROL**

TACTICAL FIELD MEDICAL AID (TFMA) ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

T10 Given a combat peacekeeping or non-combat peacekeeping scenario, perform haemorrhage control during Tactical Field Care in accordance with TFMA Guidelines

EO59 Identify the principles of wound packing and applying pressure bandages

EO60 Demonstrate wound packing and applying a pressure bandage

EO61 Identify progressive strategies, indications, and limitations of controlling external hemorrhage in Tactical Field Care

EO62 Identify the signs, symptoms, and considerations of a pelvic fracture

Three PHASES of TFMA

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
- MARCH PAWS assessment

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 TFMA training!


YOU ARE HERE

TACTICAL FIELD CARE

MARCH PAWS

DURING LIFE-THREATENING

MASSIVE BLEEDING #1 Priority

AAIRWAY

RESPIRATION

CIRCULATION

HYPOTHERMIA / HEAD INJURIES

AFTER LIFE-THREATENING

PAIN

ANTIBIOTICS

WOUNDS

SPLINTING

HEMORRHAGE CONTROL IN TFC

HEMORRHAGE CONTROL IN TACTICAL FIELD CARE

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

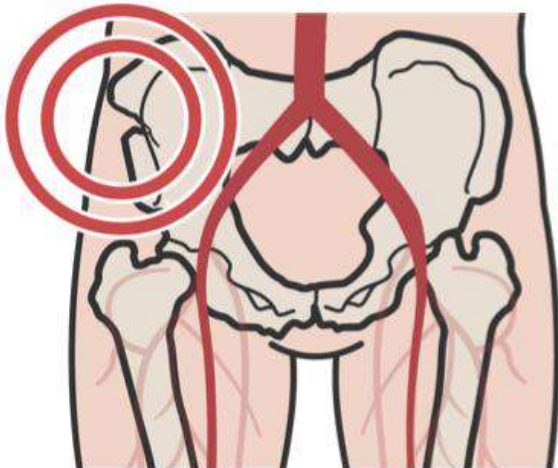
HEMORRHAGE CONTROL

PELVIC FRACTURES

Pelvic fracture may be **suspected** if the casualty's injuries are a result of blunt force or blast with **ONE OR MORE** of the following:

Physical signs suggesting a pelvic fracture:

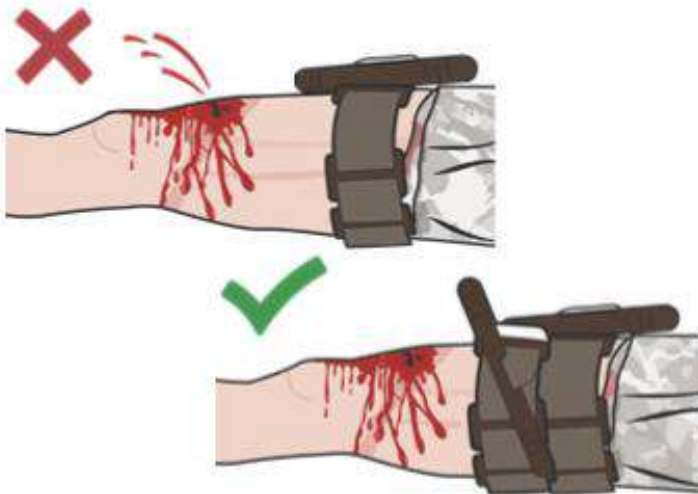
- **Pelvic pain**
- Major lower limb **amputation OR** lower **near amputations**
- Deformities, penetrating injuries, bruising near the pelvis
- **Pelvic instability** or **crepitus** (crinkly or grating feeling or sound under the skin)
- **Unconsciousness** or **shock**



If a pelvic fracture is **suspected**, the casualty **WILL REQUIRE** advanced evaluation by **medical personnel**

HEMORRHAGE CONTROL REASSESSMENT

- Reassess all **PREVIOUS** and **CURRENT** hemostatic dressings applied and ensure they are tight and effective
- If **ineffective**, apply a **second TQ side-by-side** with the first
- Reassess all **PREVIOUS** and **CURRENT** hemostatic dressings applied for **effectiveness**
- If you placed a TQ above a casualty's elbow, for instance, you should expect to **find no pulse** at the wrist below if the TQ was properly applied



HEMORRHAGE CONTROL STRATEGIES AND LIMITATIONS

EARLY CONTROL OF SEVERE HEMORRHAGE IS CRITICAL

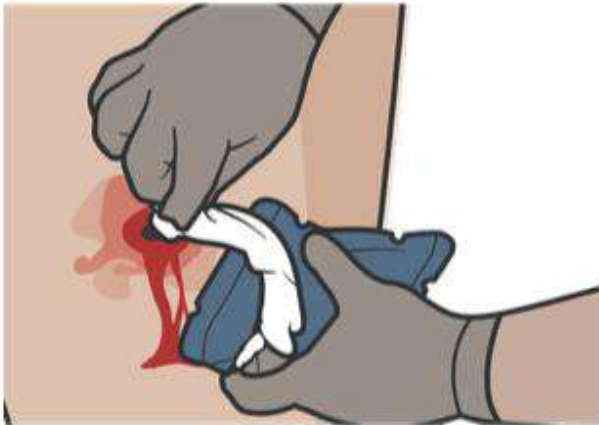
- TFMA recommended hemostatic dressings are to be applied **directly to the skin** in **TFC 2-3 inches above the bleeding site**
- Casualty's hemorrhage control interventions **must be FREQUENTLY REASSESSED** to ensure continued hemorrhage control



**DO NOT EVER APPLY IT
AND FORGET IT!**

HEMORRHAGE CONTROL

WOUND PACKING AND PRESSURE DRESSING



- Identify the **exact source** of bleeding
- **Pack** the wound



Apply direct pressure for
3 MINUTES



- **Secure** the bandage
- If the bandage has a pressure bar, **pull the bandage TIGHT**, and reverse it back over the top of the pressure bar, **forcing it down** onto the pad

HEMORRHAGE CONTROL WOUND PACKING

**KEEP
PRESSURE**



- Identify the **exact source** of bleeding and **APPLY direct pressure** as a **temporary** measure **UNTIL** gauze is placed
- Pack the wound **maintaining CONSTANT** direct pressure at the source of bleeding within **90 SECONDS** to be effective
- **HOLD** direct pressure on the gauze over the wound for at least **3 MINUTES** (**this is necessary**, even with the active ingredient in hemostatic dressings)
- When packing a large wound, more than one hemostatic gauze and/or **additional** gauze may be **needed**
- Carefully **observe** to determine if bleeding has been **controlled**

Once you are sure the bleeding has **stopped**, apply a pressure bandage

3 MINUTES

HEMORRHAGE CONTROL

PRESSURE BANDAGE REASSESSMENT

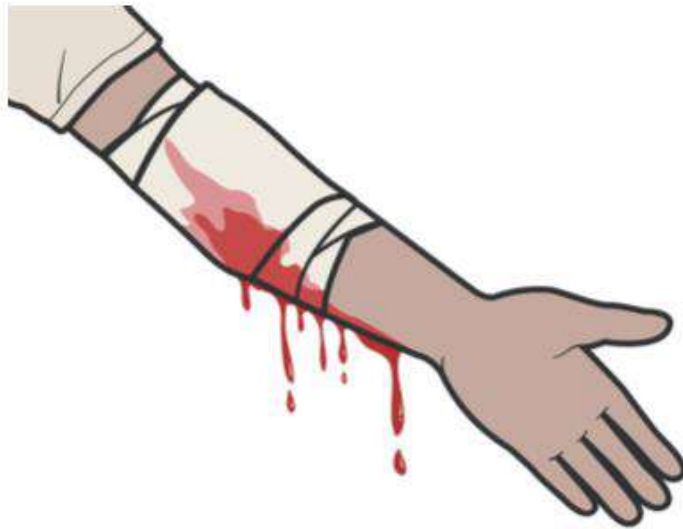


Key Points:

- Check for **circulation BELOW** the pressure bandage by **feeling for distal pulse** (a pulse below the bandage)
- If the **skin BELOW** the pressure bandage becomes **cool** to the touch, **bluish**, or **numb**, or if the **pulse** below the pressure dressing is **no longer present**, the pressure bandage may be **too tight**
- If circulation is **BLOCKED** or **STOPPED**, **loosen** and **retie** the bandage
- Dressings and bandages should be **reassessed** and checked **routinely** and **EVERY TIME** a casualty is **moved**

HEMORRHAGE CONTROL

IF THE PRESSURE BANDAGE IS INEFFECTIVE



- If the pressure bandage or hemostatic dressing is **ineffective**, **APPLY** a **hemostatic dressing 2-3 inches above** the bleeding site
- If the pressure bandage is **ineffective AND/OR blood soaked**, **REPLACE** pressure dressing with **hemostatic dressing**
- Pack the wound, **maintaining CONSTANT** direct pressure at the source of bleeding within **90 SECONDS** to be effective

PRESSURE BANDAGE

PRESSURE BANDAGE

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

SKILL STATION

Circulation/Hemorrhage Control (Skills)

- Wound Packing with Hemostatic Dressing and Pressure Bandage

SUMMARY

- If not already done, **clearly mark ALL TQs** with the **time** of TQ application and document that on the **Casualty Card**
- Check for radial pulse
- Assess for shock



CHECK ON LEARNING

- During Circulation in the MARCH PAWS sequence, what interventions should be reassessed?
- What are the signs and symptoms of a pelvic fracture?



ANY QUESTIONS?



FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 10: SHOCK RECOGNITION

TACTICAL FIELD MEDICAL AID (TFMA) ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

T11 Describe shock assessment in Tactical Field Care in accordance with TFMA Guidelines

EO63 Identify the signs, symptoms, and management steps of shock in a trauma casualty with life-threatening bleeding

EO64 Identify the importance of level of consciousness and radial pulse as indicators of shock in Tactical Field Care

TACTICAL FIELD CARE

MARCH PAWS

DURING LIFE-THREATENING

MASSIVE BLEEDING #1 Priority

AAIRWAY

RESPIRATION

CIRCULATION

HYPOTHERMIA / HEAD INJURIES

AFTER LIFE-THREATENING

PAIN

ANTIBIOTICS

WOUNDS

SPLINTING

SHOCK RECOGNITION

SHOCK RECOGNITION

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

CIRCULATION/SHOCK

SHOCK

- Shock is **inadequate blood flow to body tissues**. Inadequate blood volume inside the circulatory system results in inadequate oxygen delivery to the body's cells



- As cells cease to function, tissues cease to function, then organs cease to function, and eventually the **whole body will fail** and **DEATH** follows

IMPORTANT CONSIDERATIONS:

Shock will lead to the casualty's death if not quickly recognized and treated

CIRCULATION/SHOCK

SHOCK

- Caused by a decrease in the amount of blood volume circulating in the casualty's blood circulatory system
- Shock can have many causes – low blood volume or hypovolemia (dehydration or blood loss), low blood pressure (massive infection), heart failure, or neurologic damage
- Usually caused by severe bleeding, but it can also be caused by severe burns (second- and third-degree burns on 20 percent or more of the body surface)
- On the battlefield, assume shock is from severe blood loss (also called hemorrhagic shock)

Hemorrhagic shock can result in the casualty's **death**



M A R C H

CIRCULATION/SHOCK

GENERAL INDICATORS OF SHOCK

SIGNS AND SYMPTOMS OF SHOCK INCLUDE:

- **Mental confusion**
- **Weak or absent radial pulse**
- Rapid breathing
- Nausea
- Sweaty, cool, clammy skin
- Excessive Thirst
- Pale/grey skin
- Previous severe bleeding



M A R C H

CIRCULATION/SHOCK

GENERAL INDICATORS OF SHOCK

IMPORTANT Indicator:

- Mental confusion



IMPORTANT Indicator:

- Weak or absent radial pulse

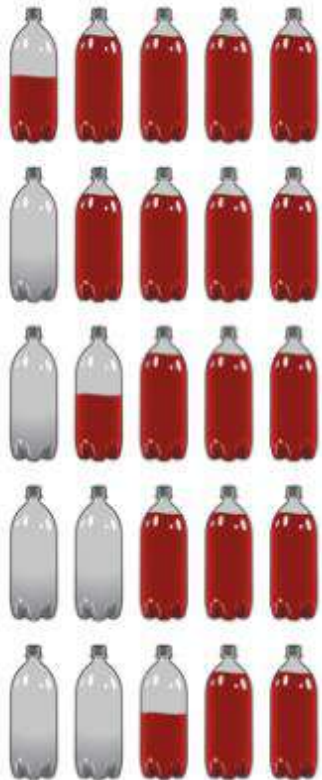


If **BOTH** indicators exist, the casualty has lost a **SIGNIFICANT** amount of blood

As previously stated, shock will lead to the casualty's **death** if not quickly recognized and treated

CIRCULATION/SHOCK

GENERAL INDICATORS OF SHOCK



Blood Volume	Blood Loss	Signs/Symptoms	Effect/Outcome
4 liter bottles full, 1 bottle 1/2 empty	500cc	Possible increased HR	Usually no effects
4 liter bottles full, 1 empty	1000cc	Radial pulse >100 Breathing probably normal	Unlikely to die from this amount of loss
3 1/2 bottles full, 1 1/2 empty	1500cc	Change in mental status Weak radial pulse >100 Increased respirations	Still unlikely to die
3 bottles full, 2 empty	2000cc	Confusion and lethargy Very weak radial pulse >120 High respiratory rate >35	Very possibly fatal if not managed
2 1/2 bottles full and 2 1/2 bottles empty	2500cc	Unconscious No radial pulse, carotid pulse, HR >140 Respirations > 35	Fatal without immediate and rapid interventions

MARCH

CIRCULATION/SHOCK

PREVENT SHOCK BY CONTROLLING BLEEDING

#1- Reassess to confirm all bleeding control measures are still effective

Ensure TQs and pressure dressings remain tight

- *Check radial pulse*



DO NOT WAIT for signs and symptoms of shock to occur

- It is better to prevent shock with hemorrhage control than to treat it
- If shock is present, though, the most critical first step is to control the bleeding
- Internal bleeding from chest or abdominal trauma may not be controllable, and shock may develop later, so continuously assess the casualty
- Medical personnel will provide other treatments, but you can save them time if extremal bleeding is controlled

MARCH

CIRCULATION/SHOCK

ASSESS/MONITOR FOR **HEMORRHAGIC SHOCK**

- Assess for signs and symptoms of shock as soon as hemorrhage is controlled, the airway is open, and respirations have been managed
- The best indicators of shock are a decreased state of consciousness (if casualty has not suffered a head injury) and/or an abnormal, weak, absent radial pulse
- Assess for hemorrhagic shock (altered mental status in the absence of brain injury and/or weak or absent radial pulse)
- Reassess/monitor for changes in the level of consciousness by checking for alertness or responsiveness to verbal or physical stimulation



M A R C H

SHOCK RECOGNITION

REASSESS



Level of consciousness

Check casualty every 15 minutes for **AVPU**

Alertness - Knows who, where they are

Verbal - Orally responds to verbal commands

Pain - Level of pain felt when the sternum is briskly rubbed with the knuckle (if needed)

Unconscious - Unresponsive

Decreasing AVPU could indicate condition worsening

Breathing rate

Monitor respirations

- Thoracic trauma may indicate tension pneumothorax (needle decompression of the chest required)
- If a casualty becomes unconscious or their breathing rate drops below two respirations every 15 seconds, insert a nasopharyngeal airway

CIRCULATION/SHOCK

SHOCK MANAGEMENT



- Fluids by mouth are permissible if the casualty is conscious and can swallow
- Evacuate the casualty if medical help is not available

- Place casualty in recovery position

Reassess the casualty frequently
for the onset of shock

CIRCULATION/SHOCK

HYPOTHERMIA MANAGEMENT

REMEMBER:

Keep the casualty **warm** and prevent hypothermia. Even in **very hot environments**, a casualty in **hemorrhagic shock** (blood loss) is at **EXTREME** risk for hypothermia

- Place a poncho or blanket under the casualty to protect from the temperature or dampness of the ground



- Cover the casualty with a survival blanket or other available materials to keep them warm and dry



SUMMARY

IMPORTANT

Indicator:

- Mental confusion

IMPORTANT

Indicator:

- Weak or absent radial pulse

- We **defined** shock
- We **identified** indicators of shock
- We discussed **prevention measures** for shock
- We discussed the **management** of shock
- We **introduced** hypothermia



CHECK ON LEARNING

- What is shock?
- What are the best indicators of shock?
- What is the most important action to prevent hemorrhagic shock?



ANY QUESTIONS?



FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 11: HYPOTHERMIA PREVENTION

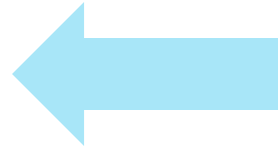
TACTICAL FIELD MEDICAL AID (TFMA)

ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

T12 Given a combat peacekeeping or non-combat peacekeeping scenario, perform hypothermia prevention measures on a trauma casualty during Tactical Field Care in accordance with TFMA Guidelines

EO65 Identify the progressive strategies, indications, and limitations of hypothermia prevention of a trauma casualty in Tactical Field Care

EO66 Demonstrate active external warming hypothermia prevention measures on a trauma casualty

EO67 Identify passive hypothermia prevention measures on a trauma casualty

TACTICAL FIELD CARE

MARCH PAWS

DURING LIFE-THREATENING

MASSIVE BLEEDING #1 Priority

AAIRWAY

RESPIRATION

CIRCULATION

 **H**YPOTHERMIA / HEAD INJURIES

AFTER LIFE-THREATENING

PAIN

ANTIBIOTICS

WOUNDS

SPLINTING

HYPOTHERMIA PREVENTION

HYPOTHERMIA



- Hypothermia is the decrease in body temperature
- Even a small decrease in body temperature can interfere with blood clotting and increase the risk of bleeding to death
- Casualties in shock are unable to generate body heat effectively
- Hypothermia is a problem for casualties with haemorrhagic shock, even with warm, ambient temperatures



IMPORTANT CONSIDERATIONS:

A lower body temperature may not be an indicator of hypothermia; it may be due to exposure to a cold environment

HYPOTHERMIA PREVENTION

HYPOTHERMIA PREVENTION



- Minimize the casualty's exposure to the elements
- Keep protective gear on or with the casualty if feasible
- Replace wet clothing with dry, if possible



You can better **prevent** hypothermia by getting the casualty onto an insulated surface as soon as possible

HYPOTHERMIA PREVENTION

HYPOTHERMIA PREVENTION

Get the casualty onto an insulated surface as soon as possible.

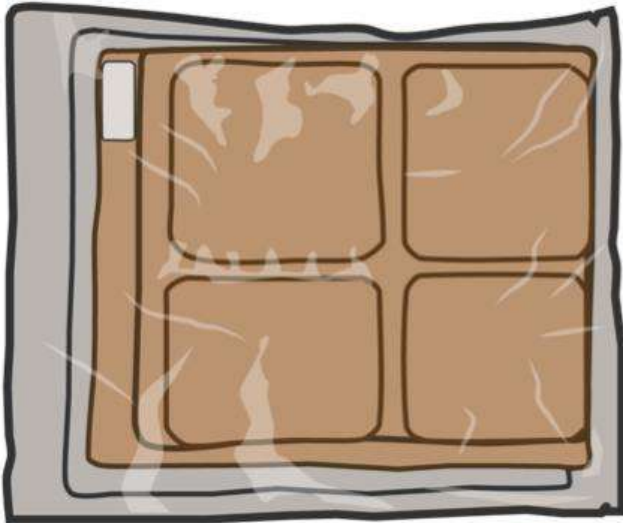


- Hypothermia is much easier to prevent than to treat
- Begin hypothermia prevention as soon as possible
- Decreased body temperature interferes with blood clotting and increases the risk of bleeding
- Blood loss can cause a significant drop in body temperature, even in hot weather

M A R C H

HYPOTHERMIA

ACTIVE HYPOTHERMIA PREVENTION



Your medical personnel will distribute the active hypothermia blankets based on unit mission and load

- Active hypothermia blankets are activated when their heating elements are exposed to air
- Active hypothermia blankets are applied to a casualty who cannot generate their own heat, but not directly on their skin because the activated blankets can cause burns

M A R C H

HYPOTHERMIA

ACTIVE HYPOTHERMIA PREVENTION

Apply the active warming blanket from the active hypothermia blanket to the casualty's torso (**not directly on the skin**), and cover the casualty with the passive hypothermia shell



KEY POINTS:

- If an active hypothermia blanket is not available, a combination of the passive warming blanket and an active warming blanket may also be used
- Active hypothermia treatment uses heating sources to warm the casualty
- Oxygen levels at higher altitudes may not be enough to sustain the chemical reaction required to generate heat

M A R C H

HYPOTHERMIA

PASSIVE HYPOTHERMIA PREVENTION



Passive hypothermia materials provide heating by:

- Keeping the casualty's body heat contained in the passive material
- Keeping the casualty off the ground

M A R C H

HYPOTHERMIA

PASSIVE HYPOTHERMIA PREVENTION

Place a poncho or blanket under the casualty to protect them from the temperature or dampness of the ground



- Passive hypothermia prevention does not reverse the hypothermic process
- If no rewarming equipment is available, then use dry blankets, poncho liners, sleeping bags, or anything that will retain heat and keep the casualty dry
- Keep the casualty off the ground

KEY POINTS:

- Blood loss can cause a significant drop in body temperature, even in hot weather
- Wrap the entire blanket-like shell (or passive heating materials) completely around the casualty, including the head
- Do not cover the face

M A R C H

HYPOTHERMIA PREVENTION VIDEO

HYPOTHERMIA PREVENTION

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

SKILL STATION

Hypothermia (Skill)

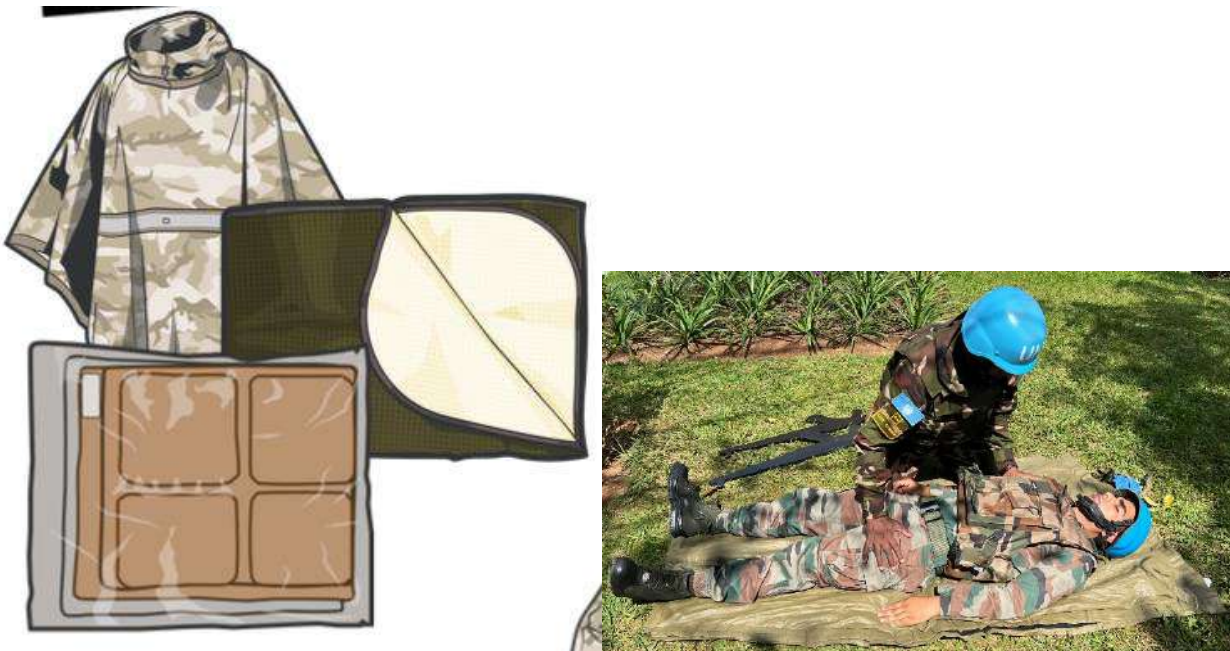
- Active/passive external warming hypothermia prevention

SUMMARY

- We defined hypothermia
- We discussed active hypothermia management/prevention
- We discussed passive hypothermia management/prevention

KEY POINTS:

- **Passive** hypothermia prevention **DOES NOT** reverse the hypothermic process
- **Active** hypothermia, when at high altitudes, may not be enough to sustain the chemical reaction required to generate heat



CHECK ON LEARNING

- Why is it important to keep a trauma casualty warm even if it is a hot environment?
- What is the difference between active and passive hypothermia management?

ANY QUESTIONS?



FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 12: HEAD INJURIES

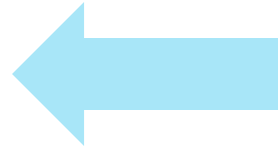
TACTICAL FIELD MEDICAL AID (TFMA)

ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

T13 Identify a head injury in accordance with TFMA Guidelines

EO68 Identify external forces that can cause a head injury

EO69 Identify signs and symptoms of a head injury

EO70 Identify the critical observations that should be reported to medical personnel for trauma casualties with a suspected head injury in accordance with the Military Acute Concussive Evaluation 2 (MACE 2).

Three PHASES of TFMA

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
- MARCH PAWS assessment

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 TFMA training!


YOU ARE HERE

TACTICAL FIELD CARE

MARCH PAWS

DURING LIFE-THREATENING

MASSIVE BLEEDING #1 Priority

AAIRWAY

RESPIRATION

CIRCULATION

 **H**YPOTHERMIA / HEAD INJURIES

AFTER LIFE-THREATENING

PAIN

ANTIBIOTICS

WOUNDS

SPLINTING

HEAD INJURIES

POTENTIAL MECHANISMS OF HEAD INJURY

Head injury is trauma to the **scalp, skull, and/or brain**

- Involvement in a vehicle **blast event, collision, or rollover**
- Presence within **50 METERS of a blast (inside or outside)**
- A direct blow to the head or witnessed loss of consciousness
- Exposure to **more than one blast event** (the Service member's commander will direct a **medical evaluation**)



OTHER EXTERNAL FORCES MAY ALSO LEAD TO HEAD INJURIES

HEAD INJURIES

SIGNS AND SYMPTOMS OF HEAD INJURY

IED Checklist

Injury	Physical damage to the body or body part of a Service member?	(Yes/No)
Evaluation	H – Headaches and/or vomiting?	(Yes/No)
	E – Ear ringing?	(Yes/No)
	A – Amnesia, altered consciousness, and/or loss of consciousness?	(Yes/No)
	D – Double vision and/or dizziness?	(Yes/No)
	S – Something feels wrong or is not right?	(Yes/No)
Distance	Was the Service member within 50 meters of the blast? Record the distance from the blast.	(Yes/No) Not Applicable

HEAD INJURIES

SIGNS AND SYMPTOMS REQUIRING MACE 2*

EVALUATION BY MEDICAL PERSONNEL

Evaluations are **most effective** when done **as soon as possible** after the injury. **Traumatic brain injury (TBI)** is likely if the casualty shows signs of **ANY** of the following:

- Deteriorating level of consciousness
- Double vision
- Increased restlessness; combative or agitated behavior
- Repeat vomiting
- Results from a structural brain injury detection device (if available)
- Seizures
- Weakness or tingling in arms or legs
- Severe or worsening headache

MACE 2
Military Acute Concussion Evaluation

Use MACE 2 as close to time of injury as possible.

Service Member Name: _____
DoD/EDIP/SSN: _____ Branch of Service & Unit: _____
Date of Injury: _____ Time of Injury: _____
Examiner: _____
Date of Evaluation: _____ Time of Evaluation: _____

Purpose: MACE 2 is a multimodal tool that assists providers in the assessment and diagnosis of concussion. The scoring, coding and steps to take after completion are found at the end of the MACE 2.

Timing: MACE 2 is most effective when used as close to the time of injury as possible. The MACE 2 may be repeated to evaluate recovery.

RED FLAGS

Evaluate for red flags in patients with Glasgow Coma Scale (GCS) 13-15.

<input type="checkbox"/> Deteriorating level of consciousness	<input type="checkbox"/> Results from a structural brain injury detection device (if available)
<input type="checkbox"/> Double vision	<input type="checkbox"/> Seizures
<input type="checkbox"/> Increased restlessness, combative or agitated behavior	<input type="checkbox"/> Weakness or tingling in arms or legs
<input type="checkbox"/> Repeat vomiting	<input type="checkbox"/> Severe or worsening headache

Defer MACE 2 if any red flags are present. Immediately consult higher level of care and consider urgent evacuation according to evacuation precedence/Tactical Combat Casualty Care (TCCC).

Negative for all red flags.
Continue MACE 2, and observe for red flags throughout evaluation.

Revised 10/2018 d/bio.dsoe.mil Page 1 of 14

SUMMARY

- We **defined** head injury
- We discussed **mechanisms of injury**
- We discussed **signs and symptoms**
- We identified **critical observations to report to higher medical personnel**



CHECK ON LEARNING

- What external forces can cause a head injury?
- What are the critical observations that should be reported to medical personnel for trauma casualties with a suspected head injury, in accordance with MACE 2?

ANY QUESTIONS?



FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 13: EYE INJURIES

TACTICAL FIELD MEDICAL AID (TFMA)

ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

T14 Given a combat peacekeeping or non-combat peacekeeping scenario, perform assessment and initial treatment of penetrating eye trauma during Tactical Field Care in accordance with TFMA Guidelines

E071 Identify basic care of an eye injury in accordance with TFMA Guidelines

E072 Demonstrate the application of a rigid eye shield to a trauma casualty in Tactical Field Care

Three PHASES of TFMA

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
- MARCH PAWS assessment

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 TFMA training!


YOU ARE HERE

TACTICAL FIELD CARE

MARCH PAWS

DURING LIFE-THREATENING

MASSIVE BLEEDING #1 Priority

AAIRWAY

RESPIRATION

CIRCULATION

 **H**YPOTHERMIA / HEAD INJURIES

AFTER LIFE-THREATENING

PAIN

ANTIBIOTICS

WOUNDS

SPLINTING

EYE INJURIES OVERVIEW

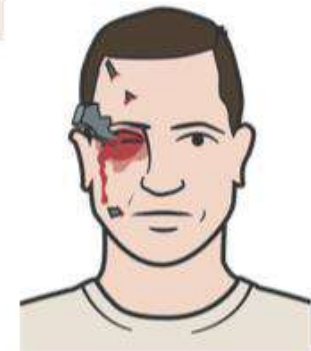
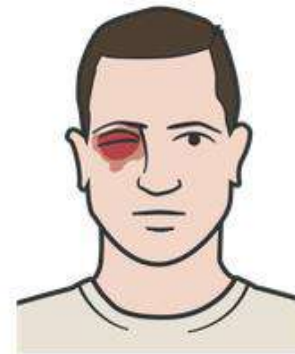
EYE INJURIES

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

EYE INJURIES

WHEN TO SUSPECT A PENETRATING EYE INJURY

1. **Bleeding surrounding the eye, inside the eyeball; or coming from the eyeball**
2. **Obvious penetration of shrapnel or debris into the eyeball or eye socket**
3. **Protruding objects from the globe of the eyeball**
4. **Swelling or lacerations of the globe of the eyeball**
5. **Protrusion of the globe of the eyeball from the eye socket**
6. **Reduced vision and swelling of the eye area**
7. **Misshapen or distorted parts of the eye**



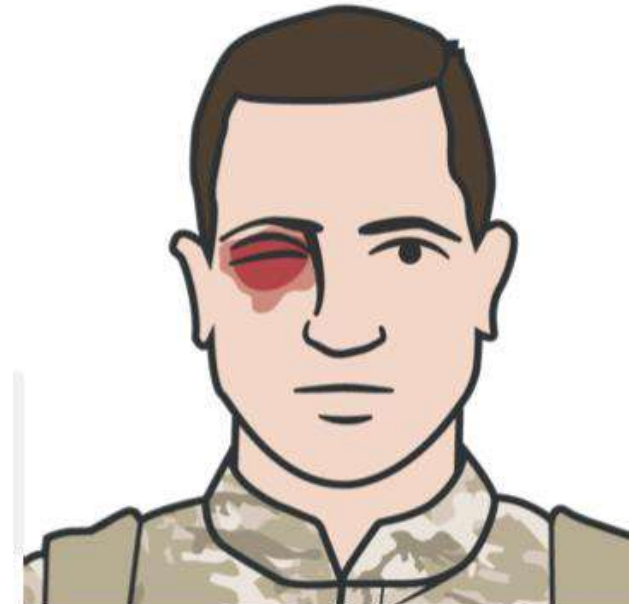
EYE INJURIES

IF A PENETRATING EYE INJURY IS NOTED OR SUSPECTED

1. Perform a rapid field test of visual acuity and document findings
2. Cover the affected eye with a rigid eye shield (**NOT a pressure patch**)

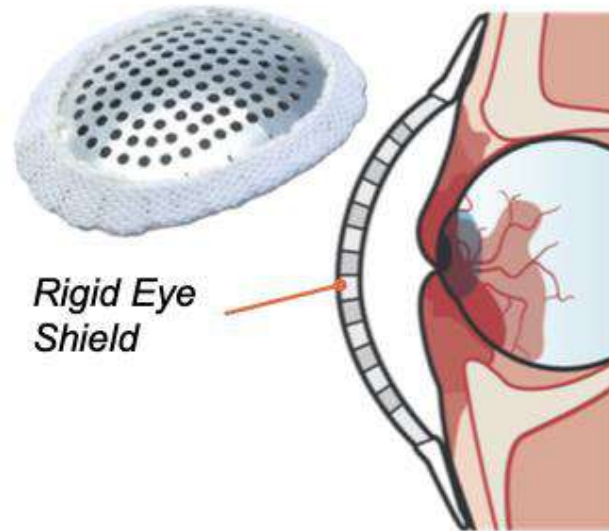
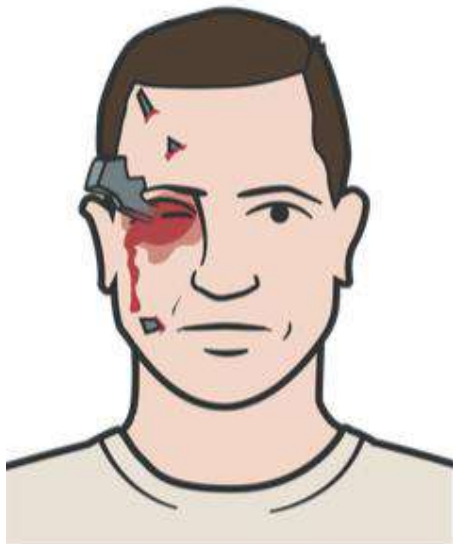
REMEMBER

- All treatments performed must be documented in the casualty's Cas Card



EYE INJURIES

PROTECTING THE EYE



Apply a rigid eye shield

- When penetrating eye trauma due to shrapnel is suspected, it is critically important to prevent manipulation or additional trauma to the eye that might cause further damage to the eye

IMPORTANT! DO NOT APPLY PRESSURE

- Avoid/prevent manipulation or additional trauma to the eye that might cause further damage
- Pressure on the eye could force the interior contents of the eye out of the eyeball through a cut or laceration

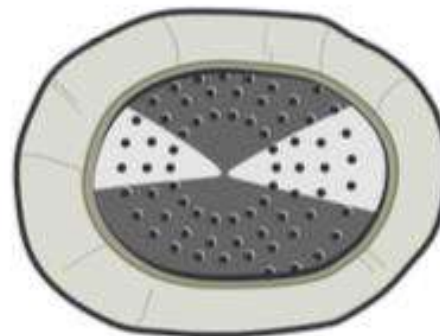
EYE INJURIES

APPLYING RIGID EYE SHIELD

The rigid eye shield is found in BFAK; if eye shield is not available, use casualty's tactical eyewear to protect the injured eye

Secure the rigid eye shield with tape at 45-degree angles across the forehead and cheek

- Do **NOT** cover both eyes unless both eyes are injured



REMEMBER

- Rigid eye shields should be placed over both eyes only when you are sure or at least strongly suspect that both eyes have been injured
- If the casualty is conscious, request Medic assistance for administration of the WMP

EYE INJURIES

DOCUMENT TREATMENT



- Document all assessments and treatment on the **Casualty Card**
- Be sure to include any medications administered and the time administered

APPLYING THE RIGID EYE SHIELD

RIGID EYE SHIELD APPLICATION

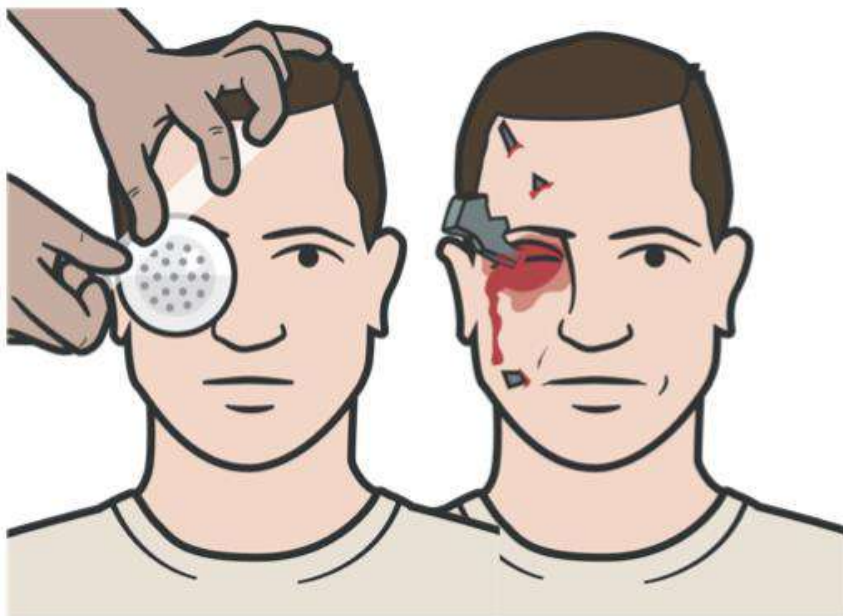
Video can be found on [DeployedMedicine.com](https://www.deployedmedicine.com)

SKILL STATION

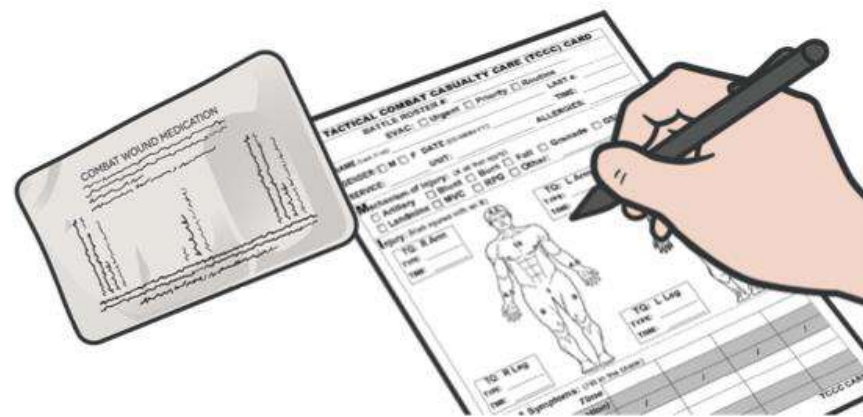
Rigid Eye Shield (Skills)

- Rigid Eye Shield

SUMMARY



- We identified **eye injuries**
- We discussed eye injury **treatment**
- We discussed **applying** an eye shield
- We discussed **documentation**



CHECK ON LEARNING

- What kind of dressing should be used on penetrating eye trauma with an impaled object?
- True or False: Protecting the injured eye with an eye shield is just as safe as using a patch or a pressure dressing.
- True or False: Only the injured eye should be covered with an eye shield.

ANY QUESTIONS?



FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 14: ANALGESICS AND ANTIBIOTICS

TACTICAL FIELD MEDICAL AID (TFMA)

ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

T15 Given a combat peacekeeping or non-combat peacekeeping scenario, recommend analgesia administration during Tactical Field Care in accordance with TFMA Guidelines

E073 Assist Medic to identify the indications and considerations of the analgesia approaches in Tactical Field Care

E074 Assist Medic to identify the indications, contraindications, and administration methods of acetaminophen in Tactical Field Care

E075 Assist Medic to Identify the indications, contraindications, and administration methods of analgesics (pain medications) in Tactical Field Care

E076 Assist Medic in administration of a Wound Medication Pack in Tactical Field Care

T16 Given a combat peacekeeping or non-combat peacekeeping scenario, assist Medic to perform antibiotic administration during Tactical Field Care in accordance with TFMA Guidelines

E077 Assist Medic to identify the evidence and considerations for early antibiotic administration in Tactical Field Care

E078 Assist Medic to identify the indications, contraindications, and administration methods of antibiotics in Tactical Field Care

Three PHASES of TFMA

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
- MARCH PAWS assessment

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 TFMA training!


YOU ARE HERE

TACTICAL FIELD CARE

MARCH PAWS

DURING LIFE-THREATENING

MASSIVE BLEEDING #1 Priority

AAIRWAY

RESPIRATION

CIRCULATION

HYPOTHERMIA / HEAD INJURIES

AFTER LIFE-THREATENING

> PAIN

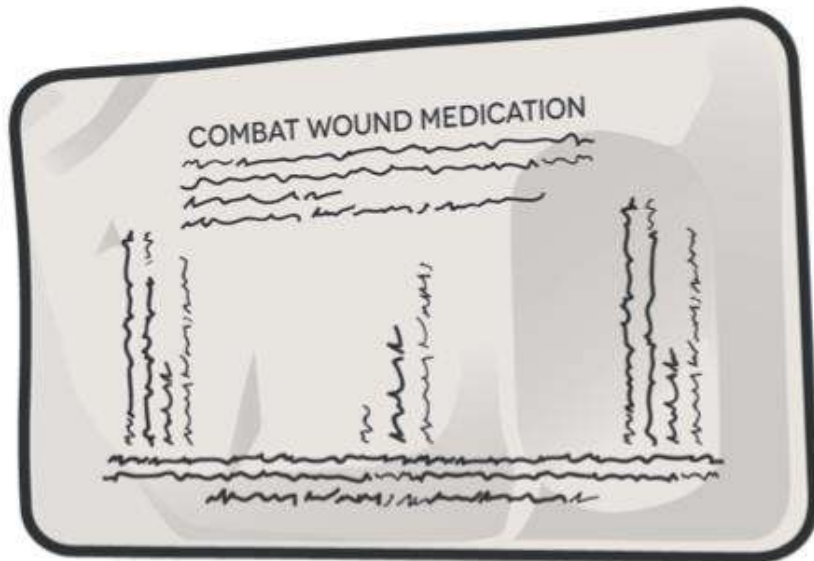
> ANTIBIOTICS

WOUNDS

SPLINTING

PAIN MEDICATION & ANTIBIOTIC ADMINISTRATION

EXAMPLE OF A WOUND MEDICATION PACK (WMP)



WMP

- Found in Medics kit
- Contains medication taken by mouth
- Document all medications administered (and time given) on UN Casualty Card

PAIN MEDICATION & ANTIBIOTIC ADMINISTRATION

WMP PAIN MANAGEMENT CONSIDERATIONS

Examples of pain medication (#1 and #3) antibiotic (#2)



1

acetaminophen
pain management



2

moxifloxacin
antibiotic



3

meloxicam
anti-inflammatory

ANALGESIA ADMINISTRATION OVERVIEW

ANALGESIA ADMINISTRATION FMA may **ONLY** assist a Medic

Remember other methods of pain control:

- Splinting
- Wound dressing
- Burn covering
- Distraction and reassurance

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

ANTIBIOTICS OVERVIEW

ANTIBIOTICS ADMINISTRATION FMA may **ONLY** assist a Medic

Video can be found on DeployedMedicine.com

PAIN MEDICATION & ANTIBIOTIC ADMINISTRATION

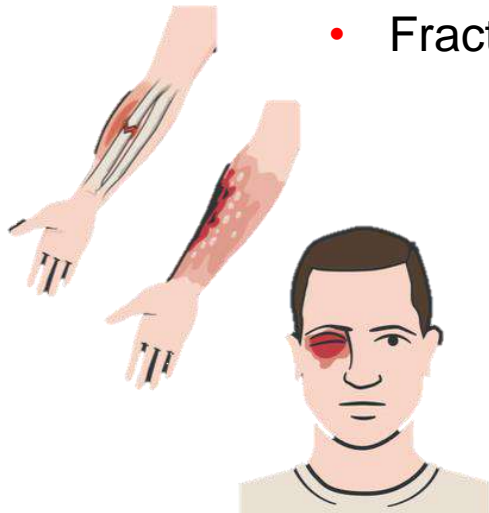
WOUND MEDICATION PACK

- Mild to moderate pain
- Casualty is still able to fight
- Casualty should take all three medications in WMP

COMBAT WOUND MEDICATION PACK

Video can be found on
DeployedMedicine.com

- Fractures



- Burns

- Eye Injuries

Note: If casualty has wounds or pain severe enough to render them unable to fight, the Medic has other options to treat pain

These meds will generally require that the casualty be disarmed, as they can result in the alteration of a casualty's mental status

PAIN MEDICATION & ANTIBIOTIC ADMINISTRATION

WHEN TO ASSIST THE MEDIC TO GIVE WMP



GIVE

- Conscious and able to swallow
- Has mild to moderate pain
- Is still able to fight if needed
- Has penetrating wounds or break in the skin



DON'T GIVE

- Unable to swallow or take oral meds (unconscious or severe facial trauma/burns)
- Known allergies

Refer to Medic if unconscious

Note: If the casualty has a break in the skin resulting from a traumatic injury, the casualty should take the WMP; otherwise, consult with Medic before taking

SKILL STATION

Analgesia/Antibiotics(Skills)

- WMP

SUMMARY

- Only a Medic may administer drugs assisted by FMA
- Battlefield wounds can be very dirty and susceptible to infection; early administration of antibiotics may reduce the chance of later infections
- Wound infections can kill the casualty or delay their recovery
- WMP should be given **ASAP** for wounds **after life-threatening** issues have been addressed



WMP should be given for any
penetrating wounds

CHECK ON LEARNING

- FMA may give drugs?
- True or False: The WMP contains pain medication and antibiotics.
- How should the WMP be taken?
- Who should take the WMP?

ANY QUESTIONS?



FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 15: WOUND MANAGEMENT

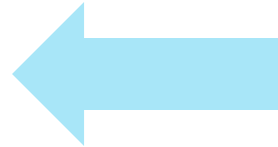
TACTICAL FIELD MEDICAL AID (TFMA)

ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

T17 Given a combat peacekeeping or non-combat peacekeeping scenario, perform assessment and initial management of wounds during Tactical Field Care in accordance with TFMA Guidelines

EO79 Identify wound management considerations in Tactical Field Care

EO80 Demonstrate application of wound dressings on a trauma casualty in Tactical Field Care

Three PHASES of TFMA

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
- MARCH PAWS assessment

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 TFMA training!


YOU ARE HERE

TACTICAL FIELD CARE

MARCH PAWS

DURING LIFE-THREATENING

MASSIVE BLEEDING #1 Priority

AAIRWAY

RESPIRATION

CIRCULATION

HYPOTHERMIA / HEAD INJURIES

AFTER LIFE-THREATENING

PAIN

ANTIBIOTICS

WOUNDS

SPLINTING

WOUND MANAGEMENT

CONTINUED REASSESSMENT

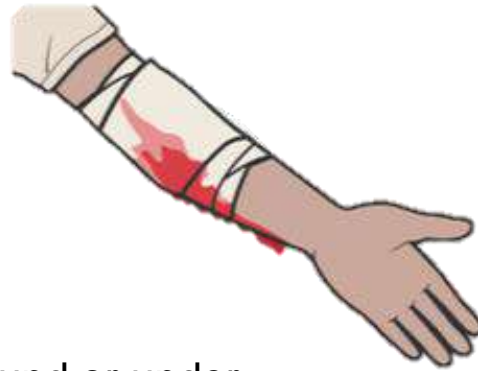
Once applied, continue to check the casualty's hemorrhage control interventions and wound management; do not apply and forget about it!

All wounds must be **FREQUENTLY REASSESSED**
to ensure continued hemorrhage control

**BLEEDING IS THE #1 CAUSE OF PREVENTABLE
DEATH ON THE BATTLEFIELD**

WOUND MANAGEMENT

CONFIRM ALL WOUNDS ARE ACCOUNTED FOR



Observe for blood flowing around or under:

- TQs, bandages, and dressings

If bleeding has not been controlled:

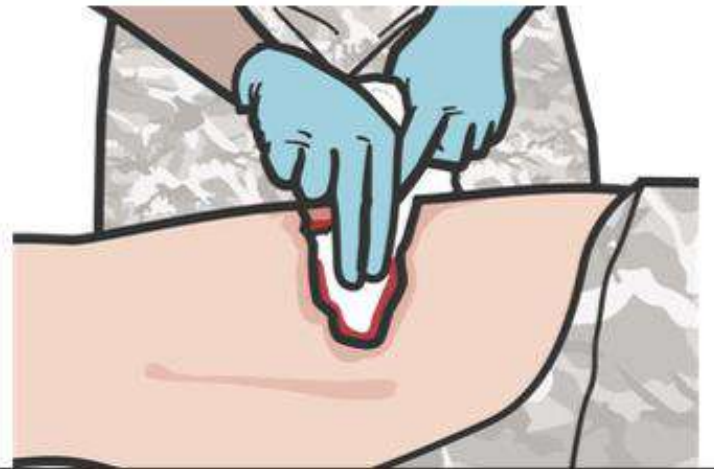
- Tighten the TQ
- Tighten the pressure bandages
- Redress the wounds
- Reassess prior life-threatening wounds to ensure bleeding is still controlled

WATCH FOR REBLEEDING!

WOUND MANAGEMENT

TREAT FOR RE-BLEEDING

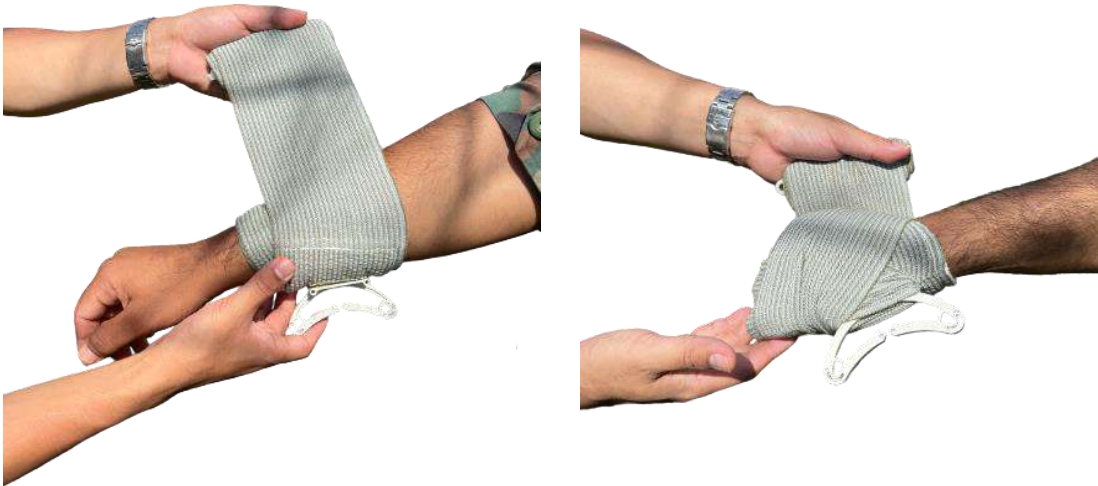
- Pack any wounds that continue to bleed with hemostatic dressing
- Once applied (with pressure for 3 minutes), carefully **observe** for blood continuing to flow from under the gauze to determine if bleeding has been controlled
- Once you are sure the bleeding has stopped, apply a **pressure bandage** over the hemostatic dressing



ALWAYS REASSESS TREATMENT!

WOUND MANAGEMENT

DRESSINGS AND BANDAGES FOR MINOR WOUNDS



Dress any previously untreated wounds by applying (or packing) gauze with direct pressure

- Non-life-threatening bleeding usually does not need hemostatic dressings
- If no dressings or gauze are available, use clean dry cloth (torn clothing, cravats, etc.)

Minor wounds include:

- Minor lacerations
- Abrasions (road rash)

This includes major wounds that are no longer bleeding, such as:

- Amputation stumps
- Gunshot wounds that required TQ
- Major lacerations
- Shrapnel wounds (still in place)
- Impaled objects

WOUND MANAGEMENT

REASSESS APPLIED BANDAGES

Assess all applied bandages for:

- **Increased** pain
- Pale or bluish **skin**
- **Pulse**

This might indicate an emergency!

Ensure the applied bandage **isn't too tight**; loosen as needed while keeping the bleeding controlled



DO NOT EVER APPLY IT AND FORGET IT!

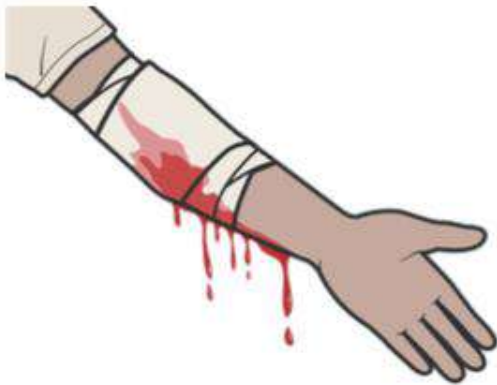
MARCH PAWS

SKILL STATION

Wound Management (Skill)

- Wound dressing

SUMMARY



- We defined **reassessment**
- We discussed **re-bleeding**
- We discussed treatment for **minor wounds**
- We discussed **reassessing** bandages



CHECK ON LEARNING

- Why should all dressed wounds be continuously reassessed?
- When should minor wounds be addressed?

ANY QUESTIONS?



FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 16: BURN TREATMENT

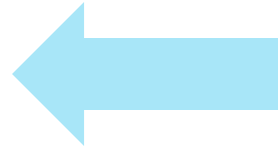
TACTICAL FIELD MEDICAL AID (TFMA)

ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

T18 Given a combat peacekeeping or non-combat peacekeeping scenario, perform assessment and initial treatment of burns during Tactical Field Care in accordance with TFMA Guidelines

EO81 Identify the specific scene safety issues and actions required of a trauma casualty with burns, before evaluation and care of the casualty

EO82 Identify the severity of burn in accordance with the conventional burn classification

EO83 Identify how to estimate the body surface area burned using the Rule of Nines

EO84 Demonstrate the application of a dry dressing to a burn casualty in accordance with TFMA guidelines

EO85 Demonstrate techniques used to prevent heat loss in a severe burn casualty in accordance with TFMA guidelines

Three PHASES of TFMA

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
- MARCH PAWS assessment

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 TFMA training!


YOU ARE HERE

TACTICAL FIELD CARE

MARCH PAWS

DURING LIFE-THREATENING

MASSIVE BLEEDING #1 Priority

AAIRWAY

RESPIRATION

CIRCULATION

HYPOTHERMIA / HEAD INJURIES

AFTER LIFE-THREATENING

PAIN

ANTIBIOTICS

WOUNDS

SPLINTING

BURN CARE

FOLLOW MARCH PAWS

- Address **ALL OTHER** life-threatening injuries using the MARCH PAWS sequence
- All trauma treatments can be performed on or through burned skin

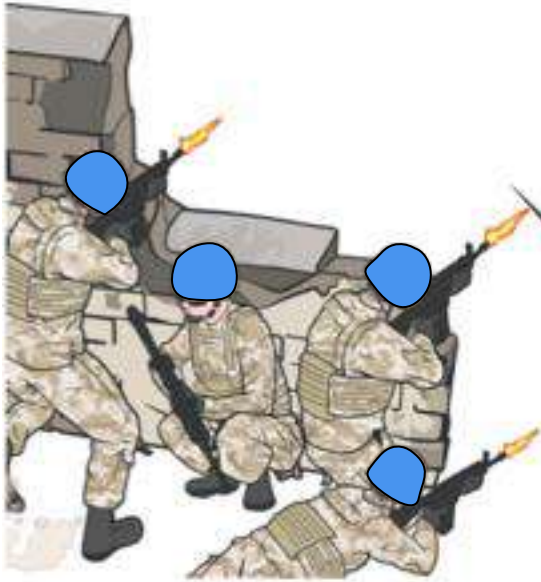
Remember

- A burned trauma casualty is a trauma casualty first



BURN CARE

POTENTIAL CAUSES



FIREFIGHTS



**EXPLOSION
(IED/VBIED)**

**VEHICLE/
AIRCRAFT
CRASHES**



ELECTRICAL



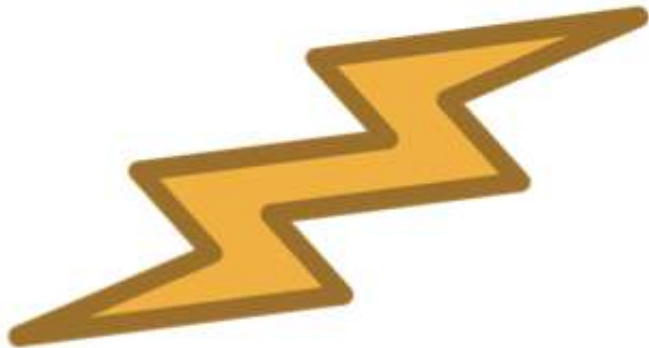
THERMAL



CHEMICAL

BURN CARE

ELECTRICAL



- Secure the power, if possible; otherwise, remove the casualty from the electrical source using a nonconductive object, such as a wooden stick
- Move the casualty to a safe place

**IN CASE OF
ELECTRICAL INJURY**

BURN CARE

THERMAL



IN CASE OF THERMAL INJURY

- Stop the source of the burn
- Cut clothing around the burned area and gently lift away

If clothing is stuck to the burn, ensure you cut around the clothing and leave it in place

- Be sure to avoid grabbing the burned area while moving/picking up the casualty

BURN CARE

CHEMICAL



IN CASE OF CHEMICAL INJURY

EXAMPLE

- White phosphorus

SOURCE

- Commonly found in tank rounds, mortar rounds, artillery rounds

TREATMENTS

- Submerge the burned area in water
- Apply wet barrier (water-soaked gauze, clothing, mud, etc.) with an occlusive dressing
- Advise medical personnel **immediately**

BURNS OVERVIEW

BURNS

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

BURN CARE

SEVERITY OF BURN

BURNS ARE CLASSIFIED BY THE DEPTH OF THE WOUND



SUPERFICIAL 1ST-DEGREE BURNS

are just like a sunburn, with a reddened appearance of the skin



PARTIAL THICKNESS 2ND-DEGREE BURNS

will also have blisters



FULL THICKNESS 3RD-DEGREE BURNS

may appear dry, stiff, and leathery, and/or can also be white, brown, or black

BURN ESTIMATION

RULE OF NINES

Rule of Nines

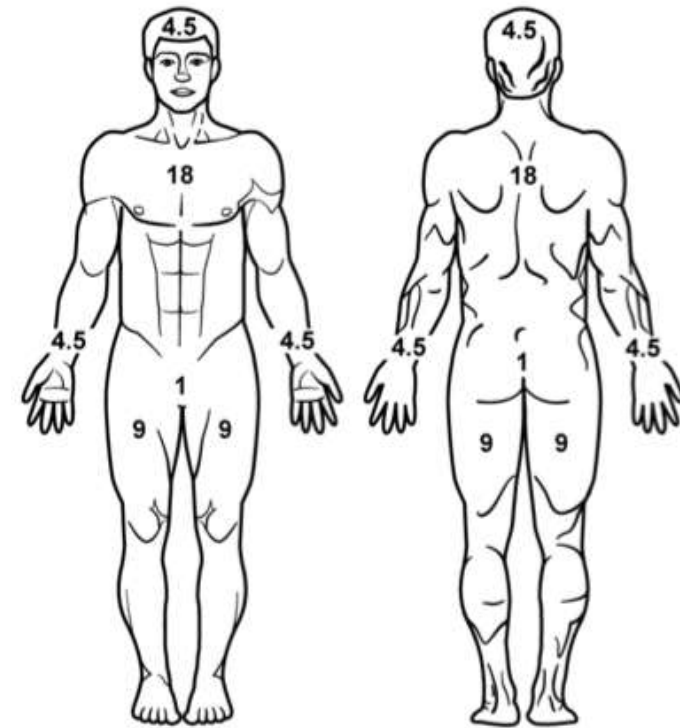
11 areas that each have **9% body surface area**
(**head, arms, front and backs of legs, and front and back of the torso** having **TWO 9% areas**)

- **Palm size** represents ~1%
- **Estimate/round up to nearest 10**

If half of the front or rear area is **burned**, the area would be **half** of the **area value**

ESTIMATION EXAMPLE

- **Half** of the front upper/lower leg is **4.5%**
- **Half** of the front upper/lower torso is **9%**



BURN CARE

BURN CARE



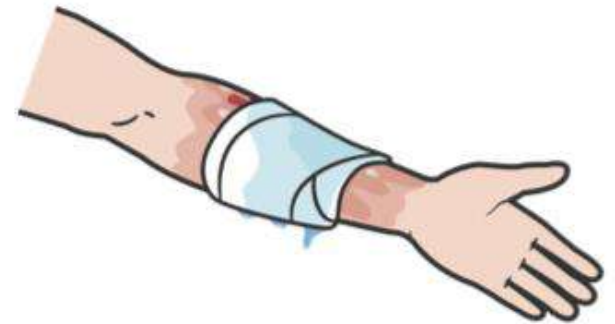
REMOVE

watches and jewelry from
burned area



COVER

the burn area with dry,
sterile dressings



COVER

burns from **white
phosphorus** with **wet**
dressings

BURN MANAGEMENT

BURN CARE + HYPOTHERMIA PREVENTION



For **extensive burns (>20%)**, consider using **active** warming supplies to cover the burned areas and prevent hypothermia

Passive Warming Supplies



- Burn patients are particularly susceptible to hypothermia
- Extra emphasis should be placed on barrier heat loss prevention methods

Facial Burns

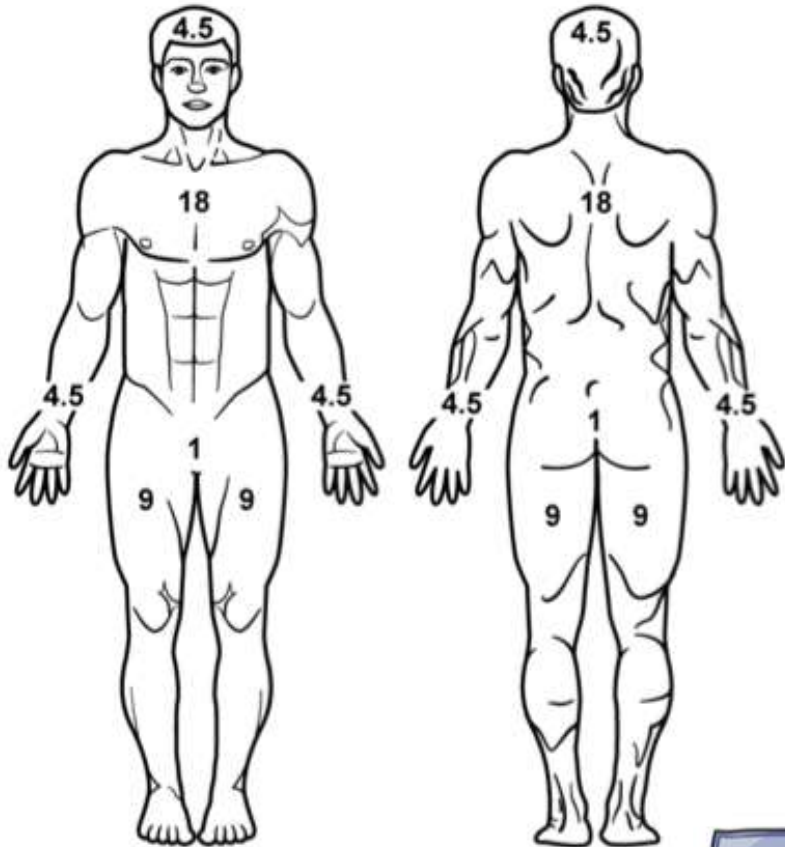
- Facial burns, especially those that occur in closed spaces, may be associated with inhalation injury
- These casualties should be monitored closely for potential airway issues
- **DO NOT** place NPA in casualty with signs of inhalation burns

SKILL STATION

Burn Treatment (Skill)

- Burn dressing

SUMMARY



- We discussed **treatment priorities**
- We discussed **potential causes** of burns
- We identified **electrical** burns
- We identified **thermal** burns
- We identified **chemical** burns
- We discussed the **Rule of Nines**
- We discussed burns **and** hypothermia
- We discussed the **prevention of hypothermia**



CHECK ON LEARNING

- What kind of dressing should be placed on burned areas?
- What should you do first when you encounter a casualty with an electrical burn?
- What should you do first when you encounter a casualty with a thermal burn?

ANY QUESTIONS?



FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 17: FRACTURES

TACTICAL FIELD MEDICAL AID (TFMA)

ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

T19 Given a combat peacekeeping or non-combat peacekeeping scenario, perform assessment and initial management of fractures during Tactical Field Care in accordance with TFMA Guidelines

EO86 Identify signs of a suspected fracture

EO87 Demonstrate the basic care of fractures in accordance with TCCC Guidelines

EO88 Demonstrate proper splint application using a malleable rigid or improvised splint to a suspected fracture in Tactical Field Care

Three PHASES of TFMA

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
- MARCH PAWS assessment

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 TFMA training!


YOU ARE HERE

TACTICAL FIELD CARE

MARCH PAWS

DURING LIFE-THREATENING

MASSIVE BLEEDING #1 Priority

AAIRWAY

RESPIRATION

CIRCULATION

HYPOTHERMIA / HEAD INJURIES

AFTER LIFE-THREATENING

PAIN

ANTIBIOTICS

WOUNDS

 **S**PLINTING

FRACTURES

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)

FRACTURES

OBJECTIVES OF SPLINTING

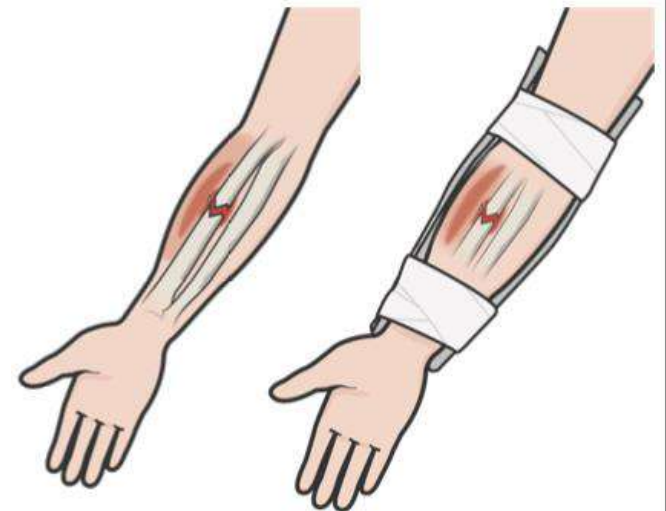
A splint is used to prevent movement and hold an injured arm/leg in place to:

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. Refer to the Medic to administer the pain medications (from the Wound Medication Pack) as needed and the antibiotic for any open fracture(s)
10. Document all treatment on a Casualty Card and attach it to the casualty

FRACTURES

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



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

SPLINTING

GUIDELINES FOR **LEG** SPLINTS

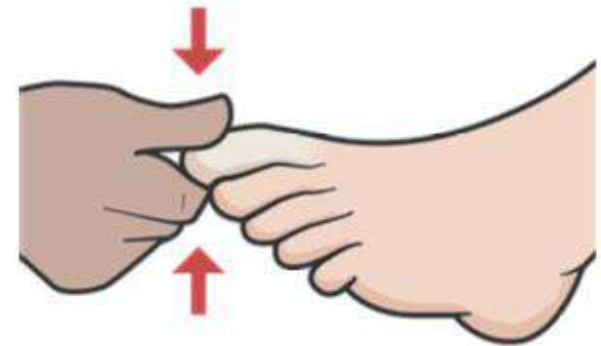


Identify the location of the fracture

Have the casualty or someone else manually stabilize the area



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

SPLINTING

GUIDELINES FOR **LEG** SPLINTS



PREPARE the splint materials for application

Measure and shape the splint on the opposing uninjured extremity



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

FRACTURES

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

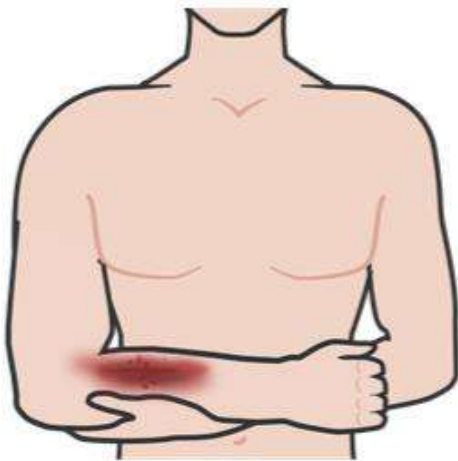


RECHECK the distal pulse following application of the splint
If the pulse is **not** palpable, loosen the splint, reposition, and reapply

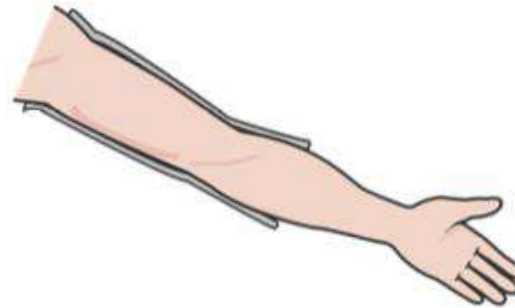
SPLINTING

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

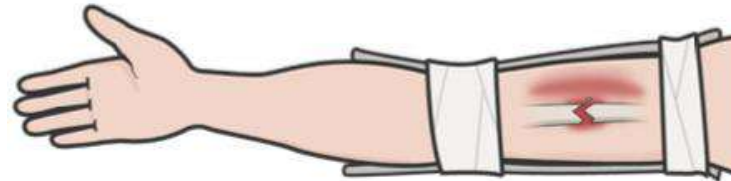


Use two triangular bandages to secure limb to body

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

SPLINTING

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

SPLINTING (TACTICAL FIELD CARE)

Video can be found on [DeployedMedicine.com](https://www.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 the Casualty Card

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?



FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 18: CASUALTY MONITORING

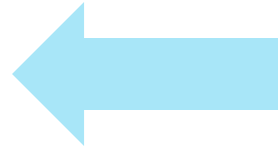
TACTICAL FIELD MEDICAL AID (TFMA)

ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

T20 Given a combat peacekeeping or non-combat peacekeeping scenario, perform monitoring of a trauma casualty during Tactical Field Care in accordance with TFMA Guidelines

EO89 Identify the methods to assess level of consciousness, pulses, and respiratory rate on a trauma casualty in Tactical Field Care

EO90 Demonstrate assessment of radial/carotid pulse and respirations in a trauma casualty in Tactical Field Care

Three PHASES of TFMA

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
- MARCH PAWS assessment

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 TFMA training!


YOU ARE HERE

CASUALTY MONITORING

ASSESSMENT USING MARCH PAWS

Re-bleeding

MARCH

MASSIVE BLEEDING

Check for re-bleeding on any previous treatments

Management

MARCH

AIRWAY

Ensure airway remains open and unobstructed

Reassess casualty every 5–10 minutes for change in status until handoff with medical personnel

CASUALTY MONITORING

ASSESSMENT USING MARCH PAWS (CONT.)

Breathing Rate

MARCH

RESPIRATION
BREATHING

Pulse

MARCH

CIRCULATION

Level of Consciousness

MARCH

HYPOTHERMIA
HEAD INJURIES

- Document any changes in status on the casualty's Cas Card.
- If medical personnel arrive in the middle of reassessment, stop and hand off casualty immediately

CASUALTY MONITORING

LEVEL OF CONSCIOUSNESS

- Check every 15 minutes (or if seriously wounded every 5–10) for decrease in AVPU:
 - A**lert
 - V**erbal
 - P**ain
 - U**nconscious
- This could indicate condition worsening
- If casualty is not **ALERT**, indicating decreased mental status, the casualty should not have weapons or communications equipment



AVPU ASSESSMENT HOW-TO

AVPU ASSESSMENT (TACTICAL FIELD CARE)

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

CASUALTY MONITORING

CHECKING PULSE



CAROTID (neck)

If casualty status is noted to be deteriorating when assessed, reassess using the MARCH PAWS sequence



RADIAL (wrist)

No radial pulse is an indicator of shock

ASSESSING RADIAL & CAROTID PULSE

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

IMPORTANT CONSIDERATIONS

Measure the number of felt heartbeats in 1 MINUTE and record on Casualty Card

CASUALTY MONITORING

CHECKING RESPIRATIONS

LOOK, LISTEN and FEEL FOR RESPIRATIONS

- If a casualty becomes unconscious or their breathing rate drops below **8 respirations within 1 MINUTE**, insert a nasopharyngeal airway
- Assess for tension pneumothorax and treat as necessary
- Perform needle decompression in the presence of tension pneumothorax
- **Reassess** to confirm that needle decompression of the chest (NDC) was successful



SKILL STATION

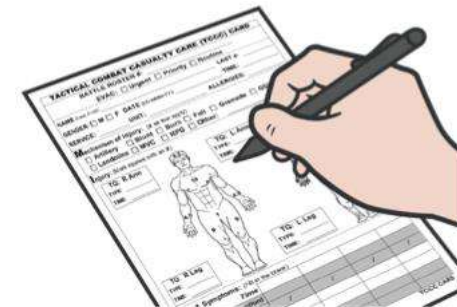
Casualty Monitoring Concepts (Skills)

- Level of consciousness
- Radial pulse
- Carotid pulse
- Tibial pulse

SUMMARY

LOOK, LISTEN and FEEL FOR RESPIRATIONS

- We discussed assessment using **MARCH PAWS**
- We discussed levels of consciousness
- We discussed checking for pulse
- We discussed checking respirations



CHECK ON LEARNING

- How is a casualty monitored after the MARCH PAWS sequence has been executed?

ANY QUESTIONS?



FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 19: PRE-EVACUATION PROCEDURES

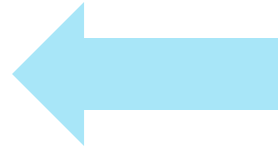
TACTICAL FIELD MEDICAL AID (TFMA)

ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

T21 Given a combat peacekeeping or non-combat peacekeeping scenario, perform pre-evacuation procedures during Tactical Field Care in accordance with TFMA Guidelines

EO91 Identify the importance of and techniques for communicating casualty information with evacuation assets and/or receiving facilities

EO92 Identify the information requirements and format of an evacuation request

EO93 Identify the recommended evacuation prioritization for peacekeeping casualties

EO94 Demonstrate the communication of evacuation request information and modified medical information report requirements

T22 Given a combat peacekeeping or non-combat peacekeeping scenario, perform documentation of care during Tactical Field Care in accordance with TFMA Guidelines

EO95 Identify how to document casualty information on the Casualty Card and the proper placement of that card on the casualty.

EO96 Demonstrate the proper documentation of care on a trauma casualty in Tactical Field Care

Three PHASES of TFMA

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
- 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

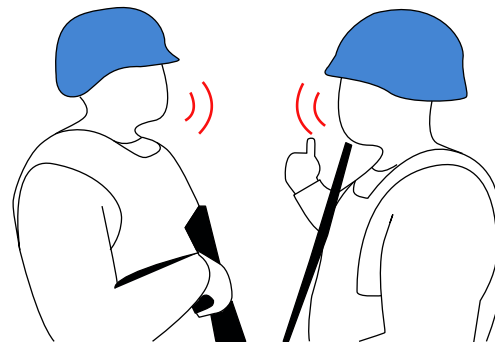
NOTE: This is covered in more advanced TFMA training!

PRE-EVACUATION COMMUNICATION



Communicate with the casualty if possible

- Encourage
- Reassure
- Explain care each step of the way



Communicate immediately with tactical leader for

- Status
- Evac requirements
- Casualty treatment

COMMUNICATE WITH EVACUATION AND MEDICAL ASSETS

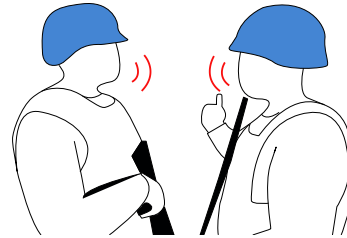
- Communicate with evacuation system to coordinate EVAC using 4-Line CASEVAC request
- Keep the Casualty Card up to date

PRE-EVACUATION

COMMUNICATE RELEVANT CASUALTY DATA



Document all assessment and medical care (including interventions and medications) on the Casualty Card



Communicate with evacuation system:

- 4-Line CASEVAC request
- **MIST** Report
 - M**echanism of injury
 - I**njuries
 - S**ymptoms
 - T**reatment
- Relay the information following your standard operating procedures (SOPs)

HANDOFF WITH MEDIC OR CASEVAC

- When handing off the casualty to the Medic or CASEVAC, provide the Casualty Card, including any additional information as needed
- MIST report
- May change as the casualty status and interventions performed change
- Conveys additional evacuation information that may be required by
- Helps better prepare peacekeeping commanders receiving facility

PRE-EVACUATION

REQUESTING EVACUATION OF CASUALTIES

- Although the Field Medical Assistant is not a medical person, they may need to initiate the medical evacuation request
- Depending on the tactical situation and available assets, the casualty may be evacuated by **CASEVAC**

CASEVAC

Movement of a casualty from Point of Injury to a Medical Treatment Facility



PRE-EVACUATION

MEDEVAC REQUEST KEY POINTS

9-LINE MEDEVAC / MIST REPORT

Video can be found on
DeployedMedicine.com

BE AWARE: This video demonstrates the TCCC 9-LINE MEDEVAC. The UN equivalent is the 4-LINE CASEVAC.

- **Every** UN member must be prepared to transmit a CASEVAC request
- A CASEVAC request is **NOT** a direct medical communication with medical providers, but a means of communicating evacuation requirements so aircraft resources can be launched as needed
- Gather **all** information needed **before** initiating transmission
- Use **appropriate and mandated communications security and brevity codes** when transmitting a CASEVAC request in accordance with the operational plan

PRE-EVACUATION

4-LINE: CASEVAC REQUEST LINES 1-4

(4 Line Format)

Line	UN CASEVAC 4-LINE ALERT MESSAGE		
	DTG:		
1	LOCATION AND CALL SIGN	PLACE NAME / DESCRIPTION	A
		GPS GRID REFERENCE	B
		CALL SIGN OF INCIDENT SITE COMMANDER	C
2	INCIDENT DETAILS	WHAT HAS HAPPENED? (Shooting, road accident, explosion etc).	D
		HOW MANY CASUALTIES ARE THERE?	E
3	ACTIONS BEING TAKEN AT SCENE	TREATMENT BEING GIVEN AND PREPERATIONS FOR EVACUATION	
4	RESOURCES REQUIRED AT SCENE TO TREAT AND EVACUATE PATIENT	GROUND AMBULANCE, AIR EVACUATION, AMET	

SKILL STATION

Communication and Documentation (Skills)

- 4-Line & Mist Report

PRE-EVACUATION CASUALTY CATEGORIES

Ground medical personnel will determine EVAC categories of casualties
EXAMPLES:

URGENT	URGENT SURGICAL	PRIORITY	ROUTINE	CONVENIENCE
<2 hours to save life, limb, or eyesight	<2 hours to nearest surgical unit	<4 hours or could deteriorate to urgent	<24 hours	Not a medical necessity
Tourniquets Corrected haemorrhage Traumatic Brain Injuries (TBIs)	Needle Decompression of the Chest (NDCs) Cricothyroidotomy Major internal bleeding Massive head trauma	Compensated shock Broken arm with loss of distal pulse 2nd-degree burns to a large portion of the abdomen or extremities	Abrasions Cardiac arrest Small fractures Frostbite 2nd-/3rd-degree burns >70% of body surface area (BSA)	Used for administrative purposes for casualty movement

PRE-EVACUATION

OVER-CATEGORIZATION

OVER-CATEGORIZATION: the tendency to classify a wound or injury as being more severe than it actually is

Historically **AND** currently problematic

Proper casualty categorization is needed to ensure that those casualties in greatest need are evacuated first and receive the care required to help ensure their **survival**

Casualties will be picked up **as soon as possible**, consistent with available resources and pending missions

- A. Urgent: <2 hours to save life, limb, or eyesight
- B. Urgent Surgical: <2 hours to nearest surgical unit
- C. Priority: <4 hours or could deteriorate to urgent
- D. Routine:<24 hours
- E. Convenience: not a medical necessity



PRE-EVACUATION

COMMUNICATE

1. **WITH THE CASUALTY**
Encourage, reassure,
and explain care
2. **WITH TACTICAL
LEADERSHIP**
Provide leadership with
the casualty's status and
location
3. **WITH MEDICAL
PERSONNEL**
Discuss with the
responding medics the
casualty's injuries and
symptoms, as well as
any medical aid provided

DOCUMENT

1. CASUALTY ASSESSMENT FINDINGS
2. MEDICAL AID RENDERED
3. CHANGES IN CASUALTY STATUS

MIST Report is generated from
Cas Card

SKILL STATION

Communication and Documentation (Skill) – Cas Card

SUMMARY

- We discussed the **4-Line** and **MIST** Reports
- We discussed **requesting** an **evacuation** of a casualty
- We identified **over-categorization**
- We identified **key information** to relay to tactical leadership



CHECK ON LEARNING

- With whom do you communicate in a casualty situation?
- What information does the MIST Report contain?
- Who should complete the Casualty Card?
- Where can you find the Casualty Card?

ANY QUESTIONS?



FIELD MEDICAL ASSISTANT COURSE (FMAC)

MODULE 20: EVACUATION PROCEDURES

TACTICAL FIELD MEDICAL AID (TFMA)

ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

- Buddy First Aid
- Field Medical Assistant



You are HERE

MEDICAL PERSONNEL

- Paramedic
- Nurse
- Doctor

STUDENT LEARNING OBJECTIVES

TERMINAL LEARNING OBJECTIVE

T23 Given a combat peacekeeping or non-combat peacekeeping scenario, prepare casualties for evacuation during Tactical Field Care in accordance with TFMA Guidelines

EO97 Identify considerations and fundamental procedures for staging casualties for evacuation

EO98 Identify the importance of pre-mission evacuation equipment preparation and rehearsals

EO99 Identify considerations and precautions required for evacuating casualties with suspected spinal injuries

EO100 Identify critical actions and checks to prepare casualties for evacuation

EO101 Identify methods of litter selection and evacuation equipment in Tactical Field Care

EO102 Identify considerations for evacuating ambulatory/walking wounded casualties in Tactical Field Care

EO103 Demonstrate the preparation of a casualty for evacuating in Tactical Field Care

EO104 Identify the importance and information considerations of a casualty After Action Review (AAR) submission

Three PHASES of TFMA

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
- 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 TFMA training!

EVACUATION PROCEDURES

IMPORTANT ACTIONS

(IN THIS MODULE)

SECURE ITEMS



CHOOSE AND PREP LITTER

PREP EVAC EQUIPMENT



PACKAGE CASUALTY FOR EVACUATION

EVACUATION PROCEDURES

SECURE CASUALTY'S EQUIPMENT



Secure the casualty's weapon and equipment in accordance with unit SOP or mission requirements



Clear and render safe any weapons evacuated with the casualty



Do not evacuate explosives with the casualty if possible

Keep in mind that receiving medical personnel may not be familiar with the equipment or have a way to secure it

EVACUATION PROCEDURES

EVAC EQUIPMENT



Prepped by unit personnel while treatment continues

Coordinate other EVAC activities



Do not delay getting casualties onto litters

Hypothermia is better prevented off the ground

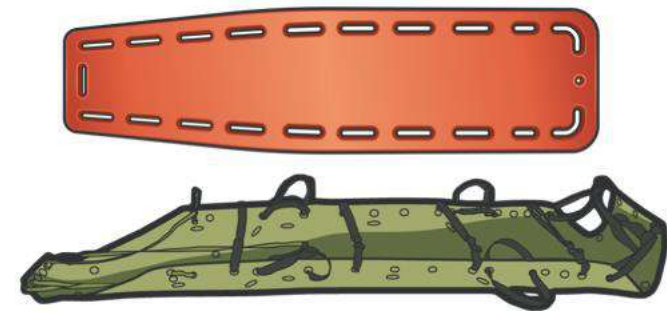
Easier to move casualty on litter



Keep necessary medical equipment with the casualty (Ex: BVM)

EVACUATION PROCEDURES

LITTERS



- Casualty movement is easier using litters
- Use best position for care and comfort
- You **DO NOT** have to place casualty on back
- For casualties with spinal injuries, keep spinal column as straight as possible
- **CASUALTY MUST BE SECURED before movement**

- Select litter based on mission or unit
- Consider and train according to operating environment:
 - Equipment
 - Movement
 - Rehearse litter open/setup/carry

EVACUATION PROCEDURES

LITTER SELECTION



Compact/lightweight transport system

- ✓ Lightweight
- ✗ Rough terrain (if dragging)
- ✓ Two-peacekeeper carry
- ✓ Draggable by one peacekeeper



Compact quad-folding litter

- ✓ Small
- ✗ Requires more than one peacekeeper
- ✓ Carrying case
- ✗ May not fit in evacuation vehicle
- ✓ Carried like a rucksack

EVACUATION PROCEDURES

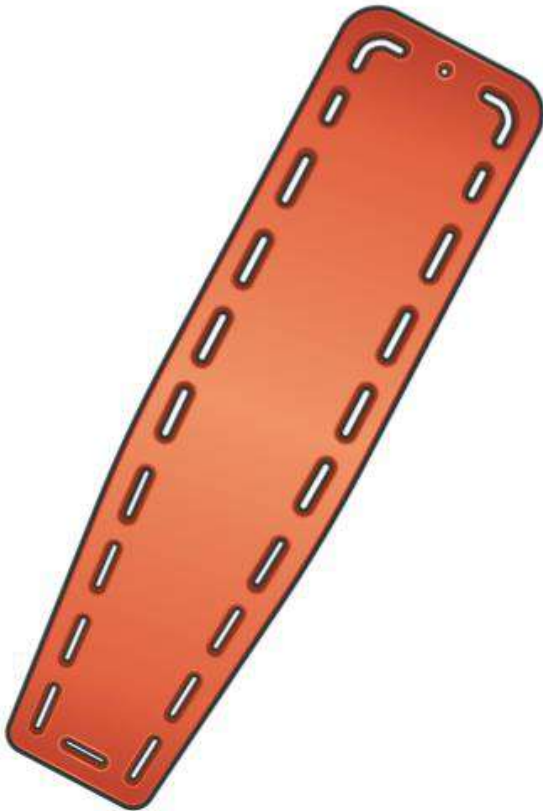
PACKAGE THE CASUALTY



- Secure loose ends of bandages, medical equipment, and hypothermia prevention materials
- During evacuation, loose materials may get caught and cause further injury to casualties or delays
- Prevent items from being blown by rotor wash or becoming entangled with other equipment
- Blankets and hypothermia materials are especially susceptible to becoming entangled
- Secure the casualty to a litter
- Properly secure completed UN Casualty Card

EVACUATION PROCEDURES

EVACUATION CONSIDERATIONS FOR SUSPECTED SPINAL INJURIES



- Events to consider for neck or back injuries: falls, motor vehicle accidents, IEDs, fast-rope injuries, etc.
- Ensure cervical (neck) spine (C-spine) immobilization when spinal cord injury is suspected, if possible
Note: Spine board is requested during 4-Line CASEVAC request
- When considering selection of litter (such as standard litters) based on mission and unit, realize that the selected litter may not fit in the given evacuation ground/air vehicle

EVACUATION PROCEDURES

WALKING WOUNDED



- Provide instructions/ assistance as needed
- If possible, casualty may assist as a litter bearer/provides security



- Guide disoriented / visually impaired casualty's hand-to-shoulder to evacuation platform

SELF-CARE

- Instruct casualty to repeatedly check their own wounds and dressings to ensure bleeding remains controlled

EVACUATION PROCEDURES

STAGE CASUALTY



- Be prepared for the arrival of the evacuation platform
- Stage the casualties in the loading sequence of the evacuation platform
- Tagging or color-coded chemlights may be used to identify casualty evacuation categories
- Maintain security at the evacuation point in accordance with SOP

EVACUATION PROCEDURES

MEDICAL AFTER ACTION REVIEW (AAR)

The AAR covers the following

- What went right?
- What went wrong?
- What can we do better?
- Lessons learned on the casualties and injuries
- Treatment of casualties and effectiveness during mission

Capturing a good AAR ensures up-to-date medical information, types of casualties, and injury patterns that units might encounter and can train for

SKILL STATION

Evacuation Procedures – Concepts (Skills)

- Staging for evacuation
- Preparing pre-mission evacuation equipment and rehearsing
- Evacuating casualties with suspected spinal cord injuries
- Preparing casualties for evacuation
- Selecting litter and evacuation equipment in TFC
- Evacuating ambulatory casualties in TFC
- Submitting the AAR
- Submitting/handing off the 4-Line CASEVAC report

SUMMARY



- We identified important actions
- We discussed securing casualty equipment
- We discussed evacuation equipment
- We identified litter selections
- We discussed casualty packaging
- We identified spinal injury considerations
- We discussed walking wounded
- We identified staging
- We identified considerations for casualty AAR

CHECK ON LEARNING

- What actions are needed to prepare for evacuation?
- What does casualty staging involve?

ANY QUESTIONS?

TACTICAL TRAUMA ASSESSMENT STUDENT PRACTICE