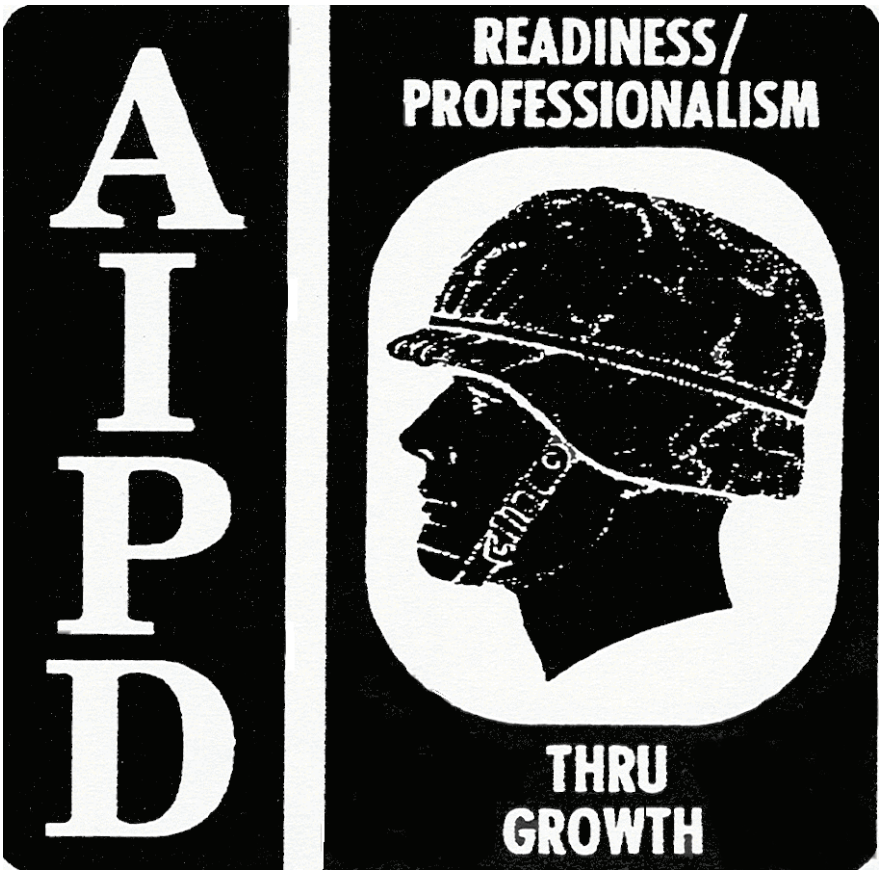
SUBCOURSE
IS0871

EDITION
B

COMBAT LIFESAVER COURSE:

STUDENT SELF-STUDY



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ADMINISTRATIVE PROBLEMS

Questions of an administrative nature (missing pages in subcourse, etc.) should be addressed to your primary instructor (group leader). If you have questions of an administrative nature after you have completed the course, you may write or call the Army Institute for Professional Development (AIPD) at the following:

Address: Army Institute for Professional Development
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CONTENT

Questions about the content of this subcourse should be directed to your primary instructor (group leader). If you still have questions or comments concerning course content, write or call the subject matter expert responsible for the subcourse. The subject matter expert responsible for this edition of the subcourse is Mr. Jan Bond, Department of Combat Medic Training, U.S. Army Medical Department Center and School, Fort Sam Houston, Texas.

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CLARIFICATION OF TRAINING LITERATURE TERMINOLOGY

When used in this publication, words such as "he," "him," "his," and "men" are intended to include both the masculine and feminine genders unless specifically stated otherwise or when obvious in context.

This subcourse is approved for resident and correspondence course instruction. It reflects the current thought of the U.S. Army Medical Department Center and School and conforms to Department of the Army doctrine as closely as currently possible. Development and progress render such doctrine subject to change.

The "B" edition of IS0871, Combat Lifesaver Course: Student Self-Study, is an update of the previous "A" edition. The "A" edition may be used until supplies are depleted.

This subcourse may be reproduced locally as needed.

COMBAT LIFESAVER COURSE: STUDENT SELF-STUDY

INTERSCHOOL SUBCOURSE 0871

U.S. Army Medical Department Center and School
Fort Sam Houston, Texas

GENERAL

Interschool Subcourse 0871, Combat Lifesaver Course: Student Self-Study, contains information needed to successfully complete the written, written performance, and performance examinations for combat lifesaver certification and recertification. All of the tasks contain important, lifesaving information.

Terminal objectives for this course are given below.

TASK: Tactically manage a casualty.

CONDITIONS: Given a casualty in a battlefield environment and a combat lifesaver aid bag.

STANDARDS: Applies the procedures given in this subcourse so that the mission is not endangered and the risk of additional injuries to the casualty is minimized.

TASK: Evaluate and treat a casualty.

CONDITIONS: Given a combat lifesaver aid bag and a casualty with one or more of the following problems: blocked airway, no respiration, bleeding from an extremity, amputation of an extremity, hypovolemic shock, or open chest wound.

STANDARDS: Performs needed procedures in accordance with the procedures given in this subcourse.

TASK: Transport a casualty.

CONDITIONS: Given a casualty in need of evacuation, SKED® litter or materials for improvising a litter, and assistant(s) (if available).

STANDARDS: Evacuates the casualty using a SKED® litter or an improvised litter in accordance with the procedures given in this subcourse.

TABLE OF CONTENTS

ADMINISTRATIVE INSTRUCTIONS

SUBCOURSE CONTENT

This subcourse contains nine lessons. Each lesson presents information needed to successfully perform tasks that a combat lifesaver is required to know and perform.

SUPPLEMENTARY REQUIREMENTS

Materials Needed. You will be furnished with needed materials at the time you take the examinations for this subcourse. Successful completion of the comprehensive written (multiple-choice) examination, written performance (Field Medical Card and MEDEVAC request) examinations, and all performance (hands-on) examinations is required for successful completion of the Combat Lifesaver Course.

Supervisory Assistance. Study the information contained in this subcourse on your own before attending classroom instruction. When you take the performance (hands-on) examinations, the evaluator will use checklists similar to those contained in this subcourse. Each written performance examination will require you to complete a form. The comprehensive written examination will consist of 40 multiple-choice items and will be closed-book and proctored. Reference materials in addition to those provided by the evaluator will not be permitted.

References. This subcourse contains all information needed to pass the written, written performance, and performance examinations. No supplementary references are needed.

SUGGESTED STUDY PROCEDURES

After reading and studying the text assignment of a lesson, complete the lesson exercises at the end of the lesson. If possible, answer the exercises without referring back to the lesson text. After completing the exercises, check your answers with the answer key that follows the lesson exercises. For each exercise answered incorrectly, reread the subcourse material referenced and rework the exercise.

If the lesson exercises contain a performance exercise, practice performing the task (if possible) and have someone check your actions against the performance checklist. When you take the actual performance examinations, an instructor will grade your performance using checklists similar to those contained in this subcourse. Keep practicing until you can score a GO on all steps.

Complete each lesson before proceeding to the next.

GRADING AND CERTIFICATION

You must score a minimum of 70 percent on the written examination and score a GO on each written performance and performance examination in order to satisfactorily complete this subcourse. A NO-GO on any step of a performance checklist will result in a NO-GO for the entire checklist.

The written examination will be proctored. You will not be allowed to use the subcourse or notes during the examination.

The primary instructor (or a designated assistant) will be responsible for grading the written, written performance, and performance examinations. Please consult your primary instructor or his designated assistant for any questions concerning retaking a failed examination (written, written performance, or performance). An examination may have more than one version. If so, an alternate version may be used for retesting.

A student who successfully completes the entire Combat Lifesaver Course (successfully completes all performance and written performance examinations and passes the comprehensive written examination) will receive 40 credit hours from the Army Institute for Professional Development (AIPD), Newport News, Virginia. There is no partial credit. AIPD will send a notice of completion to the primary instructor for each student who has successfully completed the entire course.

INTRODUCTION

The Army battle doctrine was developed for a mobile and widely dispersed battlefield. The doctrine recognizes that battlefield constraints will limit the ability of trained medical personnel, including combat medics (Health Care Specialist MOS 68W), to provide immediate, far-forward care. Therefore, a plan was developed to provide additional care to injured combat soldiers. The combat lifesaver is part of that plan.

PURPOSE OF THE COMBAT LIFESAVER

The combat lifesaver is a bridge between the self-aid/buddy-aid (first aid) training given all soldiers during basic training and the medical training given to the combat medic. The combat lifesaver is a nonmedical soldier who provides lifesaving measures as a secondary mission as his primary (combat) mission allows. The combat lifesaver may also assist the combat medic in providing care and preparing casualties for evacuation when the combat lifesaver has no combat duties to perform.

Normally, one member of each squad, team, crew, or equivalent-sized unit will be trained as a combat lifesaver.

A major advantage of the combat lifesaver is that he will probably be nearby if a member of his squad or crew is injured. It may take a combat medic several minutes or longer to reach the casualty, especially if there are several other casualties and/or the medic is at another location. The combat lifesaver is trained to provide immediate care that can save a casualty's life, such as stopping severe bleeding, administering intravenous fluids to control shock, and performing needle chest decompression for a casualty with tension pneumothorax.

COMBAT LIFESAVER'S AID BAG

The combat lifesaver carries a small aid bag (called a medical equipment set or MES) containing supplies for controlling bleeding, initiating saline lock and intravenous infusion, relieving tension pneumothorax, and other procedures. The combat lifesaver's aid bag (with contents) weighs about six and a half pounds and occupies about 1.3 cubic feet. A listing of the supplies found in the aid bag at the time this subcourse was developed is given in the Appendix. For current information, check the U.S Army Medical Materiel Agency (USAMMA) listing at http://www.usamma.army.mil/ on the Internet under DOD Unit Assemblages.

Some items, such as the bag of intravenous fluid, must be replaced when their expiration date nears. Usually, the combat lifesaver's unit will perform the needed stock rotation. If the combat lifesaver maintains his own bag, he must replenish his supplies in accordance with his unit's standing operating procedures (SOP).

During combat, the combat lifesaver will need to be resupplied rapidly as his supplies can be quickly depleted. The combat lifesaver can obtain additional supplies from combat medics, from battalion aid stations or other nearby medical treatment facilities, and from ambulances evacuating casualties.

COMBAT LIFESAVER TASKS

The primary tasks for which a combat lifesaver is responsible are listed in the subcourse Table of Contents. The tasks covered in lessons 1, 2, 3, 4, 5, and 9 are based upon buddy-aid tasks given in Soldier Training Publication 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1, and FM 21-11, First Aid for Soldiers. The tasks taught in lessons 6, 7, and 8 are modifications of the tasks taught to combat medics.

LESSON 1

PERFORMING TACTICAL COMBAT CASUALTY CARE

TASK

Tactically manage a simulated casualty.

CONDITIONS

Given a written situation concerning a casualty under combat conditions and possible responses.

STANDARDS

Select the correct response based upon instruction given in Subcourse IS0871.

REFERENCES

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 4-25.11, First Aid.

1-1. BATTLEFIELD DEATHS

Up to 90 percent of combat deaths occur on the battlefield before the casualties reach a medical treatment facility (MTF). Most of these deaths are inevitable (massive trauma, massive head injuries, and so forth). However, some conditions such as bleeding from a wound on an arm or leg, tension pneumothorax, and airway problems can be treated on the battlefield. This treatment can be the difference between being a combat death on the battlefield and a recovering soldier in a MTF. It has been estimated that proper use of self-aid, buddy-aid, and combat lifesaver skills can reduce battlefield deaths by 15 percent. Table 1-1 gives an estimated breakdown of battlefield deaths.

> Remember, in combat, functioning as a combat lifesaver is your secondary mission. Your combat duties remain your primary mission. Your first priority while under fire is to return fire and kill the enemy. You should render care to injured soldiers only when such care does not endanger your primary mission.

DEATHS DUE TO GROUND COMBAT

31 percent--Penetrating head trauma

25 percent--Surgically uncorrectable torso trauma

10 percent--Potentially correctable surgical trauma

9 percent--Exsanguination from extremity wounds

7 percent--Mutilating blast trauma

5 percent--Tension pneumothorax

1 percent--Airway problems

12 percent--Died of Wounds after evacuation to a MTF, mostly infections and complications of shock

Table 1-1. Estimated breakdown of battlefield deaths.

NOTE: Over 2500 soldiers died in Viet Nam because of hemorrhage (bleeding) from extremity wounds (wounds to the arm or leg) even though the soldiers had no other serious injuries.

1-2. TACTICAL COMBAT CASUALTY CARE

Tactical combat casualty care (TCCC) can be divided into three phases. The first is care under fire; the second is tactical field care; the third is combat casualty evacuation care. In the first, you are under hostile fire and are very limited as to the care you can provide. In the second, you and the casualty are safe and you are free to provide casualty care to the best of your ability. In the third, the care is rendered during casualty evacuation (CASEVAC). Casualty evacuation refers to the movement of casualties aboard nonmedical vehicles or aircraft. Combat casualty evacuation care is rendered while the casualty is awaiting pickup or is being transported by a nonmedical vehicle.

NOTE: Casualty evacuation (CASEVAC) is different from medical evacuation (MEDEVAC). In MEDEVAC, medical vehicles (ground ambulances), medical helicopters (air ambulances), or other medical transportation is being used.

1-3. PERFORMING CARE UNDER FIRE

Care under fire is rendered at the scene of the injury while you (the combat lifesaver) and the casualty are still under effective hostile fire. In such a situation, you should perform the following.

a. Return fire as directed or required before providing medical treatment.

b. Determine if casualty is alive or dead.

c. Provide tactical care to the live casualty. Reducing or eliminating enemy fire may be more important to the casualty's survival than the treatment you can provide.

(1) Suppress enemy fire.

(2) Use cover or concealment (smoke).

(3) Direct the casualty to return fire, move to cover, and administer self-aid (take measures to stop bleeding), if possible. If the casualty is unable to move and you are unable to move the casualty to cover and the casualty is still under direct enemy fire, have casualty “play dead.”

(4) Keep the casualty from sustaining additional wounds.

(5) Reassure the casualty.

d. If you decide you can safely move the casualty to a safe area, you may need to administer life-saving care (tourniquet to stop bleeding) before moving the casualty.

(1) If casualty is unresponsive, move the casualty and his weapon to cover as the tactical situation permits.

NOTE: If the casualty has equipment that is essential to the mission, move the mission-essential equipment also. Do not try to move equipment that is not mission essential.

(2) If the casualty has severe bleeding from a limb (arm or leg) or has suffered amputation of a limb, administer life-saving hemorrhage control (apply a tourniquet) before moving the casualty.

NOTE: You must determine the relative threat of the tactical situation versus the risk to the casualty. Can you remove the casualty to a place of relative safety without becoming a casualty yourself? Is the casualty safer where he is? If possible, seek assistance from your leader.

e. Communicate the medical situation to the team leader.

f. Tactically transport the casualty, his weapon, and mission-essential equipment to cover.

g. Recheck the bleeding control measures as the tactical situation permits.

1-4. PERFORMING TACTICAL FIELD CARE

Perform tactical field care when you and the casualty are no longer under direct enemy fire.

NOTE: Tactical field care is care rendered by the combat lifesaver when no longer under effective hostile fire. Tactical field care also applies to situations in which an injury has occurred on a mission, but there is no hostile fire. Available medical equipment is limited to that carried into the field by the combat lifesaver and individual soldiers.

a. **Communication**. In the following situations, communicate the medical situation to the unit leader.

(1) Upon determining that casualty will not be able to continue mission.

(2) Before initiating any medical procedures. (Ensure that the tactical situation allows for time to treat the casualty before initiating any medical procedures.)

(3) Upon any significant change in casualty's status.

b. **General Impression**. Form a general impression of the casualty as you approach (extent of injuries, chance of survival, and so forth--see Lesson 2). Evaluate the tactical situation.

NOTE: If the casualty has suffered from a blast or penetrating trauma and has no signs of life (no pulse and no respirations), do not perform cardiopulmonary resuscitation (CPR). The casualty will probably not survive and you may expose yourself to enemy fire.

c. **Level of Consciousness**. When possible, determine the casualty's level of consciousness using the AVPU system. Ask questions that require more than a "yes" or "no" answer. Examples of questions are: "What is your name?" "What is the date?" "Where are we?" Recheck the casualty's level of consciousness about every 15 minutes to determine if the casualty's condition has changed.

(1) A--The casualty is alert, knows who he is, the date, where he is, and so forth.

(2) V--The casualty is not alert, but does responds to verbal commands.

(3) P--The casualty responds to pain, but not to verbal commands.

(4) U--The casualty is unresponsive (unconscious).

NOTE: Maintaining a check on the casualty's level of consciousness is especially important when the casualty has suffered a head injury.

d. **Airway**. Assess and secure the casualty's airway (see Lesson 3).

(1) If the casualty is conscious, able to speak, and is not in respiratory distress, no airway intervention is needed.

(2) If the casualty is unconscious, perform the following.

(a) Use a head-tilt/chin-lift or jaw thrust to open the airway. The head-tilt/chin-lift method is the normal method of opening the casualty's airway. The jaw thrust method is used if you suspect that the casualty has suffered a spinal injury.

NOTE: The muscles of an unconscious casualty's tongue may have relaxed, causing his tongue to block the airway by sliding to the back of the mouth and covering the opening to the trachea (windpipe). Using the head tilt/chin-lift or jaw thrust to move the tongue away from the trachea may cause the casualty to resume breathing on his own.

(b) Check the casualty for breathing. Place your ear over the casualty's mouth and nose with your face toward the casualty's chest while maintaining the casualty's airway (head-tilt/chin-lift or jaw thrust). Look for the rise and fall of the casualty's chest and abdomen. Listen for sounds of breathing. Feel for his breath on the side of your face. If breathing is not present, begin rescue breathing.

(c) If the casualty is breathing on his own, use a nasopharyngeal airway (NPA) to maintain the airway.

(d) If the casualty has no additional injuries, roll the casualty into the recovery position (on his side). This allows accumulated blood and mucus to drain from the casualty's mouth instead of choking the casualty. See figure 1-1.

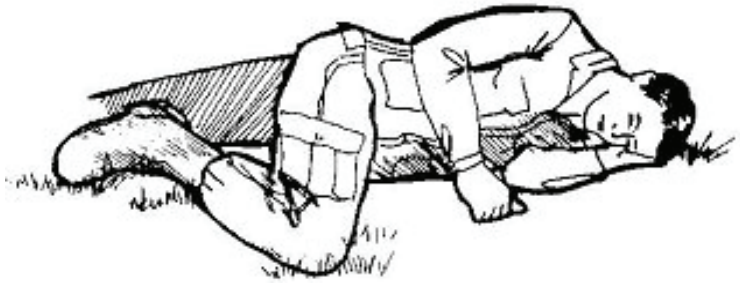

Figure 1-1. Unconscious casualty placed in the recovery position.

e. **Chest**. Assess and treat the casualty for chest injuries (Lesson 4).

(1) Expose the chest and check for equal rise and fall. Remove the minimum of clothing required to expose and treat injuries. Protect the casualty from the environment (heat and cold) as much as possible.

(2) Examine the chest for wounds. Check for both entrance and exit wounds (sucking chest wounds).

(3) Immediately seal any penetrating injuries to the chest with airtight material. Seal one open chest wound with a three-sided seal (one side of airtight material left untaped). Sealing the wound keeps air from entering the wound. If air can freely enter through the wound, the casualty's lung may collapse. The three-sided seal prevents air from entering the chest, but allows trapped air to escape.

(4) Monitor the casualty for progressive severe respiratory distress (breathing becomes more labored and faster). If respiration becomes progressively worse, assume tension pneumothorax exists and decompress the affected chest side with a 14-gauge needle inserted at second intercostal space (ICS) on mid-clavicular line (MCL). Secure the catheter in place with tape.

CAUTION: Only perform needle chest decompression on a casualty with a penetrating (sucking) chest wound.

(5) If the casualty has been treated for an open chest wound, position or transport the casualty with the affected (injured) side down, if possible. The body pressure acts to "splint" the affected side.

f. **Bleeding**. Identify and control major bleeding (see Lesson 5).

(1) Apply a tourniquet to a major amputation of the extremity.

(2) Apply an emergency trauma bandage and direct pressure to a severely bleeding wound.

(a) If conventional methods of controlling severe bleeding (emergency trauma bandage, direct pressure, pressure dressing, hemostatic dressing, and so forth) do not control the bleeding on an extremity, apply a tourniquet.

(b) If a tourniquet was previously applied, consider changing the tourniquet to a pressure dressing and/or using a hemostatic dressing to control bleeding. Loosen the tourniquet, but do not remove the tourniquet, while applying conventional methods of controlling bleeding. If conventional methods are not able to control hemorrhage, retighten the tourniquet until the bleeding stops.

NOTE: By converting the tourniquet to a pressure dressing or controlling the bleeding by other methods, you may be able to save the limb of the casualty if the tourniquet has not been in place for six hours. If tourniquet has been in place for more than six hours, **do not** remove the tourniquet.

g. **Intravenous Fluids**. Determine if the casualty requires fluid resuscitation (Lesson 6). Use your initial assessment, the casualty's radial pulse, and the casualty's mental status to determine if fluid resuscitation is required. These items of information can be determined even in the typical noisy and chaotic battlefield environment.

(1) If the casualty has only superficial wounds, intravenous (IV) resuscitation is not necessary, but oral fluid hydration should be encouraged. Over 50 percent of casualties are in this category.

(2) If the casualty has a significant wound to an extremity or to the trunk (neck, chest, abdomen, or pelvis) and the casualty is coherent and has a palpable radial pulse, initiate a saline lock. Do not administer intravenous fluids at this time, but continue to monitor the casualty. Begin administering fluids intravenously if the casualty's mental status (AVPU) decreases or his radial pulse is no longer detectable.

NOTE: If you can no longer feel the casualty's radial pulse, his blood pressure has probably dropped below 80 mmHg (millimeters of mercury). This is a sign that the casualty is suffering from hypovolemic shock (decreased amount of blood in the circulatory system).

NOTE: An upper extremity (arm) is the preferred site for the saline lock. **Do not** use a site distal to (below) a significant wound. See paragraph 5-2 for a definition of the term "distal."

(3) If the casualty does not have a radial pulse, ensure that the bleeding has been controlled (direct pressure, pressure dressings, hemostatic bandage, or tourniquet, as needed). Initiate a saline lock and begin administering intravenous fluids (one IV bag contains 500 milliliters [ml] of Hextend®) as rapidly as possible. Recheck the casualty's pulse in 30 minutes.

(a) If the radial pulse has returned, do not give any additional fluids. Monitor the casualty's pulse as frequently as possible.

(b) If the radial pulse does not return, give an additional 500 ml of Hextend® and evacuate the casualty as soon as possible.

NOTE: If the second IV bag has been administered and there is still no radial pulse, use your remaining supplies to treat other casualties.

h. **Other Wounds**. Identify and treat other wounds. Dress all wounds, including exit wounds. Remember to remove only the minimum of clothing required to expose and treat the injuries. Protect the casualty against the environment (hot and cold temperatures).

i. **Fractures**. Splint any obvious long bone fractures.

j. **Combat Pill Pack**. Administer pain medications and antibiotics (combat pill pack) to any soldier wounded in combat. Do not administer your own pack since you may need them yourself and you have no extra combat pill packs in your aid bag.

NOTE: Each soldier will be issued a combat pill pack prior to deployment on tactical missions.

k. **Field Medical Card**. Initiate a DD Form 1380, U.S. Field Medical Card (FMC), to document the casualty's injuries and the treatment given (Lesson 7).

1-5. PERFORMING COMBAT CASUALTY EVACUATION CARE

Prepare the casualty for evacuation, if needed.

a. If the casualty is to be evacuated by medical transport, you may need to prepare a MEDEVAC request (Lesson 8).

b. If medical evacuation is not available, prepare the casualty for evacuation using nonmedical means (CASEVAC). If the casualty is unable to walk, transport the casualty using a SKED® or improvised litter (see Lesson 9).

c. If an unconscious casualty is evacuated on a nonmedical vehicle, the combat lifesaver may need to accompany the casualty to monitor the casualty's airway, breathing, bleeding, and IV and to reinforce the casualty's dressings as needed.

Continue with Exercises

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LESSON EXERCISES: LESSON 1

INSTRUCTIONS: Answer the following exercises by marking the letter of the response that **best** answers the question or **best** completes the sentence or by writing the answer in the space provided.

After you have answered all of the exercises, check your answers against the "Solutions to Lesson Exercises" at the end of the exercises. For each exercise answered incorrectly, reread the lesson material referenced.

1. Of the deaths that occur during ground combat, about what percent die before reaching a medical treatment facility?

   a. 10 percent.
   b. 50 percent.
   c. 75 percent.
   d. 90 percent.

2. Your unit is in ground combat. You see a soldier fall as though he has been shot. Your primary duty is to:

   a. Continue firing at the enemy.
   b. Stop firing and go to the fallen soldier.

3. Of the following types of deaths occurring during ground combat and before reaching a medical treatment facility, select the type of preventable death from which more soldiers died.

   a. Tension pneumothorax.
   b. Blocked airway.
   c. Bleeding from wounds to the extremities.
   d. Heart attack.

4. When performing care under fire, which of the following can be rendered before moving the casualty?

   a. Perform cardiopulmonary resuscitation (CPR).
   b. Apply a tourniquet to control bleeding.
   c. Perform needle chest decompression to relieve tension pneumothorax.
   d. Administer the combat pill pack to control pain and infection.

5. You and a casualty are under fire. The casualty is conscious and able to fire his weapon. What should you tell him to do?

_____

6. You and a casualty are under fire. The casualty has a severe wound to the arm. You can administer treatment without endangering the mission or yourself. What treatment should you administer?

_____

7. You have been wounded and are still under enemy fire. You are unable to return fire and there is no safe cover nearby. What should you do?

_____

8. You can move a casualty out of enemy fire. Should you try to retrieve his weapon also?

   a. Yes.
   b. No.

9. A nasopharyngeal air is inserted to maintain the casualty's airway as part of:

   a. Care under fire.
   b. Tactical field care.
   c. Both care under fire and tactical field care.

10. What is in the combat pill pack that you and other soldiers carry in combat?

_____

11. A casualty has a significant wound to his leg. The casualty is coherent and has a palpable radial pulse. The wound has been dressed and the bleeding is controlled. What should you do now?

   a. Nothing, unless the casualty looses consciousness.
   b. Initiate a saline lock.
   c. Initiate a saline lock and begin administering intravenous fluids.

12. Why must a penetrating chest wound be sealed?

a. To keep air from entering through the wound.
b. To keep air from escaping through the wound.
c. To control bleeding.

13. You are going to administer a combat pill pack to a casualty. You should administer:

a. The casualty's pack.
b. Your personal pack.
c. A pack from your aid bag.

14. You are accompanying an unconscious casualty during evacuation. The casualty has an IV. What should you do?

a. Monitor the casualty's breathing.
b. Monitor bleeding from the casualty's wounds.
c. Monitor the casualty's IV.
d. All of the above.

Check Your Answers on Next Page

SOLUTIONS TO LESSON EXERCISES: LESSON 1

1. d (para 1-1)
2. a (para 1-1, box)
3. c (Table 1-1)
4. b (para 1-3d(2))
5. Return fire (para 1-3c(3))
6. Tourniquet (para 1-3d(2))
7. Play dead (para 1-3c(3))
8. a (para 1-3d(1))
9. b (para 1-4d(2)(c))
10. Pain medication and antibiotics (para 1-4j)
11. b (para 1-4g(2))
12. a (para 1-4e(3))
13. a (para 1-4j)
14. d (para 1-5c)

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LESSON 2

EVALUATING A CASUALTY

TASK

Evaluate the simulated casualty for life-threatening conditions.

CONDITIONS

Given a written situation concerning a casualty under combat conditions and possible responses.

STANDARDS

Select the correct response based upon instruction given in Subcourse IS0871.

REFERENCES

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 4-25.11, First Aid.
FM 100-14, Risk Management.

2-1. INTRODUCTION

This lesson assumes that you, the combat lifesaver, are receiving or returning fire, there is a wounded soldier in need of help, and you can provide assistance without endangering your primary (combat) mission.

WARNING

If there are any signs of nerve agent poisoning, stop the evaluation, take the necessary nuclear, biological, and chemical (NBC) protective measures, and then resume appropriate first aid measures.

2-2. ACTIONS BEFORE APPROACHING THE CASUALTY

Take the following actions before approaching the casualty on the battlefield. Remember to protect yourself.

a. Scan the area for potential danger.

(1) Survey the area for small arms fire.

(2) Detect area for fire or explosive devices.

(3) Determine threat for chemical or biological agents.

(4) Survey buildings, if any, for structural stability.

b. Determine the best route of access to the casualty and the best route of egress. If you need to move the casualty to a safer area, be sure to select an area that provides optimum cover and concealment. Plan your evacuation route prior to exposing yourself to possible hostile fire.

c. Request covering fire during movement to and from the casualty's location to reduce the risk to yourself and the casualty.

d. Anticipate the type of injuries the casualty may have received and what care will probably be needed. Did the casualty fall from a wall? (If so, the casualty may have broken bones.) Was there an explosion? (If so, the casualty may have blast effects.) Was there only small arms fire? (If so, the casualty may have bleeding wounds.)

e. Anticipate how your actions (movement, noise, light, and so forth) may affect the enemy's fire.

f. Decide what care you can administer to the casualty when you reach him and what care will have to wait until you have returned the casualty to a place of safety.

2-3. INITIAL ACTIONS

Remember, if you and the casualty are still under effective hostile fire, return fire as directed or required. Do not expose yourself to enemy fire in order to provide care.

a. If possible, determine if casualty is alive or dead.

b Provide tactical care to the live casualty.

(1) Suppress enemy fire. Reducing enemy fire may be more important to the casualty's survival than the treatment you can provide.

(2) If the casualty can function, direct him to return fire, move to cover, and administer self-aid.

(3) If the casualty is unable to return fire or move to safety and you cannot assist him, tell the casualty to “play dead.”

c. When the combat situation allows you to safely assist the casualty:

(1) Approach the casualty by the safest route.

(2) Form a general impression as you approach the casualty (extent of injuries, chance of survival, and so forth).

(3) If you decide to move the casualty (and yourself) to a safer location, take the casualty's weapon and other mission-essential equipment with you, if possible.

NOTE: The remainder of this lesson assumes that you and the casualty are in a protected area or that you have moved the casualty to a protected area.

2-4. CHECKING THE CASUALTY FOR RESPONSIVENESS

a. To check the casualty for responsiveness:

(1) Ask in a loud, but calm, voice: “Are you okay?” Gently shake or tap the casualty on the shoulder.

(2) Determine level of consciousness by using AVPU (A = Alert; V = responds to Voice; P = responds to Pain; U = Unresponsive). See paragraph 1-4c of Lesson 1 for additional information.

NOTE: If the casualty is alert or responds to voice, do not check the casualty's response to pain.

NOTE: To check a casualty’s response to pain, rub his breastbone briskly with a knuckle or squeeze his first.

b. If the casualty is conscious, ask where it hurts or where his body feels different than usual. This helps to determine the level of responsiveness and provides you with information that can be used when treating the casualty.

c. If the casualty is unconscious, position the casualty and open his airway (Lesson 3). Opening his airway may result in the casualty's level of consciousness being upgraded.

2-5. POSITIONING THE CASUALTY ON HIS BACK

Position the casualty on his back if he is not already lying on his back. To turn a casualty onto his back, perform the following steps.

a. Kneel beside the casualty with your knees near his shoulders, leaving space to roll the body.

b. Raise the casualty's arm that is nearest to you above the casualty's head.

c. Adjust the casualty's legs so that they are together and straight or nearly straight.

d. Place one of your hands under the back of the casualty's head and neck for support.

e. With your free hand, reach across the casualty's back and grasp the casualty under the arm (far armpit area).

f. Pull steadily and evenly toward yourself, keeping the head and neck in line with the torso.

g. Once the casualty is rolled onto his back, place his arms at his sides.

NOTE: This method of rolling the casualty is used to minimize further injury to the casualty's spine in case he has suffered an injury to the head, neck, or back.

2-6. CHECKING THE CASUALTY FOR BREATHING

Check the casualty for breathing (see Lesson 3).

NOTE: It is assumed that you and the casualty are in a protected area. If you are still exposed to enemy fire, apply a tourniquet to control any severe bleeding and move the casualty and yourself to a safe location before checking for breathing.

NOTE: If the casualty is conscious and talking, his breathing is satisfactory for now. However, continue to monitor the casualty's breathing since swelling throat tissue, bleeding into the throat, or other injuries could require you to establish an airway and perform rescue breathing.

a. Look, listen and feel for respirations. If the casualty is breathing, determine if the breathing rate is normal, rapid, or slow.

(1) Place your ear about one inch above the casualty's mouth and nose. Listen for breathing. Look at the casualty's chest to see if it is rising and falling.

(2) Feel for breathing by placing your hand or cheek about one inch above the casualty's mouth and nose. Feel for air being exhaled.

NOTE: If the casualty is not breathing, stop the evaluation to restore the airway.

NOTE: In a combat situation, if you find a casualty with no signs of life (no breathing and no pulse), do not attempt to restore the airway. Do not attempt to perform cardiopulmonary resuscitation. Do not continue first aid measures.

(3) Count the casualty's respirations (one inhalation and one expiration together is one respiration) for 15 seconds. If the casualty has less than two respirations during the 15 seconds, a nasopharyngeal airway may be required.

b. Expose the casualty's chest to look for equal rise and fall of the chest and for wounds.

(1) If the casualty's chest is not rising and falling evenly, make a mental note and proceed with the evaluation.

(2) If the casualty has a penetrating chest wound and is breathing or making an effort to breathe, stop the evaluation and apply an occlusive dressing (see Lesson 4) to seal the penetrating wound.

NOTE: Check for entrance and exit wounds to the chest. If an entrance wound and an exit wound are present, both must be sealed.

(3) If the casualty has a penetrating chest wound, is not breathing, and is making no effort to breathe, do not attempt to treat the injury.

2-7. CHECKING THE CASUALTY FOR BLEEDING

a. Look for blood-soaked clothes.

b. Look for entry and exit wounds.

c. Place your hands behind the casualty's neck and pass them upward toward the top of the head. Note whether there is blood or brain tissue on your hands from the casualty's wounds.

d. Place your hands behind the casualty's shoulders and pass them downward behind the back, thighs, and legs. Note whether there is blood on your hands from the casualty's wounds.

e. If life-threatening bleeding from an extremity (arm, forearm, thigh, or leg) is present, stop the evaluation and control the bleeding using a tourniquet (see Lesson 5).

2-8. ADDITIONAL CARE

a. After any needed immediate live-saving aid has been administered, move the casualty to an area where additional aid can be given.

b. If possible, send a soldier to find a combat medic.

c. Administer additional care until the combat medic arrives or until you are told to resume your combat duties. Now that you are in a safe area, you can render care that you could not administer while under fire.

NOTE: When the combat medic arrives, he may require your assistance, especially if several soldiers require treatment.

d. Reassure the casualty. Show confidence in your actions.

e. If you have administered the needed care and a combat medic has not arrived, initiate a Field Medical Card for the casualty (see Lesson 7).

f. If needed, request aeromedical evacuation (see Lesson 8) and/or evacuate the casualty (see Lesson 9).

2-9. CLOSING

a. **Preventable Deaths**. As discussed in Lesson 1, the three primary preventable causes of death from injury on the battlefield are:

(1) Severe bleeding from an arm or leg wound (apply a tourniquet or emergency trauma dressing).

(2) Collapsed lung (perform needle chest decompression).

(3) Blockage of the nose and throat from an injury to the face (insert a nasopharyngeal airway).

b. **Special Situations**. Listed below are some situations in which you should avoid treating the casualty while under fire.

(1) Your own life is in imminent danger.

(2) There are other soldiers in your area who require treatment more urgently.

(3) The casualty does not have vital (life) signs; that is, the casualty is not breathing, does not have a pulse, and is not moving.

(4) The casualty's injury is not survivable unless the casualty can be evacuated to a medical treatment facility within a given time and evacuation is not possible within the time limitation. Examples of such injuries are:

(a) Penetrating head injuries with brain tissue exposed.

(b) Severe burns covering a large part of the body.

(c) Mutilating blast injuries.

Continue with Exercises

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LESSON EXERCISES: LESSON 2

INSTRUCTIONS: Answer the following exercises by marking the letter of the response that **best** answers the question or **best** completes the sentence or by writing the answer in the space provided.

After you have answered all of the exercises, check your answers against the "Solutions to Lesson Exercises" at the end of the exercises. For each exercise answered incorrectly, reread the lesson material referenced.

1. You are going to the aid of an injured soldier. You are under fire. What should be your first action.

   a. Scan the area for possible dangers.
   b. Check the soldier's pulse.
   c. Check the soldier for breathing.
   d. Check the soldier for bleeding.

2. The casualty is lying on his back. You see a penetrating wound to the front of a casualty's chest. Which of the following is true?

   a. You only need to seal the visible chest wound.
   b. You need to check for both entrance and exit wounds to the chest and seal both.

3. When should you plan how to move a wounded soldier out of enemy fire?

   a. Before you leave your place of safety to go to the wounded soldier.
   b. As soon as you reach the wounded soldier.
   c. As soon as you have treated the life-threatening conditions.
   d. As soon as you have treated all of the casualty's injuries.

4. You have reached a wounded casualty under fire. The casualty has a penetrating chest wound, is not breathing, and is making no effort to breathe. Which of the following is the proper procedure?

   a. Begin performing cardiopulmonary resuscitation.
   b. Seal the chest wound(s).
   c. Move the casualty to a place of safety.
   d. Do not try to treat the casualty.

5. You are determining the casualty's level of responsiveness. The casualty tells you that he has been shot. Should you test the casualty's responsiveness to pain?

   a. Yes, a full testing is required.
   b. No, you already have sufficient information to make a determination that the casualty is alert.

6. When evaluating a casualty, the casualty should be in what position?

   a. On his back (supine).
   b. On his chest (prone).
   c. Lying on his injured side.
   d. Lying on his uninjured side.

7. Which of the following should you treat first if exposed to enemy fire?

   a. Severe bleeding.
   b. Breathing difficulties with a penetrating chest wound.

8. Which of the following should you treat first if you and the casualty are in a protected area?

   a. Severe bleeding.
   b. Breathing difficulties with a penetrating chest wound.

9. How does evaluation and treatment of a casualty in a secure situation differ from that in a combat (under fire) situation?

   _____

   _____

   _____

   _____

10. What are the three principal preventable causes of death on the battlefield?

_____

_____

_____

11. What are three situations in which you would not treat a casualty?

_____

_____

_____

12. Practice performing evaluations on a simulated casualty.

Check Your Answers on Next Page

SOLUTIONS TO LESSON EXERCISES: LESSON 2

1. a (para 2-2a)

2. b (paras 2-6b(2), b(2) Note)

3. a (para 2-2b)

4. d (para 2-6b(3); this casualty will not survive and you may expose yourself to enemy fire.

5. b (para 2-4a(2) first Note)

6. a (para 2-5)

7. a (para 2-6 first Note)

8. b (paras 2-6, 2-7, 2-6 first Note)

9. In a secure environment, the enemy situation will not be a factor. This will allow you to focus more on the evaluation, treatment ,and evacuation of the casualty (para 2-8c)

10. Severe bleeding from an arm or leg wound.
    Collapsed lung (tension pneumothorax).
    Blockage of the nose and throat from an injury to the face. (para 2-9a)

11. [Any three of the following]
    Your own life is in imminent danger.
    There are other casualties in the area who require treatment more urgently.
    The casualty does not have vital signs.
    The casualty's injury is not survivable.
    Your combat duties do not allow you to treat the casualty. (paras 2-9b, 1-1 box)

12. You should have perform the steps in the following checklist in the sequence given.

CHECKLIST FOR EVALUATING A CASUALTY

Situation: You have spotted a casualty (simulated). Your area is under fire. The casualty is lying in a prone position.

Supplies: Combat Lifesaver Medical Equipment Set.

	GO	NO-GO
Establishes security of the site.	_____	_____
Forms an impression of the casualty's condition.	_____	_____
Checks for responsiveness.	_____	_____
Positions the casualty on his back.	_____	_____
Checks the casualty for breathing.	_____	_____
Checks the casualty for bleeding.	_____	_____
Sends a soldier to get medical help.	_____	_____
Describes situations where first aid would not be administered.	_____	_____

OVERALL EVALUATION (A no-go on any step gives an overall evaluation of no-go.)	GO	NO GO

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LESSON 3

OPENING AND MANAGING A CASUALTY'S AIRWAY

TASK

Open and manage the airway of a simulated casualty.

CONDITIONS

Given a simulated casualty and a combat lifesaver medical equipment set.

STANDARDS

Score a GO on the performance checklist.
Additional injuries to the casualty are prevented.

REFERENCES

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 4-25.11, First Aid.

3-1. MOVING TO SAFETY

If a casualty is not breathing, you must take measures to restore respiration (breathing) as soon as possible. You must be in a situation in which you and the casualty are not under hostile fire before treating breathing problems. If you are under enemy fire, quickly move yourself and the casualty to a location where you can safely administer measures to restore breathing. (See Lessons 1 and 2.)

3-2. CHECKING THE CASUALTY FOR RESPONSIVENESS

If the casualty appears to be unconscious, check the casualty for responsiveness. Ask in a loud, but calm, voice: “Are you okay?” Also, gently shake or tap the casualty on the shoulder. If the casualty does not respond, you will need to position the casualty and open his airway.

3-3. POSITIONING THE CASUALTY

If the casualty is not on his back, turn him onto his back using the following procedure.

a. Kneel beside the casualty.

b. Raise the casualty's arm that is nearest to you above the casualty's head.

c. Adjust the casualty's legs so that they are together and straight or nearly straight.

d. Place one of your hands under the casualty's head and neck.

e. With your free hand, reach across the casualty's back and grasp the casualty under the arm (far armpit area).

f. Pull steadily and evenly toward yourself, keeping the head and neck in line with the torso.

g. Roll the casualty as a single unit. The head and neck should stay in line.

h. Once the casualty is rolled onto his back, place his arms at his sides.

NOTE: This method of rolling the casualty is used to minimize further injury to the casualty's spine in case he has suffered an injury to the head, neck, or back.

3-4. OPENING THE CASUALTY'S AIRWAY

When a casualty becomes unconscious, all of his muscles may relax. This relaxation may cause the casualty's tongue to slip to the back of his mouth and block his airway. Removing the blockage and opening the airway may allow the casualty to resume breathing on his own. Two methods of opening the casualty's airway are the head-tilt/chin-lift method and the jaw thrust method. If you suspect that the casualty has suffered a neck or spinal injury, use the jaw thrust method.

NOTE: Even if the casualty is still breathing, positioning the airway will allow him to breathe easier.

NOTE: If you see something in the casualty's mouth (such as foreign material, loose teeth, dentures, facial bone, or vomitus) that could block his airway, use your fingers to remove the material as quickly as possible.

a. **Head-Tilt/Chin-Lift Method.**

CAUTION: Do not use this method if a spinal or neck injury is suspected.

(1) Kneel at the level of the casualty's shoulders.

(2) Place one of your hands on the casualty's forehead and apply firm, backward pressure with the palm of your hand to tilt the head back.

(3) Place the fingertips of your other hand under the tip of the bony part of the casualty's lower jaw and bring the chin forward. See figure 3-1.

(4) Lift the chin forward until the upper and lower teeth are almost brought together. The mouth should not be closed as this could interfere with breathing if the nasal passages are blocked or damaged. If needed, the thumb may be used to depress the casualty's lower lip slightly to keep his mouth open.

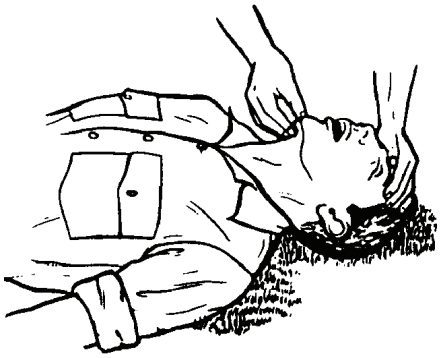

Figure 3-1. Opening the airway using the head-tile/chin-lift method.

CAUTION: Do not use the thumb to lift the lower jaw.

CAUTION: Do not press deeply into the soft tissue under the chin with the fingers as this could close the casualty's airway.

CAUTION: Do not completely close the casualty's mouth.

b. **Jaw Thrust Method**. Use this method if a spinal or neck injury is suspected.

(1) Kneel at the top of the casualty's head.

(2) Rest your elbows on the surface on which the casualty is lying (ground, and so forth).

(3) Place one hand on each side of the casualty's lower jaw at the angle of the jaw, below the ears.

(4) Stabilize the casualty's head with your forearms.

(5) Use the index fingers to push the angles of the casualty's lower jaw forward.

(6) Use the thumb to retract the casualty's lower lip to keep the casualty's mouth open, if necessary. See figure 3-2.

CAUTION: Do not tilt or rotate the casualty's head.

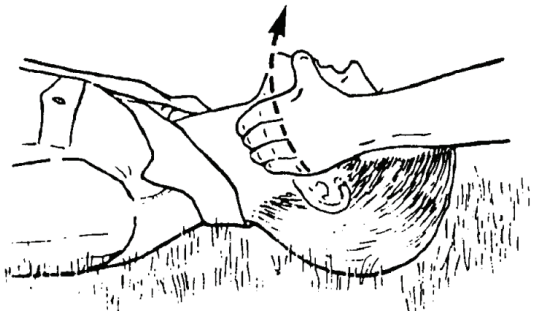

Figure 3-2. Opening the airway using the jaw thrust method.

3-5. CHECKING THE CASUALTY FOR BREATHING

While maintaining the open airway position (head-tilt/chin-lift or jaw thrust), place your ear over the casualty's mouth and nose and look toward the chest and abdomen. Figure 3-3 shows checking for breathing while maintain the head-tilt/chin-lift.

a. Look to see if the casualty's chest rises and falls.

b. Listen for air escaping during exhalation.

c. Feel for the flow of air on the side of your face.

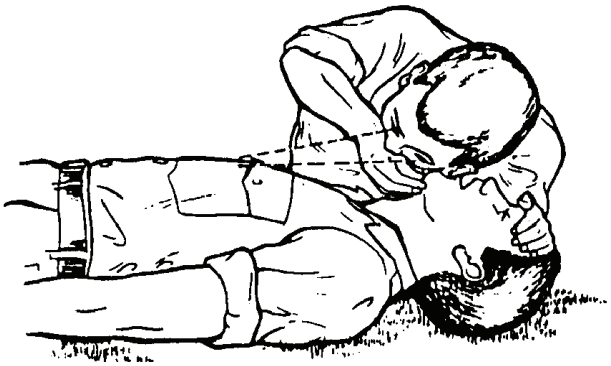

Figure 3-3. Checking for signs of breathing while maintaining an open airway (head-tilt/chin-lift).

d. Take appropriate action.

(1) If the casualty is not breathing, begin rescue breathing.

(a) Gently pinch the casualty's nostrils closed.

(b) Administer two full breaths (mouth-to-mouth) and check the casualty's carotid (neck) pulse.

(c) If the casualty has a pulse, continue administering rescue breathing at the rate of one breath every five seconds. Check the casualty's pulse every 12 breaths or so (about every minute).

(d) If a check shows that the casualty does not have a carotid pulse, begin administering cardiopulmonary resuscitation (CPR) if you know how.

NOTE: In a tactical situation, if a casualty is found with no pulse and no respiration, cardiopulmonary resuscitation is not recommended.

(2) If the casualty is breathing, count the number of respirations for 15 seconds. If the casualty is unconscious, or if his respiratory rate is less than two breaths in 15 seconds, or if the casualty is making snoring or gurgling sounds, insert a nasopharyngeal airway (paragraph 3-6) and place the casualty in the recovery position (paragraph 3-7).

3-6. INSERTING A NASOPHARYNGEAL AIRWAY

A nasopharyngeal airway (see figure 3-4) provides an open (patent) airway and helps to keep the tongue from falling to the back of the mouth and blocking the airway.

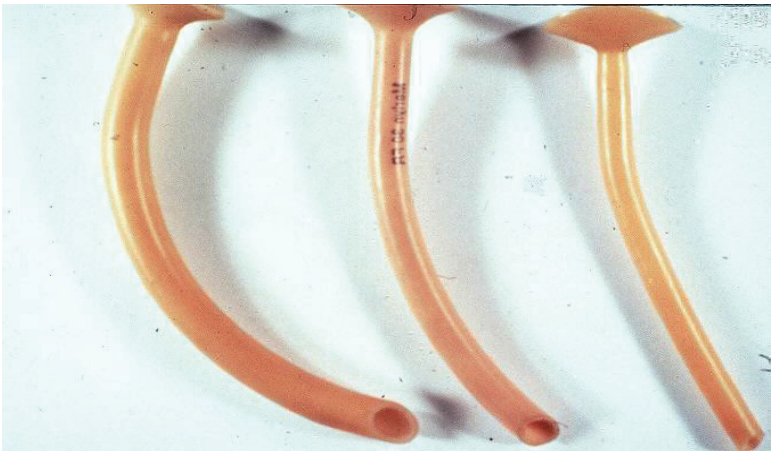

Figure 3-4. Examples of nasopharyngeal airways.

CAUTION: Do not use the nasopharyngeal airway if the roof of the casualty's mouth is fractured or brain matter is exposed.

CAUTION: Do not use the nasopharyngeal airway if there is clear fluid coming from the ears or nose. This may be cerebrospinal fluid (CSF). Cerebrospinal fluid indicates a possible skull fracture.

a. Place the casualty on his back with his face up (see paragraph 3-3).

b. Lubricate the tube with sterile lubricating jelly or water (figure 3-5).

Figure 3-5. Lubricating the nasopharyngeal airway tube with sterile lubricating jelly.

c. Insert the airway.

(1) Expose the opening of the casualty's nostril (figure 3-6).

Figure 3-6. Exposing the opening of the casualty's nostril.

NOTE: The casualty's right nostril is usually used.

(2) Insert the tip of the airway tube into the nostril.

(3) Position the tube so that the bevel (pointed end) of the airway faces toward the septum (the partition inside the nose that separates the nostrils).

(4) Insert the airway into the nostril and advance it until the flange rests against the nostril (figure 3-7).

Figure 3-7. Airway inserted with flange resting against the nostril.

CAUTION: Never force the airway into the casualty's nostril. If resistance is met, pull the tube out and attempt to insert it in the other nostril. If neither nostril will accommodate the airway, go to step d.

d. Place the casualty in the recovery position and seek medical aid.

3-7. PLACING THE CASUALTY IN A RECOVERY POSITION

The recovery position (figure 3-8) allows blood and mucus to drain out of the casualty's nose and mouth and not to drain back into the airway. To place a casualty in the recovery position:

a. Roll the casualty, as a single unit, onto his side.

b. Place the hand of the casualty's lower arm under his chin.

c. Flex the casualty's upper leg.

Figure 3-8. Casualty in the recovery position.

Continue with Exercises

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LESSON EXERCISES: LESSON 3

INSTRUCTIONS: Answer the following exercises by marking the letter of the response that **best** answers the question or **best** completes the sentence or by writing the answer in the space provided.

After you have answered all of the exercises, check your answers against the "Solutions to Lesson Exercises" at the end of the exercises. For each exercise answered incorrectly, reread the lesson material referenced.

1. You find a soldier who appears to be unconscious. Which of the following should be your first action in rendering aid to this person?

   a. Check his pulse.
   b. Call out, "Are you okay?" and gently shake his shoulder.
   c. Begin inserting a nasopharyngeal airway.
   d. Open his airway.
   e. Begin performing mouth-to mouth resuscitation.

2. You are going to check the casualty to see if he is breathing. How should you position the casualty?

   a. On his back.
   b. On his stomach.
   c. On his right side.
   d. On his left side.

3. Which method of opening the airway is preferred if you believe that the casualty has an injured neck or spine?

   a. Head-tilt/chin-lift.
   b. Jaw thrust.

4. In the head-tilt/chin-lift method of opening a casualty's airway, one hand is used to press on his forehead. How is the thumb on the opposite hand used?

   a. Lift the casualty's chin by hooking the thumb under the casualty's jaw.
   b. Hook over the casualty's bottom teeth to ensure a good grip on his chin.
   c. Press against the casualty's nose to seal off his nostrils.
   d. Keep the casualty's lower lip depressed, if needed.

5. When performing the head-tilt/chin-lift method of opening a casualty's airway, you _____ allow your fingers to press deeply in the soft tissues under the chin.

   a. Should.
   b. Should not.

6. When performing a jaw thrust on a casualty lying on the ground, your elbows should be resting on the:

   a. Casualty's chest.
   b. Casualty's abdomen.
   c. Ground.

7. When rolling a casualty, one of your hands is used to support the casualty's head and neck. What should you do with the other hand.

   a. Reach across the casualty's chest, grab under the casualty's arm, and pull the casualty toward you.
   b. Place your hand under the casualty's side that is nearest to you and push the casualty away from you.

8. When you check for breathing, you should:

   a. Watch the casualty's chest to see if it rises and falls.
   b. Listen for sounds of breathing.
   c. Feel for any exhaled breath blowing against your face.
   d. Do all of the above.

9. What are three indicators that a nasopharyngeal airway should be inserted?

   _____

   _____

   _____

10. What should you do with the nasopharyngeal tube before inserting it into the casualty's nostril?

    a. Lubricate the outside of the tube with antibacterial ointment.
    b. Rub the outside of the tube with an iodine solution.
    c. Pour alcohol through the inside of the tube.
    d. Lubricate the outside of the tube with water or sterile lubricating jelly.
    e. None of the above; the tube is inserted as is.

11. Normally, the nasopharyngeal tube is inserted into the casualty's _____ nostril.

    a. Left.
    b. Right.

12. You are inserting a nasopharyngeal tube into the casualty's nostril when resistance is met. What should you do?

    a. Continue inserting the tube.
    b. Begin twisting the tube so that it slides around the blockage.
    c. Remove the tube and insert it into the nostril again.
    d. Remove the tube and insert it into the other nostril.
    e. Remove the tube and begin cardiopulmonary resuscitation.

13. Upon successfully inserting a nasopharyngeal airway, the flange of the airway should be:

    a. Inserted as far as possible into the casualty's nostril.
    b. Against the outer part of the casualty's nostril.
    c. About half an inch from the outside of the casualty's nostril.
    d. About an inch from the outside of the casualty's nostril.

14. You have inserted a nasopharyngeal airway. How should you position the casualty?

    a. On his back.
    b. On his stomach.
    c. On his side.

15. If possible, form a group of three. One person plays the role of the casualty, the second plays the role of the combat lifesaver, and the third plays the role of the evaluator (the evaluator uses this lesson as a guide). Practice the following:

    a. Turning the casualty from his stomach onto his back
    b. Performing the head-tilt/chin-lift.
    c. Performing the jaw thrust.
    d. Checking the casualty for breathing.
    e. Placing the casualty in a recovery position.

    After the "combat lifesaver" has completed the procedures correctly, switch roles.

16. If you have access to an appropriate manikin and a nasopharyngeal airway, practice inserting the airway.

Check Your Answers on Next Page

SOLUTIONS TO LESSON EXERCISES: LESSON 3

1. b (para 3-2)
2. a (para 3-3)
3. b (para 3-4)
4. d (para 3-4a(4))
5. b (para 3-4a(4) Second caution)
6. c (para 3-4b(2))
7. a (paras 3-4e, f, g)
8. d (para 3-5a, b, c)
9. Casualty is unconscious
   Casualty's respiration rate is less than 2 breaths every 15 seconds.
   Casualty is making snoring or gurgling sounds.
10. d (para 3-6b)
11. b (para 3-6c(1) Note)
12. d (para 3-6c(4) Caution)
13. b (para 3-6(4)
14. c (paras 3-5d(2), 3-6d, 3-7a)
15. See the following checklists.
16. See the last checklist.

CHECK AND TURN A CASUALTY

Given: Simulated unconscious casualty lying on his stomach (prone position)

		GO	NO-GO
1.	Checks the casualty for responsiveness (shakes or taps shoulder, asks "Are you OK?").	_____	_____
2.	Kneels beside the casualty.	_____	_____
3.	Raises the casualty's near arm above his head.	_____	_____
4.	Straightens the casualty's legs.	_____	_____
5.	Supports the casualty's head and neck with one hand.	_____	_____
6.	Reaches across casualty with free hand, grabs casualty, and rolls casualty toward him in a steady and even manner.	_____	_____
7.	Places the casualty's arms at his side.	_____	_____
	OVERALL EVALUATION (A no-go on any step will result in a no-go for the entire task)	GO	NO-GO

PERFORM A HEAD-TILT/CHIN-LIFT

Given: Simulated unconscious casualty lying on his back with arms at his sides

		GO	NO-GO
1.	Kneels at the casualty's shoulder.	_____	_____
2.	Places one hand on the casualty's forehead and applies firm pressure with the palm to tilt the head back.	_____	_____
3.	Places fingertips of other hand under the casualty's chin and lifts the lower jaw forward.	_____	_____
4.	Pressure from fingers does not interfere with casualty's airway.	_____	_____
5.	Casualty's upper and lower teeth are almost brought together, but the casualty's mouth is not closed. (The thumb on the hand performing the chin-lift can be used to depress the casualty's lower lip, if needed.)	_____	_____
6.	Checks casualty for breathing (looks for rising/falling chest, listens for sounds of breathing, and feels for air flow).	_____	_____
	OVERALL EVALUATION (A no-go on any step will result in a no-go for the entire task)	GO	NO-GO

PERFORM A JAW THRUST

Given: Simulated unconscious casualty lying on his back with arms at his sides

		GO	NO-GO
1.	Kneels at the top of the casualty's head.	_____	_____
2.	Rests elbows on surface (ground, and so forth).	_____	_____
3.	Places one hand on each side of casualty's head and stabilizes the casualty's head with his forearms.	_____	_____
4.	Places hands at the angles of the casualty's lower jaw.	_____	_____
5.	Pushes the angles of the lower jaw forward using his index fingers.	_____	_____
6.	Casualty's upper and lower teeth are almost brought together, but the casualty's mouth is not closed. (The thumb can be used to depress the casualty's lower lip, if needed.)	_____	_____
7.	Checks casualty for breathing (looks for rising/falling chest, listens for sounds of breathing, and feels for air flow).	_____	_____
	OVERALL EVALUATION (A no-go on any step will result in a no-go for the entire task)	GO	NO-GO

INSERT A NASOPHARYNGEAL AIRWAY

Given: Simulated unconscious casualty lying on his back with arms at his sides
Nasopharyngeal airway (from combat lifesaver medical equipment set (MES)
Packet of sterile lubricating jelly (from combat lifesaver MES)

		GO	NO-GO
1.	Positions casualty in a face up position.	_____	_____
2.	Lubricates the tube with sterile lubricating jelly.	_____	_____
3.	Exposes the opening of the casualty's right nostril.	_____	_____
4.	Inserts the tip of the airway into the nostril with the bevel toward the septum.	_____	_____
5.	Advances airway until the flange rests against the nostril.	_____	_____
6.	Does not force the airway into the nostril. If resistance is met, pulls out the tube and attempts to insert it in the other nostril.	_____	_____
7.	Places the casualty in the recovery position (on his side with hand under his chin and upper leg flexed to stabilize the casualty).	_____	_____
	OVERALL EVALUATION (A no-go on any step will result in a no-go for the entire task)	GO	NO-GO

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LESSON 4

TREATING PENETRATING CHEST TRAUMA AND DECOMPRESSING A TENSION PNEUMOTHORAX

TASK

Treat a simulated casualty with penetrating chest trauma, including decompressing a tension pneumothorax.

CONDITIONS

Given a simulated conscious or unconscious casualty and a combat lifesaver medical equipment set.

STANDARDS

Score a GO on the performance checklist.
Additional injuries to the casualty are prevented.

REFERENCES

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 4-25.11, First Aid.

Section I. TREATING AN OPEN CHEST WOUND

4-1. INTRODUCTION

The body has two lungs. Each lung is enclosed in a separate airtight area within the chest. If an object punctures the chest wall, air may be allowed to enter the chest. If air enters into one of the formerly airtight areas, the lung within that area cannot fully expand and begins to collapse. In order for both lungs to collapse, both sides of the chest would have to be punctured. Any degree of collapse, however, interferes with the casualty's ability to breathe and reduces the amount of oxygen available for the body to use. Figure 4-1 shows a normal chest and lungs. Figure 4-2 shows a chest and lungs with a penetrating (open) chest wound that has allowed one of the lungs to collapse. The lung does not collapse immediately, but does so gradually as air enters and remains in the chest cavity.

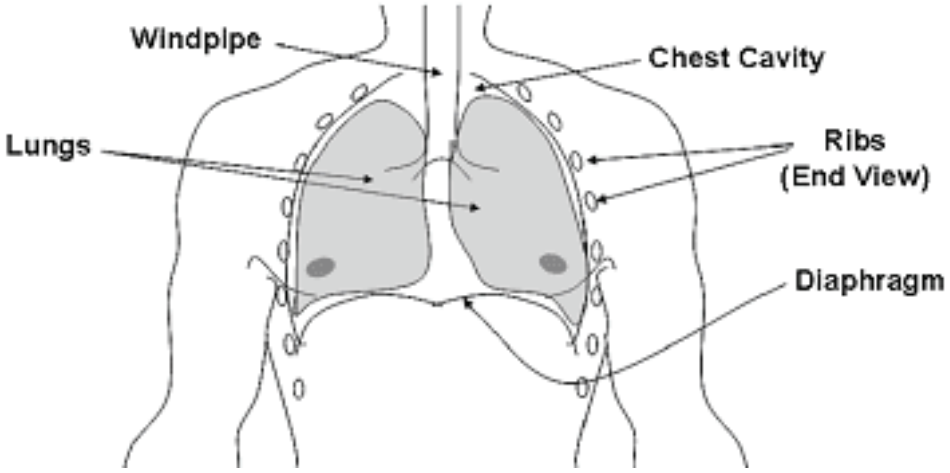
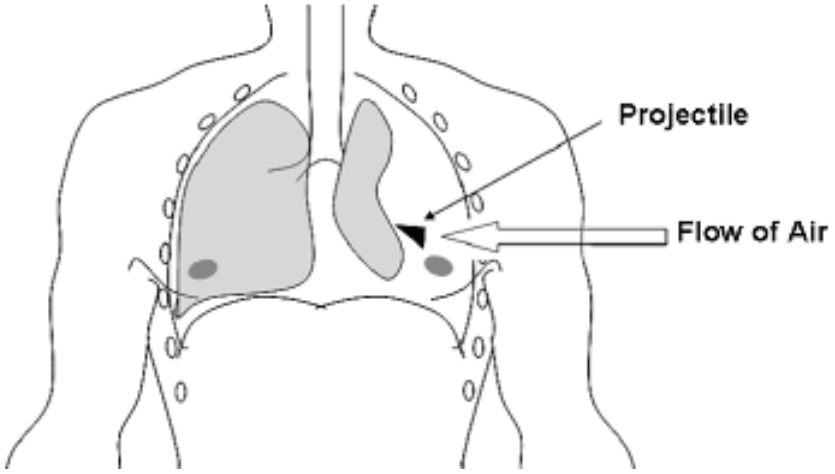


Figure 4-1. Normal chest cavity and lungs.



NOTE: Air flows into the chest cavity from a penetrating wound, collapsing the lung.

Figure 4-2. Collapsed lung.

4-2. SIGNS AND SYMPTOMS OF AN OPEN CHEST WOUND

An open chest wound can be caused by the chest wall being penetrated by a bullet, knife blade, shrapnel, or other object. 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. Some of the signs and symptoms of an open chest wound are given below.

a. Sucking or hissing sounds coming from chest wound. (When a casualty with an open chest wound breathes, air goes in and out of the wound. This air sometimes causes a "sucking" sound. Because of this distinct sound, an open chest wound is often called a "sucking chest wound.")

b. Casualty coughing up blood (hemoptysis).

c. Frothy blood coming from the chest wound. (The air going in and out of an open chest wound causes bubbles in the blood coming from the wound.)

d. Shortness of breath or difficulty in breathing.

e. Chest not rising normally when the casualty inhales. (The casualty may have several fractured ribs, resulting in a flail chest.)

f. Pain in the shoulder or chest area that increases with breathing.

g. Bluish tint of lips, inside of mouth, fingertips, or nail beds (cyanosis). (This color change is caused by the decreased amount of oxygen in the blood.)

h. Signs of shock such as a rapid and weak heartbeat.

4-3. CHECKING FOR OPEN CHEST WOUNDS

Check for both entry and exit wounds. Look for a pool of blood under the casualty's back. Use your hands to feel for wounds.

a. If there is more than one open chest wound, treat the more serious (largest, heaviest bleeding) wound first.

b. If the casualty has an open chest wound on his front and another open chest wound on his back and they both affect the same lung, apply the flutter valve (three taped sides) to the wound on the front. Apply a full seal (all four sides taped) to the wound on the casualty's back.

4-4. EXPOSING THE WOUND

Expose the area around the open chest wound by removing, cutting, or tearing the clothing covering the wound. If clothing is stuck to the wound, do not try to remove the stuck clothing as this may cause additional pain and injury. Cut or tear around the stuck clothing. Do not try to clean the wound or remove objects from the wound.

4-5. SEALING AN OPEN CHEST WOUND

Since air can pass through most dressings and bandages, you must seal the open chest wound with plastic, cellophane, or other nonporous, airtight material to prevent air from entering the chest and collapsing the lung. The wrapper from a field first aid dressing or an emergency trauma dressing can be used. The following steps assume that the wrapper from a field first aid dressing is being used. However, the same general steps can be used with any airtight material.

a. **Prepare the Plastic Wrapper.** Cut open one end of the plastic wrapper of a field dressing. Remove the inner packet (the field dressing wrapped in paper) and put it aside. Continue to cut around the edges of the plastic wrapper until a flat surface is created. This plastic wrapper will be used to make the airtight seal.

NOTE: If there is both an entry wound and an exit wound, the plastic wrapper may be cut to make two seals if the wounds are not too large. The edges of the sealing material should extend at least two inches beyond the edges of the wound.

b. **Have Casualty Exhale.** Tell the casualty to exhale (breathe out) and hold his breath. This forces some of the air out of the chest wound. The more air that can be forced out of the chest before the wound is sealed, the better the casualty will be able to breathe after the wound is sealed.

NOTE: The casualty can resume normal breathing after the wound is sealed.

NOTE: If the casualty is unconscious or cannot hold his breath, place the plastic wrapper over the wound after his chest falls but before it rises.

c. **Apply and Tape the Airtight Material Over Wound.**

(1) Place the inside surface of the plastic wrapper (the side without printing) directly over the hole in the chest to seal the wound.

(2) Check the plastic wrapper to ensure that it extends at least two inches beyond the wound edges in all directions. If the wrapper does not have a two-inch margin, it may not form an airtight seal and may even be sucked into the wound. If the wrapper is not large enough or is torn, use foil, material from a poncho, cellophane, or other airtight material to form the seal.

(3) Tape down three edges of the plastic, usually the top edge and two side edges. This creates a "flutter valve" effect. When the casualty inhales, the plastic is sucked against the wound and air cannot enter the wound. When the casualty exhales, air may be able to exit the wound through the untaped (bottom) edge of the plastic. See figure 4-3.

NOTE: If there are two wounds affecting the same lung, apply airtight material to the other wound and tape down all four sides so that no air can enter or escape the wound.

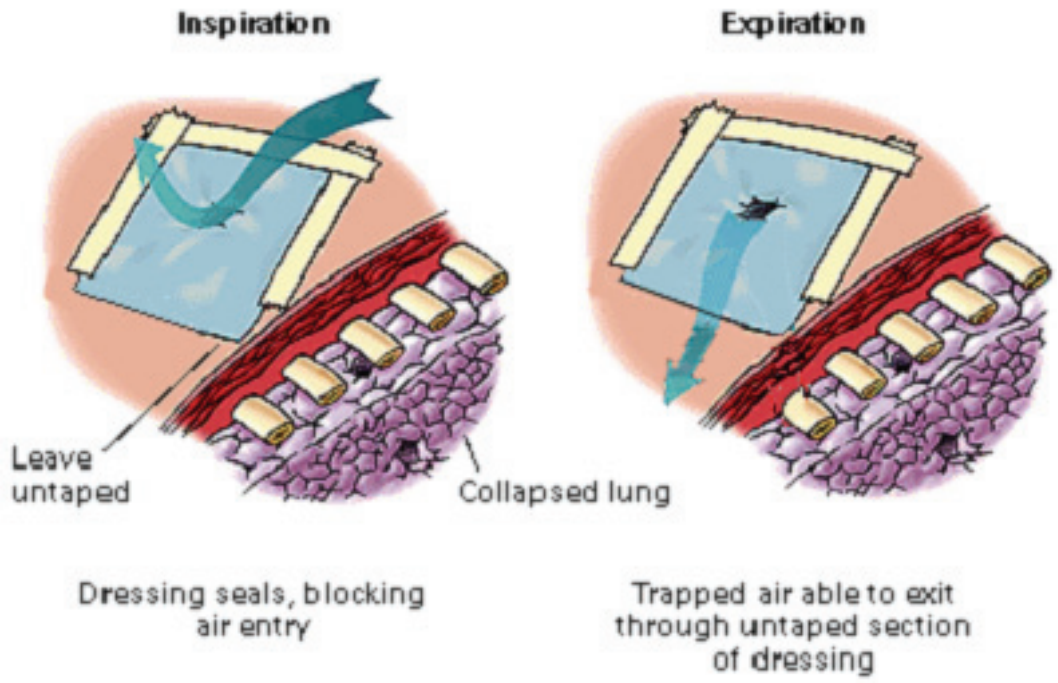


Figure 4-3. Flutter valve effects (inspiration and expiration).

d. **Dress the Wound.** The dressing and bandage will help to protect the airtight material from damage and provide pressure to the wound.

(1) Remove the field dressing from the paper wrapper.

(2) Place the white side of the dressing directly over the plastic wrapper forming the flutter valve. Maintain pressure on the dressing so the plastic wrapper will not slip.

CAUTION: If an object is protruding from the chest wound, do not try to remove it. Place airtight material around the object to form as airtight a seal as possible. Stabilize the object by placing a bulky dressing made from the cleanest material available around the object. Apply improvised bandages to hold the sealing material and dressings in place. Do not wrap the bandages around the protruding object.

(3) Secure the field dressing using the attached bandage tails. If the casualty is able, have him hold the dressing in place while you secure it. If he cannot help, then you must hold the dressing in place while securing it.

(a) Grasp one tail, slide it under the casualty, and bring it back over the dressing.

(b) Wrap the other tail around the casualty in the opposite direction and bring it back over the dressing.

(c) Tighten the tails and tie them with a nonslip knot over the center of the dressing. The knot will provide additional pressure over the wound and will help to keep the seal airtight. The bandages should not be tight enough to interfere with breathing.

CAUTION: If an object is protruding from the wound, tie the knot beside the object, not on it.

4-6. POSITIONING A CASUALTY WITH A DRESSED OPEN CHEST WOUND

Position the casualty on his side (recovery position) with his injured side next to the ground (figure 4-4). Pressure from contact with the ground acts like a splint to the injured side and helps to reduce the pain. (Positioning the casualty on his uninjured side might result in difficulty in breathing.)

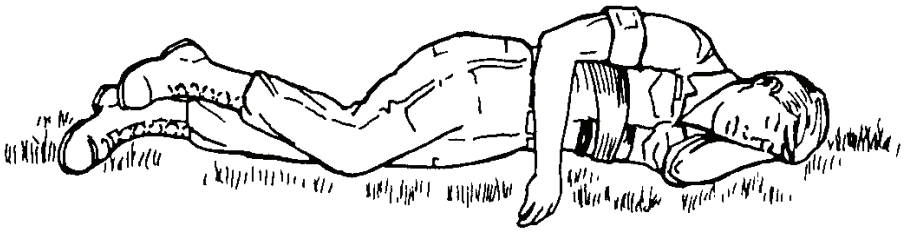


Figure 4-4. Casualty with a dressed open chest wound.

NOTE: The casualty may wish to sit up. If he can breathe easier when sitting up than lying on his side, allow him to sit up with his back leaning against a tree, wall, or other support. If he becomes tired, have him lie on his injured side again.

Section II. TREATING TENSION PNEUMOTHORAX

4-7. TENSION PNEUMOTHORAX

Tension pneumothorax occurs when there is a buildup of air in the plural space and the air cannot escape. As the air outside the lung continues to increase, the affected lung continues to collapse. In addition to causing further collapse of the affected lung, the increasing pressure of the trapped air pushes on the mediastinum (the mass of material separating the two plural sacs). This movement of the mediastinum may compress the uninjured lung, major blood vessels, and the heart. You will need to perform a needle chest decompression to relieve the pressure of the tension pneumothorax.

4-8. SIGNS AND SYMPTOMS OF TENSION PNEUMOTHORAX

Signs and symptoms of tension pneumothorax include the following.

a. Anxiety, agitation, and apprehension.

b. Diminished or absent breath sounds.

c. Increasing difficulty in breathing (dyspnea) with cyanosis (bluish tint of lips, inside of mouth, fingertips, and/or nail beds).

d. Rapid, shallow breathing (tachypnea).

e. Distended neck veins.

f. Abnormally low blood pressure (hypotension) evidenced by a loss of radial pulse.

g. Cool, clammy skin.

h. Decreased level of consciousness (AVPU scale).

i. Visible deterioration.

j. Loss of consciousness.

k. Tracheal deviation (a shift of the windpipe to the right or left).

NOTE: Tracheal deviation is a late sign of tension pneumothorax and will probably not be observed.

NOTE: The above signs and symptoms may be difficult to assess in a combat situation. You must be alert to the possibility of tension pneumothorax whenever a casualty has a penetrating chest wound. Therefore, the sole criterion for treating a tension pneumothorax with needle decompression is a penetrating chest wound with increasing respiratory difficulty.

4-9. NEEDLE CHEST DECOMPRESSION

CAUTION: A needle chest decompression is performed ONLY if the casualty has a penetrating wound to the chest and increasing trouble breathing.

a. **Gather Materials**. You will need the large bore needle and catheter unit from your aid bag. You will also need a strip of tape from the spool in your aid bag.

b. **Locate the Insertion Site**. The insertion site is located in the second intercostal space (the area between the second and third ribs, counting from the top) at the mid-clavicular line (an imaginary line perpendicular to the ribs approximately in line with the casualty's nipple) on the same side of the chest as the penetrating wound. Figure 4-5 shows the location of the second intercostal space. Figure 4-6 shows the mid-clavicular line.

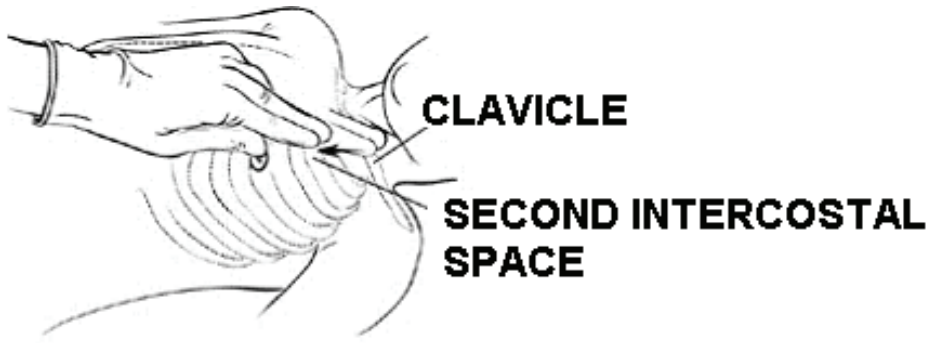


Figure 4-5. Locating the second intercostal space (wound on casualty's left side).

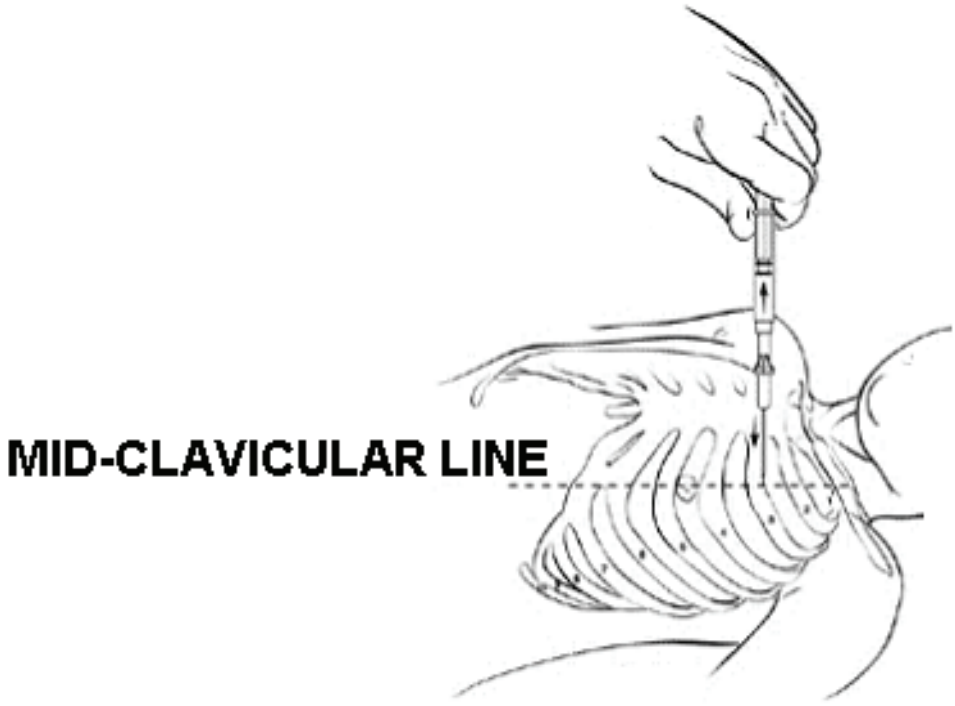


Figure 4-6. Locating the mid-clavicular line (wound on casualty's left side).

c. **Insert the Needle**. Firmly insert the needle into the skin above the top of the third rib into the second intercostal space at a 90-degree angle (figure 4-6). Continue inserting the needle (with its catheter covering) until the chest cavity has been penetrated. You will feel a "pop" as the needle enters the chest cavity. A hiss of escaping air under pressure should be heard.

CAUTION: Proper positioning of the needle is essential to avoid damaging blood vessels and nerves that run along the bottom of each rib.

d. **Withdraw the Needle**. Withdraw the needle while holding the catheter in place. The catheter will remain as a means for air trapped in the chest to escape to the atmosphere.

e. **Secure the Catheter**. Use the strip of tape to secure the catheter hub to the chest wall. Do not cover the opening of the catheter hub. Figure 4-7 illustrates a casualty with a catheter and flutter valve dressing in place.

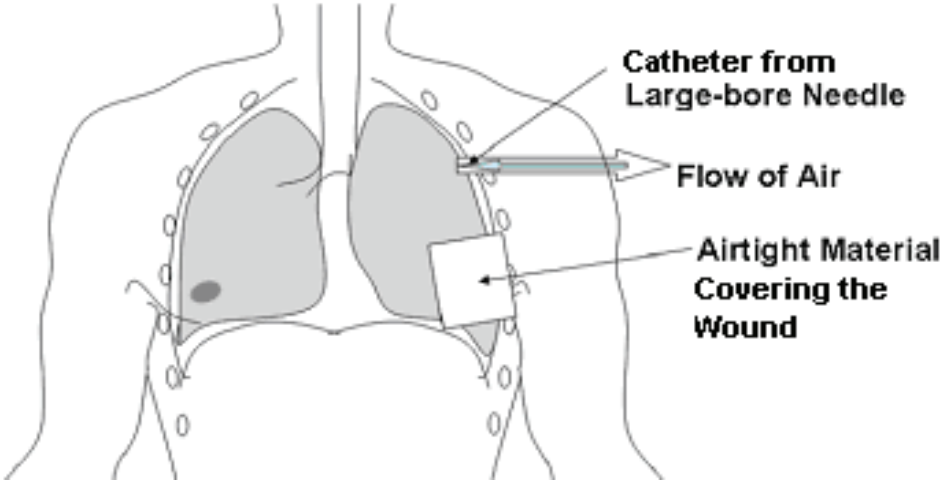


Figure 4-7. Casualty with catheter in place to relieve tension pneumothorax.

f. **Monitor Casualty**. By allowing trapped air to escape from the plural area, the casualty's respirations should quickly improve. Applying airtight material over the wound and having a catheter release trapped air permits the affected lung to re-inflate somewhat. If possible, monitor the casualty until medical care arrives or until the casualty is evacuated to the nearest medical facility. Be prepared to take measures to treat for shock.

g. **Transport Casualty**. If you have performed a needle decompression on a casualty with a tension pneumothorax, the casualty should be transported with his injured side up rather than injured side down. This is done to allow access to the catheter during transport. The casualty may be transported in a sitting-up position if the casualty finds that position more comfortable.

Continue with Exercises

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LESSON EXERCISES: LESSON 4

INSTRUCTIONS: Answer the following exercises by marking the letter of the response that **best** answers the question or **best** completes the sentence or by writing the answer in the space provided.

After you have answered all of the exercises, check your answers against the "Solutions to Lesson Exercises" at the end of the exercises. For each exercise answered incorrectly, reread the lesson material referenced.

1. A soldier has been stabbed in his chest. The blade entered the chest just above his right nipple, penetrated the chest wall, and was withdrawn. Which of the following is most likely to happen?

   a. His right lung will begin to collapse.
   b. His left lung will begin to collapse.
   c. Both of his lungs will begin to collapse.

2. A soldier has suffered a wound to the chest. You are not sure if the chest wall has been penetrated. What should you do?

   a. Leave the wound exposed until the medic arrives.
   b. Dress and bandage the wound as you would a cut on the arm.
   c. Apply airtight material over the wound and tape down three sides of the material, then dress and bandage the wound.
   d. Apply airtight material over the wound and tape down all four sides of the material, then dress and bandage the wound.

3. An open chest wound is sometimes called another name. What is the name?

   _____

4. List three signs or symptoms other than the sound of air passing through the wound that may indicate the casualty has an open chest wound.

   _____

   _____

   _____

5. A soldier has been shot. The bullet passed through the left side of his chest (entrance and exit wounds). Which of the following is the preferred method of treatment.

    a. Apply airtight material over each wound and tape down all four sides of the material for each wound.
    b. Apply airtight material over each wound, tape down three sides of the material for the wound on the front, and tape down all four sides of the material for the wound on the back.
    c. Apply airtight material over each wound and tape down three sides of the material for each wound.

6. A casualty has a circular puncture wound to his chest about one inch in diameter. You have airtight material in the following sizes. You want to use the smallest material that fits the size criteria. Which piece should you use?

    a. Square 2 inches by 2 inches.
    b. Square 4 inches by 4 inches.
    c. Square 6 inches by 6 inches.
    d. Square 8 inches by 8 inches.
    e. Rectangle 8 inches by 12 inches.

7. When positioning a casualty with a chest wound, he should lie:

    a. On his back.
    b. On his front.
    c. On his side, wounded side up.
    d. On his side, wounded side down.

8. Tension pneumothorax has developed in a casualty with a chest injury to his right side. The condition could result in:

    a. Collapse of his right lung.
    b. Compression of his left lung.
    c. Compression of the heart and blood vessels.
    d. Responses a and b above.
    e. Responses a and c above.
    f. Responses a, b, and c above.

9. A casualty with an open chest wound is showing initial signs of tension pneumothorax. You should:

    a. Raise a corner of the dressing covering the untaped side of the airtight material (over the flutter valve).
    b. Insert a large bore needle to decompress the plural sac.
    c. Begin cardiopulmonary resuscitation.

10. Which of the following is a sign or symptom of tension pneumothorax? (More than one response may be correct.)

    a. Skin becomes warmer and dry.
    b. Nail beds of fingers become bluish.
    c. You can no longer feel the casualty's pulse at his wrist.
    d. The casualty's breathing has returned to normal.
    e. The casualty is becoming agitated.
    f. The veins in the casualty's neck appear to be swollen.

11. You are going to insert a needle to relieve tension pneumothorax. You should choose an insertion site that is:

    a. On the top of the chest and on the injured side.
    b. On the side of the chest and on the injured side.
    c. On the top of the chest and on the uninjured side.
    d. On the side of the chest and on the uninjured side.
    e. In the middle of the chest over the sternum (breastbone).

12. The insertion site to relieve tension pneumothorax should be:

    a. Slightly below the second rib.
    b. Slightly above the third rib.
    c. Slightly below the third rib.
    d. Slightly above the fourth rib.
    e. Slightly below the fourth rib.
    f. Slightly above the fifth rib.

13. The insertion site to relieve tension pneumothorax is located along the casualty's mid-clavicular line. What else is located on or near this imaginary line?

    _____

14. You are inserting a needle to relieve tension pneumothorax. How can you tell when you have penetrated the chest wall and the tip of the needle is now in the plural space?

_____

15. Once you have penetrated the plural space with a large bore needle, you should:

    a. Tape the needle in place.
    b. Remove the needle and catheter, then tape airtight material over the injection site.
    c. Remove the needle, leaving the catheter, and tape the catheter hub to the chest.
    d. Remove the needle, leaving the catheter, and tape airtight material over the injection site.

16. A casualty who has a catheter from a needle chest decompression is being evacuated. How should he be positioned on the litter?

    a. On his back.
    b. On his stomach.
    c. On his injured side (the side with the catheter).
    d. On his uninjured side (the side without the catheter).

17. Using a manikin or fellow student, practice treating an open chest wound.

18. If an appropriate manikin and appropriate supplies are available, practice performing a needle chest decompression.

Check Your Answers on Next Page

SOLUTIONS TO LESSON EXERCISES: LESSON 4

1. a (para 4-1)

2. c (paras 4-2, 4-5)

3. Sucking chest wound (para 4-2a)

4. Any three of the following (paras 4-2 b through h)
   Coughing up blood
   Bubbles in blood on chest
   Breathing problems (shortness of breath, and so forth)
   Abnormal chest actions (flail chest)
   Pain that increases when inhaling
   Cyanosis
   Pulse rate increases, but becomes weaker

5. b (para 4-3b)

6. c (para 4-5c(2)). The wound size is one inch in diameter. Two inches beyond the wound equals 2" + 1" + 2" = 5" diameter. The 6"x6" square is the smallest material to contain a circle with a 5" diameter.

7. d (para 4-6)

8. f (para 4-7)

9 b (para 4-7)

10. b, c, e, f (para 4-8)

11. a (para 4-9b)

12. b (paras 4-9b, c, c Caution)

13. Nipple (para 4-9b)

14. Feel a "pop." Hear air escaping. (either or both) (para 4-9c)

15. c (paras 4-9c, d)

16. d (para 4-9g)

17. See checklist on the following page.

18. See second checklist.

TREAT AN OPEN CHEST WOUND

Given: Simulated conscious casualty with wound(s) indicated (pen mark, and so forth)
Field first aid dressing or emergence trauma dressing
Scissors (from combat lifesaver MES)
Tape (from combat lifesaver MES)
Additional air tight material, dressings, bandages, if needed

		GO	NO-GO
1.	Checks casualty for entrance and exit wound.	_____	_____
2.	Exposes wound.	_____	_____
3.	Prepares airtight material that will extend at least 2 inches beyond the edge of the wound on all sides.	_____	_____
4.	Has casualty exhale and hold breath.	_____	_____
5.	Places airtight material over wound so that airtight material extends at least 2 inches beyond edges of wound.	_____	_____
6.	Tapes three sides of airtight material to chest.	_____	_____
7.	Allows casualty to resume breathing.		
8.	If two wounds, repeats steps 2 through 7 except that all four sides are taped to the chest.	_____	_____
9.	Dresses and bandages the wound(s).	_____	_____
	OVERALL EVALUATION (A no-go on any step will result in a no-go for the entire task)	GO	NO-GO

PERFORM A NEEDLE CHEST DECOMPRESSION

Given: Simulated casualty (manikin) with dressed chest wound
Large bore needed with catheter (from combat lifesaver MES)
Scissors (from combat lifesaver MES)
Tape (from combat lifesaver MES)

		GO	NO-GO
1.	Identifies insertion site (second intercostal space above third rib on mid-clavicular line on injured side).	_____	_____
2.	Inserts needle/catheter unit into insertion site at approximately a 90-degree angle.	_____	_____
3.	Continues insertion until chest wall is penetrated ("pop" is felt, air heard escaping).	_____	_____
4.	Removes the needle but leaves the catheter in place.	_____	_____
5.	Tapes the catheter hub to the chest wall (air passage remains open).	_____	_____
	OVERALL EVALUATION (A no-go on any step will result in a no-go for the entire task)	GO	NO-GO

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LESSON 5

CONTROLLING BLEEDING

TASK

Apply a field dressing, elevation, manual pressure, pressure dressing, emergency trauma dressing, chitosan dressing, improvised tourniquet, and/or Combat Application Tourniquet®, as needed.

CONDITIONS

Given a simulated casualty with bleeding from a limb and needed supplies.

STANDARD

Score a GO on the performance checklist.

REFERENCES

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 4-25.11, First Aid.
GTA 08-05-063, Applying the Chitosan Bandage.

Section I. CONTROLLING BLEEDING OF A WOUND ON AN EXTREMITY

5-1. INTRODUCTION

a. The leading preventable cause of death on the battlefield is bleeding from an extremity. Bleeding (hemorrhaging) from an extremity can usually be controlled by applying a dressing and bandage, applying manual pressure, elevating the injured limb, applying a pressure dressing. An emergency trauma bandage serves as a dressing and bandage and as a pressure dressing. If these methods do not control the bleeding, a tourniquet can be applied to stop the flow of blood below the tourniquet band.

b. In some situations, such as a complete amputation of a forearm, a tourniquet should be applied immediately since the previously stated methods would be inadequate to control the bleeding.

c. In combat, while under enemy fire, a rapidly applied tourniquet is the initial method used to control life-threatening hemorrhaging from a limb.

5-2. TERMINOLOGY

As you go through this lesson, it will be helpful to know the meaning of certain terms as they are used in this subcourse.

a. **Extremity**. One of the limbs.

(1) Upper extremity. Upper extremity refers to the arm (located between the shoulder and the elbow) and the forearm (located between the elbow and the wrist). Often, the term "arm" is used to refer to the arm, forearm, and hand. The terms "upper arm" and "lower arm" are sometimes used to refer to the arm and forearm respectively.

(2) Lower extremity. Lower extremity refers to the thigh (located between the hip and the knee) and the leg (located between the knee and the ankle). Often, the term "leg" is used to refer to the thigh, leg, and foot. The terms "upper leg" and "lower leg" are sometimes used to refer to the thigh and leg respectively.

b. **Dressing**. The term "dressing" refers to the material that is placed directly over the wound. The dressing absorbs some of the blood and helps a clot to form. The clot "plugs" the wound to stop the bleeding. The dressing also protects the wound from additional contamination and injury.

c. **Bandage**. A bandage is the material used to hold (secure) the dressing in place so the dressing will not slip and destroy the clot that is forming. The ends of the bandage are called the tails.

d. **Field Dressing**. The field dressing consists of a pad of sterile (germ-free) white dressing with a bandage (usually olive-drab) already attached to the dressing pad (see figure 5-1). The field dressing is wrapped in paper and then sealed in a plastic envelope. The field dressing is also called the "field first aid dressing," "first aid dressing," and the "combat dressing." It is being replaced by the emergency trauma bandage.

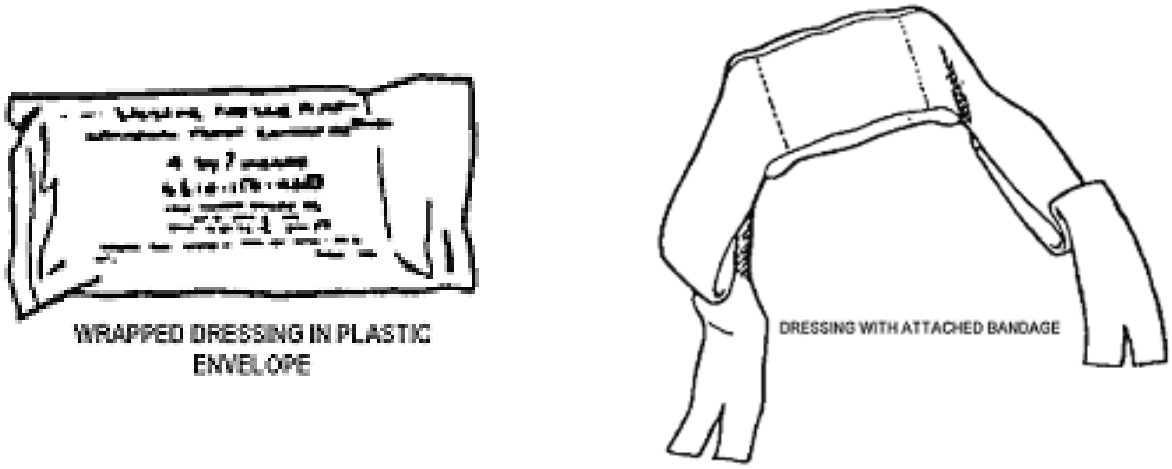


Figure 5-1. Field dressing.

e. **Emergency Trauma Bandage**. The emergency trauma bandage (figure 5-2) consists of a sterile white pad with an elastic tail and a pressure device used to apply pressure to the wound. This bandage is also known as the "emergency trauma dressing," "emergency bandage," "Israeli pressure dressing," and the "Israeli bandage." It is replacing the field dressing in the soldier's individual first aid kit.

Figure 5-2. Emergency bandage packet (opened) with contents.

f. **Hemorrhage**. Hemorrhage is another word for bleeding. It usually refers to serious bleeding.

g. **Tourniquet**. A tourniquet is a device for compressing the blood vessels of an extremity in order to stop blood flow distal to the tourniquet band.

h. **Combat Application Tourniquet®**. The Combat Application Tourniquet® (CAT) is a device developed specifically to be used as a tourniquet.

i. **Distal**. Distal means away from the point of reference. In this lesson, the heart is the central point. The hand is distal to the elbow because the hand is farther from the heart than is the elbow. (Follow the path of blood flow from the heart through the arteries as a guideline.) It is the opposite of proximal.

j. **Proximal**. Proximal means toward the point of reference (heart). The knee is proximal to the foot because the knee is closer to the heart (following blood flow) than is the knee. It is the opposite of distal.

k **Artery**. Arteries are blood vessels that carry blood away from the heart to the parts of the body.

l. **Vein**. Veins are blood vessels that carry blood from the parts of the body back to the heart.

m. **Casualty**. The casualty is the soldier who is injured.

5-3. APPLYING A FIELD DRESSING TO AN EXTREMITY

NOTE: It is assumed that you have already evaluated the casualty as explained in Lesson 2 and performed any needed procedures, such as opening the airway.

NOTE: You should put on examination gloves (found in the soldier's individual first aid kit and the combat lifesaver aid bag) if possible to reduce contamination.

CAUTION: Monitor the casualty's respirations, especially if he is unconscious. If the casualty stops breathing, administer mouth-to-mouth resuscitation (see Lesson 3) unless you are in a chemical environment or in the care-under-fire phase of a tactical environment.

a. **Expose the Wound**. If at all possible, expose the wound first by pushing or cutting away loose clothing around the casualty's wound. This will enable you to better view the extent of the injury. Scissors or a bayonet can be used to cut clothing.

CAUTION: Clothing or anything else stuck to the wound should be left alone to avoid further injury. Cut or tear around the stuck material so that the stuck material remains undisturbed. Do not attempt to clean the wound.

> **WARNING**
>
> Do not remove protective clothing in a chemical environment. Apply dressings *over* the protective clothing.

b. **Check for Entrance and Exit Wounds**. Before applying the dressing, carefully examine the casualty to determine if there is more than one wound. A missile may have entered at one point and exited at another point. The exit wound is usually larger than the entrance wound. If there is an entrance wound and an exit wound, both wounds need to be bandaged.

CAUTION: If the missile (such as a bullet or shrapnel) lodges in the body (fails to exit), do not attempt to remove it or probe the wound.

CAUTION: If there is an object extending from (impaled in) the wound, do not remove the object. Apply a dressing around the object and use additional improvised bulky dressings made from the cleanest material available to build up the area around the object. This will stabilize the object and help to prevent further injury. Apply a supporting bandage over the bulky materials to hold them in place.

c. **Open the Field Dressing**.

NOTE: The emergency trauma bandage (paragraph 5-17) can be used on any bleeding wound. It can be used both as a field dressing and as a pressure dressing. The following assumes that you are using the field dressing, not the emergency trauma bandage. See Section IV for the use of the emergency trauma bandage.

(1) Remove the field dressing packet from the casualty's first aid pouch.

NOTE: Use the casualty's field dressing first in order to conserve your supplies. If you use up all of the field dressings in your aid bag, improvise a dressing and bandage using the cleanest cloth available.

(2) Tear the plastic envelope and remove its contents.

(3) Twist the paper wrapper until it breaks or tear it open.

(4) Grasp the folded olive drab tails of the field dressing with both hands (figure 5-3).

NOTE: The following illustrations do not show the combat lifesaver wearing the examination gloves.

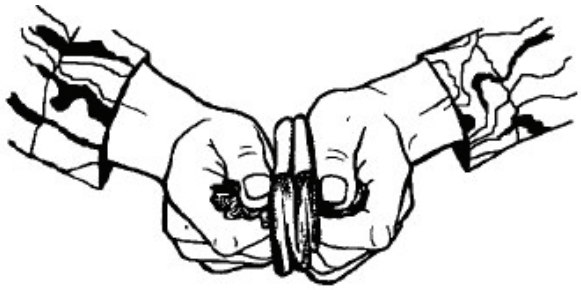


Figure 5-3. Grasping the tails of the field dressing with both hands.

d. **Apply the Field Dressing**.

(1) Hold the field dressing directly above the wound with the white side of the dressing material toward the wound.

(2) Pull on the tails so that the dressing opens and flattens (figure 5-4).

CAUTION: Do not touch the white (sterile) side of the dressing. Do not allow the white (sterile) side of the dressing come into contact with any surface other than the wound.

(3) Place the white part of the dressing directly over the wound (figure 5-5).

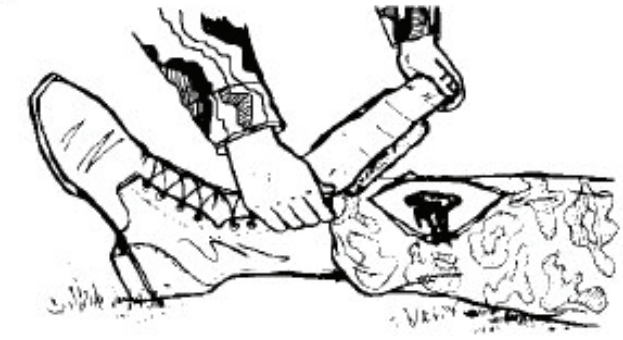


Figure 5-4. Pulling the dressing open.

Figure 5-5. Placing the dressing directly on the wound.

e. **Secure the Dressing**.

(1) Place one hand on top of the dressing to hold the dressing in place.

NOTE: If the casualty is conscious and able, you can have him hold the dressing in place while you secure it.

(2) Wrap one of the tails around the injured body part with your free hand. As you wrap, cover one of the exposed sides of the dressing with the bandage. (The bandage can usually be wrapped around a limb more than once.) Bring the tail back over the dressing. See figure 5-6.

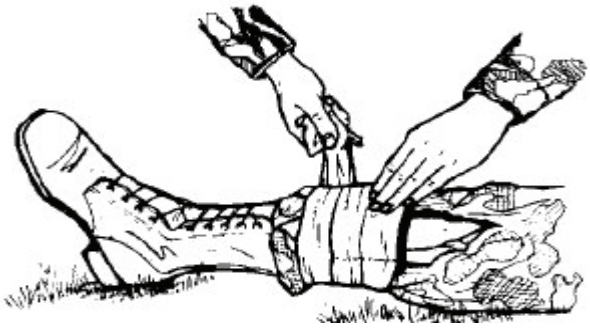


Figure 5-6. Wrapping the first tail around the injured limb. (Note: The second tail is held in the palm of the hand holding the dressing in place.)

(3) Wrap the other tail around the injured body part in the opposite direction. As you wrap, cover the remaining exposed side of the dressing with the bandage. Bring the tail back to the dressing.

NOTE: Using the tails to seal the exposed edges of the dressing will prevent foreign material from getting under the dressing and contaminating the wound.

(4) Tie the tails into a nonslip knot over the outer edge of the dressing (figure 5-7). The tails should be tied firm enough to prevent the dressing from slipping, but loose enough to insert two fingers between the knot and the dressing.

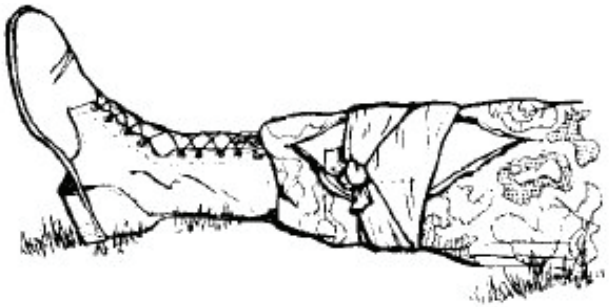


Figure 5-7. Tails tied in a nonslip knot on the outer edge of the dressing.

f. **Check Circulation**. The purpose of the field dressing is to help the blood to clot. The clot will help to prevent additional blood loss. The field dressing should not stop the flow of blood to the rest of the limb. (This is why you should be able to insert two fingers between the knot and the dressing.)

(1) After the knot is tied, check the blood circulation below (distal to) the bandage. If the skin below the bandage becomes cool to the touch, bluish, or numb, the bandage may be too tight and be interfering with circulation. Check to see if you can detect a pulse below the bandage.

(2) If blood circulation is impaired, loosen and retie the tails; then check the circulation again. If circulation is not restored, evacuate the casualty as soon as possible. Medical treatment may be needed to save the limb.

NOTE: If the wound continues to bleed, you may need to remove the dressing, reevaluate the wound, reposition the dressing, and secure the dressing again.

5-4. APPLYING MANUAL PRESSURE

If practical, apply direct pressure over the dressing with your hand (figure 5-8). This pressure will help to compress the damaged blood vessels and control the bleeding. Maintain this pressure for 5 to 10 minutes.

Figure 5-8. Applying manual pressure.

NOTE: If the casualty is conscious and can follow instructions, you can have him apply the manual pressure himself.

5-5. ELEVATING THE INJURED LIMB

Elevate the injured limb above the level of the casualty's heart to decrease the bleeding. An injured leg can be raised by placing the foot and ankle on a stable object, such as a pack, log, or rock (figure 5-9). An injured forearm can be elevated by placing the forearm on the casualty's chest if he is lying on his back or by having the casualty place his arm on top of his head if he is sitting. Elevating the injured limb and applying manual pressure should be done at the same time when no fracture is involved.

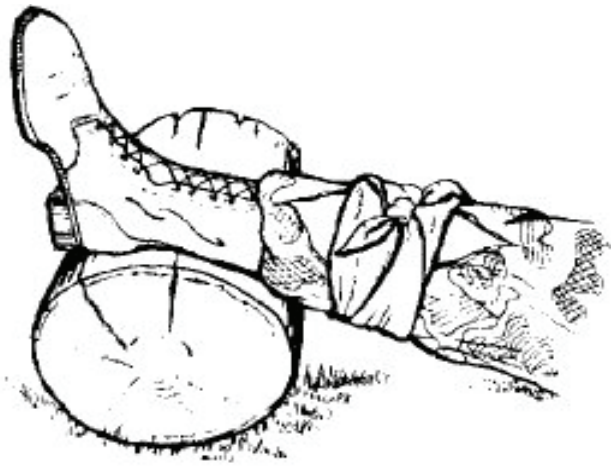


Figure 5-9. Elevating an injured limb.

CAUTION: Examine the injured extremity for fractures (visible broken bone, deformity of the limb, and so forth) before elevating the limb. If a fracture is suspected, do not elevate the wound until the limb has been properly splinted.

5-6. APPLYING A PRESSURE DRESSING

If blood continues to seep from the dressing after you have secured the dressing, applied manual pressure, and elevated the wound (if applicable), apply a pressure dressing. Keep the injured extremity elevated while applying the pressure dressing.

NOTE: The emergency trauma bandage (paragraph 5-17) can be used both as a field dressing and as a pressure dressing.

a. Place a wad of padding on top of the dressing and directly over the wound (figure 5-10). The wad can be made from a folded muslin bandage (cravat) from your aid bag, a rag, material torn from clothing, or other material that can be folded several times.

b. Place a cravat over the wad of padding (figure 5-11) and wrap the cravat tightly around the limb, covering the field dressing (figure 5-12).

Figure 5-10. Applying a wad on top of the field dressing.

Figure 5-11. Placing an improvised cravat over the wad.

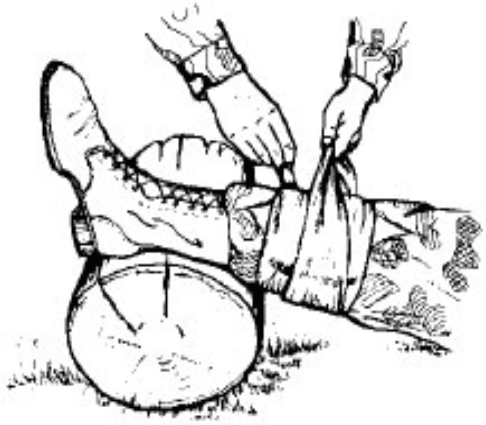


Figure 5-12. Wrapping the ends of the cravat around the limb.

(1) The cravat can be made from a muslin bandage from your aid bag or other material torn and folded into a cravat (see figure 5-18 in Section II). Other materials such as a handkerchief, sock, or strip of cloth torn from a shirt can also be used.

(2) Wire and narrow material, such as a shoestring, are not used since they are likely to damage blood vessels and nerve tissue.

c. Tie the ends of the cravat in a nonslip knot to secure the wad of padding (figure 5-13). Tie the nonslip knot directly over the wound. The cravat should be tight enough so only the tip of one finger can be inserted under the cravat. Do not tie the cravat so tight that it cuts off blood circulation. The pressure on the wad of dressing helps to restrict the blood vessels and control the bleeding.

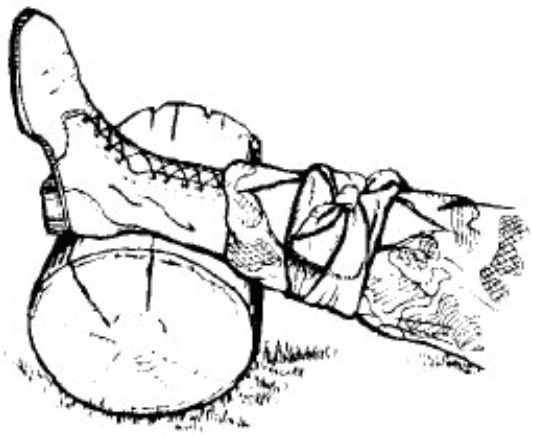


Figure 5-13. Nonslip knot tied on top of bandage over the wound.

d. Check the circulation below the pressure dressing. If the skin below the pressure dressing becomes cool to the touch, bluish, or numb, or if the pulse below the pressure dressing is no longer present, the pressure dressing may be too tight. If circulation is impaired, loosen and retie the cravat. If circulation is not restored, evacuate the casualty as soon as possible.

NOTE: The pressure dressing can be loosened and retied without disturbing the blood clot forming under the field dressing.]

e. Apply manual pressure over the pressure dressing while keeping the limb elevated.

(1) If the pressure dressing controls the bleeding, proceed to check the casualty for other injuries.

CAUTION: Check the distal end of wounded extremity (fingers or toes) periodically for adequate circulation. The pressure dressing must be loosened and reapplied if the area below the dressing becomes cool, blue, or numb. If circulation is not restored, evacuate the casualty as soon as possible.

(2) If the wound continues to bleed, apply digital pressure, if possible. If applying digital pressure is not possible or does not control the bleeding, apply a tourniquet as described in Section II.

5-7. APPLYING DIGITAL PRESSURE

Applying digital pressure to “pressure points” is another method of controlling bleeding. This method uses pressure from the fingers, thumbs, heel of the hand, or knee to press at the site or point where a main artery supplying the wounded area lies near the skin surface or over bone (see figure 5-14). This pressure may help shut off or slow down the flow of blood from the heart to the wound. It is used in combination with pressure and elevation. Two pressure points are discussed below.

a. **Arm (Brachial Artery)**. Digital pressure is used to control severe bleeding of the lower part of the arm and elbow.

(1) The pressure point is located above the elbow on the inside of the arm in the groove between the muscles.

(2) Using your fingers or thumb, apply pressure to the inside of the arm over the bone.

b. **Groin (Femoral Artery)**. Digital pressure is used to control severe bleeding of the thigh and lower leg.

(1) The pressure point is located on the front, center part of the crease in the groin.

(2) Using the heel of your hand or your knee, apply pressure to press the artery against the bone. Lean forward to apply pressure.

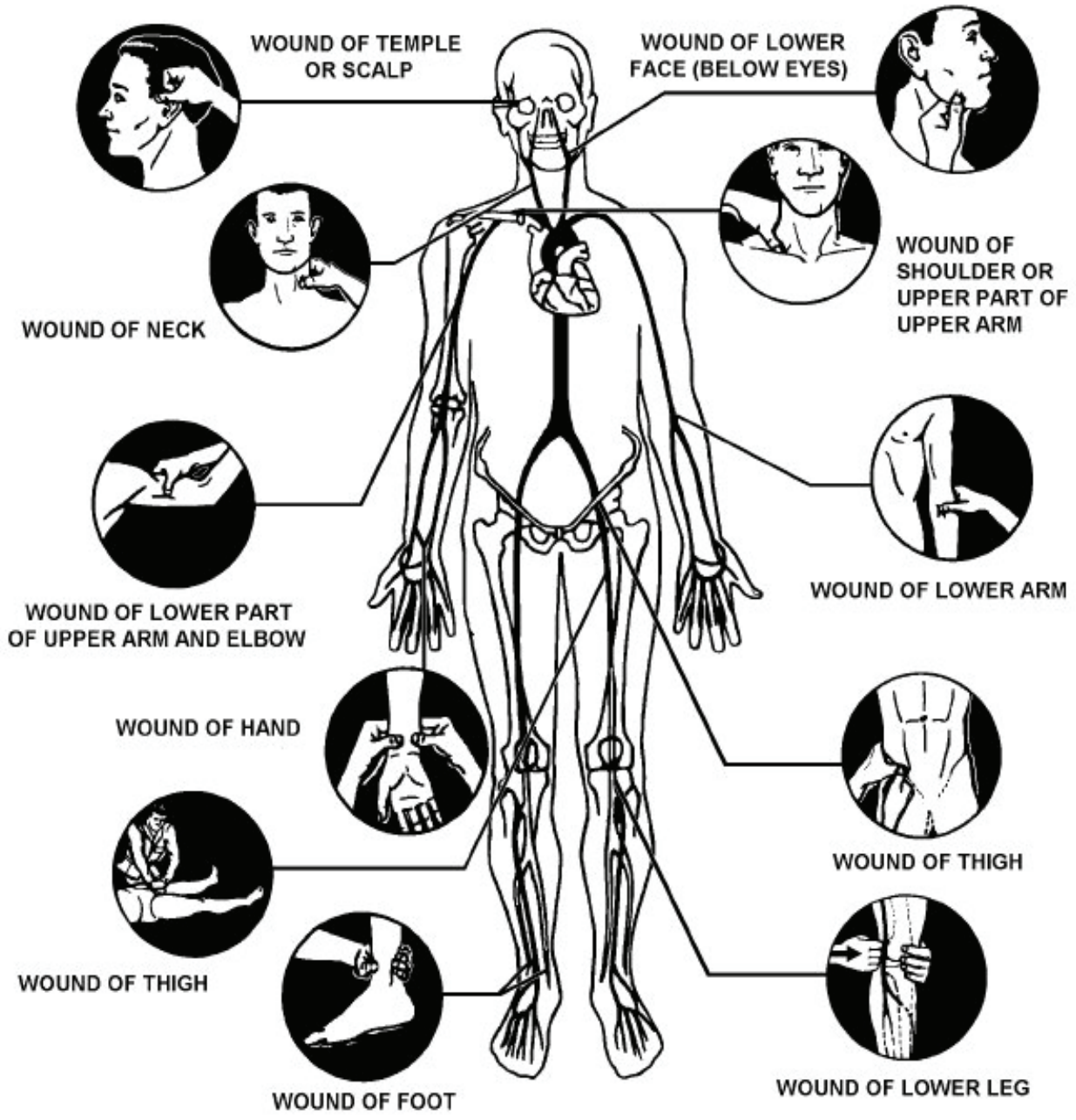


Figure 5-14. Applying digital pressure to various pressure points.

Section II. APPLYING A TOURNIQUET

5-8. DETERMINING IF A TOURNIQUET IS REQUIRED

A tourniquet is a constricting band placed around an extremity to stop arterial bleeding by stopping blood circulation to the part of the limb below (distal to) the tourniquet. A tourniquet is only used on an arm or leg where there is a danger of the casualty bleeding to death.

> **WARNING**
>
> A tourniquet is **not** used for wounds to the head, neck, or trunk (chest and abdominal area).

a. **Wound on an Extremity**. Bleeding from a major artery of the thigh, lower leg, or arm and bleeding from multiple arteries may prove to be beyond control by the methods discussed in Section I. If the pressure dressing under firm hand pressure becomes soaked with blood and the wound continues to bleed, apply a tourniquet.

NOTE: The tactical situation may not allow the time or safety for conventional methods of controlling the bleeding. The recommended means to control bleeding in a tactical environment while under fire is a rapidly applied tourniquet. Once you and the casualty have reached safety, consider loosening the tourniquet (do not remove the tourniquet) and using direct pressure and/or a pressure dressing to control the hemorrhage. If the tourniquet has been in place for more than six hours, do not remove the tourniquet.

> **REMEMBER**
>
> If you are unable to control bleeding except with a tourniquet, it is better to sacrifice a limb than to lose a life due to excessive bleeding.

b. **Amputation**.

(1) An amputation may be complete (the limb is completely severed) or partial (the two parts of the limb remain connected by some skin). Both require a tourniquet. Both involve bleeding from multiple arteries and are beyond control by the methods discussed in Section I.

(2) A person whose arm or leg has been amputated may not be bleeding when first discovered, but a tourniquet should be applied anyway. This absence of bleeding is due to the body's normal defenses (contraction and clotting of blood vessels) as a result of the amputation. However, bleeding will start when the blood vessels relax or if the clot is knocked loose while moving the casualty.

5-9. APPLYING A COMBAT APPLICATION TOURNIQUET®

A Combat Application Tourniquet® (CAT) (figure 5-15) is the tourniquet of choice. It is effective and can be applied quickly. Use the CAT from the soldier's individual first aid kit. Procedures for applying the CAT are given below.

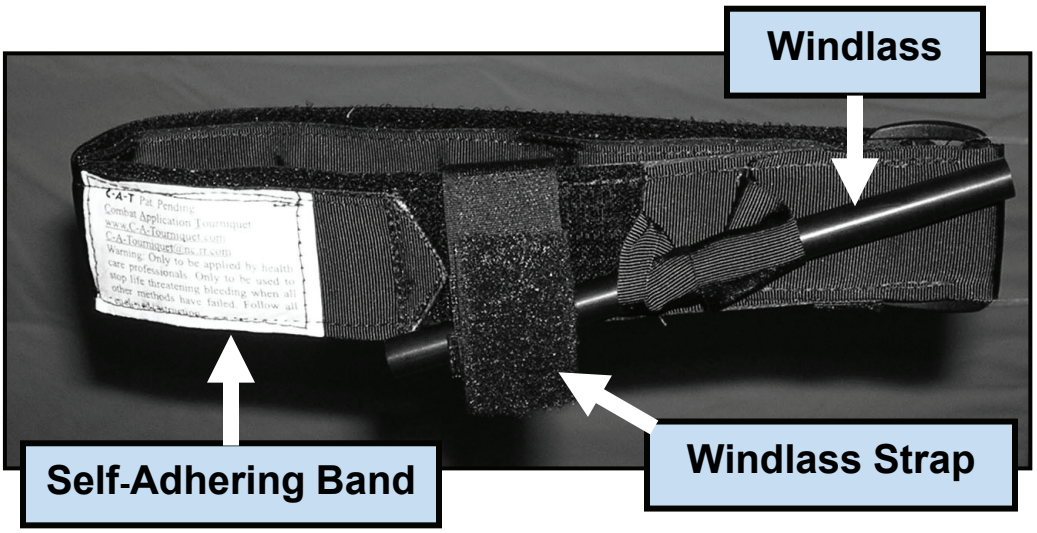


Figure 5-15. The Combat Application Tourniquet®.

a. Remove the CAT from its pouch.

NOTE: The CAT is packaged in its one-handed configuration.

b. Slide the wounded extremity through the loop of the self-adhering band (figure 5-16 A).

c. Position the CAT two inches above the wound (figure 5-16 B).

CAUTION: If the wound is below the knee or elbow, initially position the tourniquet band two inches above the wound. If a tourniquet applied below the knee or elbow is not successful at stopping the bleeding, apply a second tourniquet two inches above the joint (knee or elbow). Do not remove the first tourniquet until the second tourniquet has been applied.

NOTE: The second tourniquet may need to be applied above the joint (elbow or knee) because the body part below the joint (the forearm or leg) has two bones. The presence of two bones increases the difficulty of collapsing the artery completely. The body part above the joint (arm or thigh) has only one bone and, therefore, the artery is easier to compress.

d. Pull the free running end of the self-adhering band tight and securely fasten it back on itself (figures 5-16 C, D). Do not adhere the band past the windlass clip.

NOTE: The friction adaptor buckle is not necessary for proper CAT application to an arm (figure 5-16 J). However, it must be used as added protection when using two hands to apply the CAT to a leg. To use, route the self-adhering band strap through the fiction adaptor buckle (figure 5-17). This also prevents the strap from loosening during transport.

e. Twist the windlass rod until the bright red arterial bleeding has stopped (figure 5-16 E). Darker bleeding from the veins may continue for a while.

f. Lock the rod in place with the windlass clip (figure 5-16 F).

(1) For added security (and always before moving a casualty) secure the windlass rod with the windlass strap.

(2) For small extremities, also secure the self-adhering band under the windlass strap.

g. For small extremities, continue to wind the self-adhering band around the extremity and over the windlass rod (figure 5-16 G).

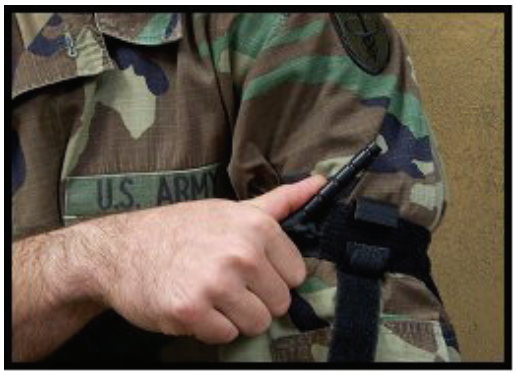
h. Grasp the windlass strap, pull it tight, and adhere it to the Velcro on the windlass clip (figure 5-16 H). The CAT is now properly applied and the casualty is ready for transport (figure 5-16 I).

A. Place the wounded extremity through the loop of the self-adhering band.

B. Place tourniquet above the injury site.

C. Pull the free-running end of the self-adhering band tight, then securely fasten it back on itself.

D. Adhere the self-adhering band completely around the band until the windlass clip is reached.



E. Twist the windlass rod until the bleeding has stopped.

F. Lock the rod in place with the windlass clip.

Figure 5-16. Applying the Combat Application Tourniquet® to a wound on the arm. (continued)

G. For small extremities, continue to adhere the self-adhering band around the extremity and over the windlass rod.

H. Grasp the windlass strap, pull it tight, and adhere it to the Velcro on the windlass clip.

I. CAT applied and casualty ready for transport.

J. NOTE: The friction adaptor buckle is not necessary for proper CAT application to an arm. However, it **MUST** be used with two hands when applying to a leg.

Figure 5-16. Applying the Combat Application Tourniquet® to a wound on the arm. (concluded)

A

B

A. Wrapping the self-adhering band through the friction adaptor buckle to prevent the self-adhering band from loosening during transport.

B. CAT applied to a complete amputation.

Figure 5-17. Applying the Combat Application Tourniquet® to the thigh. (large extremity application).

5-10. APPLYING AN IMPROVISED TOURNIQUET

In the absence of a specially designed tourniquet, such as the CAT, a tourniquet may be made from a strong, pliable material such as gauze, a muslin bandage, or a strip of material torn from clothing. An improvised tourniquet is used with a rigid stick-like object to act as the windlass rod. To minimize skin damage, ensure that the improvised tourniquet is at least two inches wide.

a. **Gather Materials for Making a Tourniquet**.

(1) Tourniquet band. You need a band of strong, pliable material that is at least two inches wide when folded and will retain this width after being tightened. A folded muslin bandage (usually called a cravat), a folded handkerchief, or a folded strip of clothing will do. A belt, rope, strap from LBE (load bearing equipment), roller gauze, or a torn sleeve can also be used. Do not use wire or shoestrings as a tourniquet band. A wide tourniquet will protect the tissue beneath the tourniquet when it is tightened. If a very narrow tourniquet is used, the nerves and blood vessels beneath the tourniquet may be seriously damaged.

NOTE: Figure 5-18 illustrates how to fold material into a cravat. The square material is cut in half along the diagonal (base) to form two triangular bandages. Each triangular bandage can be made into a cravat.

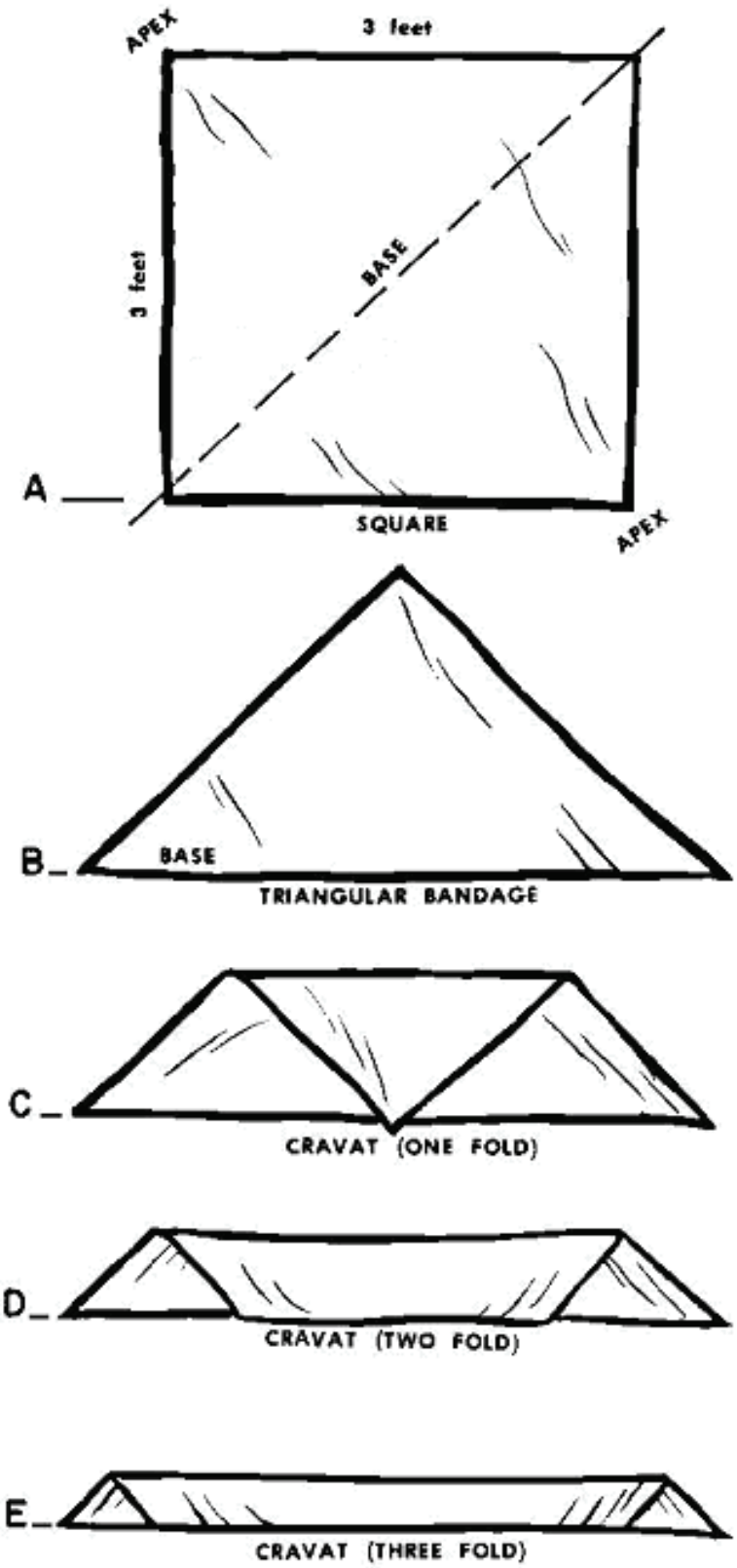


Figure 5-18. Folding a muslin bandage or a square of material into a tourniquet band.

(2) Rigid windlass. A rigid windlass is needed to tighten the tourniquet band. A windless device can be made by placing seven or eight tongue depressors together, one on top of the other, and wrapping tape around the tongue depressors. You can make this device and keep it in your aid bag. If you do not have such a windlass, a strong rigid object can be used as shown in figures 5-20 and 5-21.

(3) Securing materials. Additional material is needed to secure the rigid windlass once the tourniquet band has been tightened. A piece of cloth or cravat similar to the tourniquet band can serve as securing material.

b. **Select the Tourniquet Site**. Select a site two to four inches above the edge of the wound or amputation site.

(1) If the wound or amputation site is in the upper arm or thigh, select a site that is two to four inches above the edge of the wound or amputation site.

(2) If the wound or amputation is below the elbow or knee, initially select a site two inches above the edge of the wound or amputation site. If an improvised tourniquet applied below the knee or elbow is unsuccessful at stopping the bleeding, apply a second tourniquet two to four inches above the joint (knee or elbow). Do not remove the first tourniquet until the second tourniquet has been applied.

CAUTION: Do not place a tourniquet over a joint or over a fracture site.

c. **Apply the Tourniquet.**

(1) Place the tourniquet band material around the tourniquet site.

(2) Tie the band with a half-knot (the same as the first part of tying a shoe) (figure 5-19).

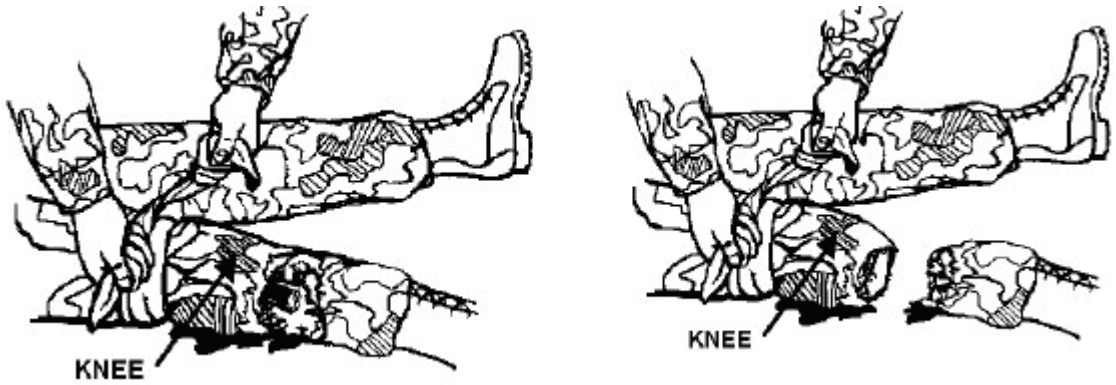


Figure 5-19. Applying an improvised tourniquet band above the knee.

(3) Place the windlass on top of the half-knot.

(4) Tie a full knot (square knot) over the windlass (figure 5-20).

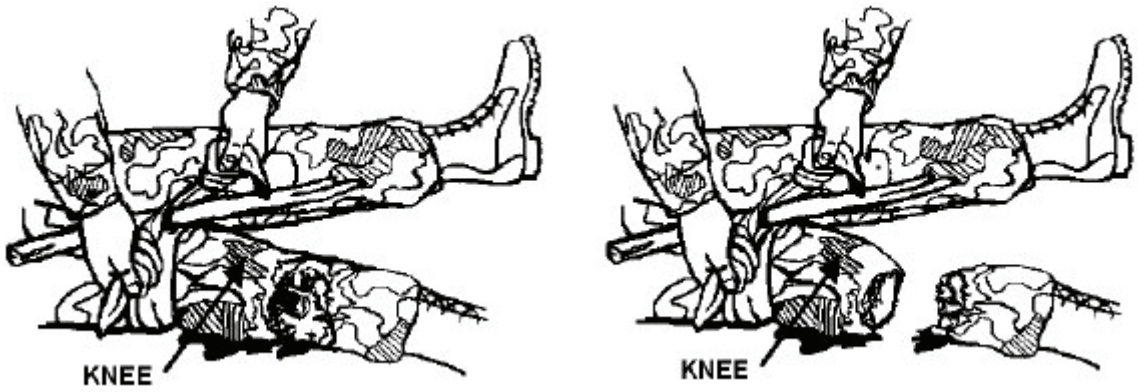


Figure 5-20. Securing the rigid object with a full knot.

(5) Twist the windlass (figure 5-21) either clockwise or counterclockwise until the tourniquet is tight and the bright red bleeding has stopped. Bright red blood is from a severed artery. Generally, darker blood is from a vein. Dark blood may continue to ooze even after the tourniquet has been properly applied. There should be no pulse below the tourniquet.

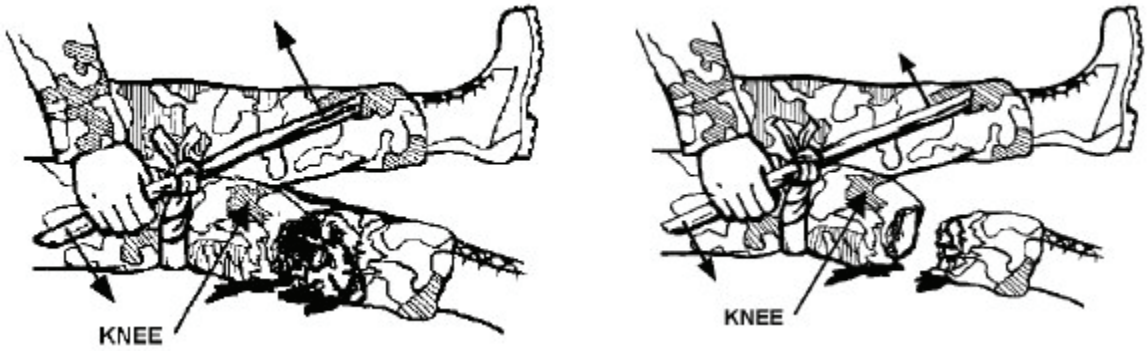


Figure 5-21. Twisting the windlass to tighten the tourniquet band.

(6) Wrap a piece of securing material, such as a cravat or torn strip of clothing, around the limb. Then wrap the ends of the material around one end of the windlass so that the windlass is secured and the tourniquet band will not unwind.

NOTE: Tape from your aid bag can be used to secure the windlass instead of a strip of material or cravat.

(7) Tie the tails of the securing material in a nonslip knot (figure 5-22).

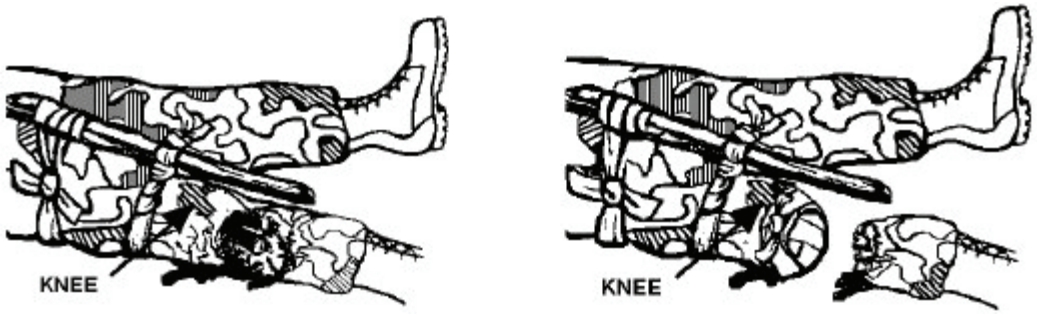


Figure 5-22. Securing the rigid object with additional material.

5-11. MARKING THE CASUALTY

Write a "T" and the time of application on the casualty's forehead with a pen, the casualty's blood, mud, or other substance. The "T" alerts medical personnel that a tourniquet has been applied.

5-12. DRESSING AN AMPUTATION

After the tourniquet has been applied to an amputation of the arm or leg, place a dressing made of soft, absorbent material over the end of the stump and secure the dressing with bandages. The dressing will help to prevent additional contamination of the wound and will also help to protect the wound from additional injury.

Section III. CONTROLLING SHOCK

5-13. IDENTIFYING SHOCK

Hypovolemic (low blood volume) shock can result in death. Hypovolemic shock is usually caused by severe bleeding, but it can also be caused by a severe loss of body fluids from severe burns, vomiting, or diarrhea. Hypovolemic shock can also result from excessive sweating caused by heat injury (heat exhaustion). Signs and symptoms of shock include:

(1) Sweaty but cool (clammy) skin.

(2) Pale skin.

(3) Restlessness, nervousness, or agitated behavior.

(4) Unusual thirst.

(5) Confused mental process.

(6) Rapid breathing.

(7) Blotchy bluish skin, especially around the mouth.

(8) Nausea.

5-14. PREVENTING/TREATING SHOCK

Initiate procedures to control shock even if signs and symptoms are not yet present.

a. **Position the Casualty**. Position the casualty on his back. If possible, place a poncho or blanket under the casualty to protect him from the temperature or dampness of the ground. Elevate the casualty's legs so that his feet are slightly higher than the level of his heart. (This helps the blood in the veins of his legs return to his heart.) Place a small log, field pack, box, rolled field jacket, or other stable object under the casualty's feet or ankles in order to maintain the elevation. Exceptions to the normal shock position are described below.

CAUTION: Do not elevate the legs until all lower limb fractures have been splinted.

(1) Spinal injuries. Keep a casualty with a suspected spinal fracture or a severe head injury as immobile as possible. Do not elevate the casualty's legs. Immobilize his head, neck, and back, if possible.

(2) Open chest wounds. If the casualty wants to sit up, help him to sit with his back to a wall, tree, or other support. Setting up may help him breathe easier. If the casualty wants to lie down, position him so that he is lying on his injured side. (Lying on his injured side allows the ground to function like a splint and helps to control pain. Also, having the uninjured side up decreases pressure on the uninjured side of the chest and allows the uninjured lung to function easier.)

(3) Open abdominal wounds. Keep the casualty on his back with his knees flexed (raised) and his feet on the ground. Keeping the knees flexed reduces stress to the abdomen and should reduce the pain.

(4) Minor head wound. A casualty with a minor head wound should be allowed to sit up. If the casualty has bleeding into the mouth or if he does not want to sit up, position him on his side with his wound up and his head turned so that fluid can drain from his mouth.

(5) Unconsciousness. Position an unconscious casualty on his side (recovery position) with his head turned so fluids can drain from his mouth. If the casualty vomits, quickly perform a finger sweep to clear his airway. If the casualty inhales the vomitus, it could block his airway.

b. **Initiate a Saline Lock**. A saline lock (see Lesson 6) should be initiated anytime the casualty has suffered a severe loss of blood. If the casualty has an abnormal mental status or no palpable radial (wrist) pulse on an uninjured arm, convert the saline lock to an intravenous infusion (IV) and administer 500 ml of Hextend®.

c. **Splint the Limb, If Appropriate.** Splinting the injured limb can reduce additional damage to the limb and help to reduce pain and the risk of shock.

(1) If one or more bones in the limb have been fractured, apply a splint to the injured limb. If a splint is not applied to the extremity, broken bone fragments may grate on blood vessels and nerves, resulting in additional damage.

(2) It is good practice to splint the arm, forearm, thigh, or leg when a severe wound is present even if the limb is not fractured. Immobilizing the limb helps to stop bleeding and reduce pain. It also reduces muscular activity. Since muscular activity can increase the rate of blood flow (and, therefore, blood loss), applying a splint can reduce the amount of bleeding.

(3) If the casualty has suffered an incomplete amputation, splint the limb.

d. **Prevent Chilling or Overheating**.

(1) In cool weather, cover the casualty with a blanket, poncho, or other available materials to keep him from loosing body heat. Place covering under the casualty as well as over the casualty in order to prevent chilling.

CAUTION: Blood loss can cause a significant drop in body temperature even in hot weather.

(2) In warm weather, keep the casualty in the shade. If natural shade is not available, erect an improvised shade using a poncho and sticks or other available materials. Fanning the casualty promotes the evaporation of perspiration, thus cooling the casualty.

e. **Reassure the Casualty**. Keep the casualty calm. Tell the casualty that you are helping him. Be confident in your ability to help the casualty and have a "take charge" attitude. Your words and actions can do much to reduce the casualty's anxiety. Be careful of any comments you make regarding the casualty's condition.

f. **Seek Help**. If possible, send a soldier to get the combat medic.

CAUTION: If the casualty is in shock, <u>do not</u> give him anything to eat or drink.

CAUTION: If you leave the casualty to seek medical help, tell the casualty that you are going to get medical help and will return. Before leaving, turn his head to one side. This will help to keep the casualty from choking should he vomit while you are gone.

5-15. EVACUATING THE CASUALTY

Evacuate the casualty with a tourniquet to the nearest medical treatment facility (MTF) as soon as possible. See Lesson 9.

a. Do not cover the tourniquet. Leave the tourniquet in full view so medical personnel can locate it quickly.

b. Continually monitor the casualty for development of conditions that may require the performance of necessary basic lifesaving measures such as opening the airway, performing mouth-to-mouth resuscitation, and preventing shock.

c. If an amputation is involved, try to save the amputated part of the limb and evacuate the amputated part with the casualty. If possible, rinse amputated part free of debris, wrap it loosely in saline-moistened sterile gauze, seal the amputated part in a plastic bag or cravat, and place it in a cool container.

CAUTIONS: Do not freeze the amputated part.
Do not place amputated part in water.
Do not place the amputated part directly on ice.
Do not use dry ice to cool the amputated part.
Do not place the amputated part so that it is in view of the casualty.

d. If the amputation is incomplete, splint the limb.

e. Initiate a DD Form 1380, U. S. Field Medical Card, and attach the card to the casualty (see Lesson 7).

Section IV. OTHER BANDAGES/DRESSINGS

5-16. GENERAL

Section I described the application of the field dressing and the pressure dressing. There are two other items that you should know how to apply--the emergency trauma bandage and the chitosan [ki' to san] dressing.

a. The emergency trauma bandage (also known as the emergency trauma dressing, the Israeli bandage, and the Israeli pressure dressing) applies additional, continuous pressure to the wound. It is replacing the field first aid dressing in the soldier's individual first aid kit. Each soldier should have an emergency trauma bandage in his individual first aid kit. You have two emergency trauma bandages in your combat lifesaver aid bag.

b. The chitosan dressing (also called the hemostatic bandage and the chitosan bandage) uses a chemical to help stop the bleed. You have one chitosan dressing in your combat lifesaver aid bag. The chitosan dressing is not part of the soldier's individual first aid kit.

5-17. EMERGENCY TRAUMA BANDAGE

The emergency trauma bandage can be used on any bleeding wound. It can be used both as a field dressing and as a pressure dressing. Follow the procedures below when applying the emergency bandage to a wound on the casualty's extremity.

a Remove the bandage from the pouch (figure 5-23 A).

b. Place the pad (dressing) on the wound.

c. Wrap the elastic bandage around the wounded extremity (figure 5-23 B).

d. Insert the elastic bandage completely into the pressure bar (figure 5-23 C).

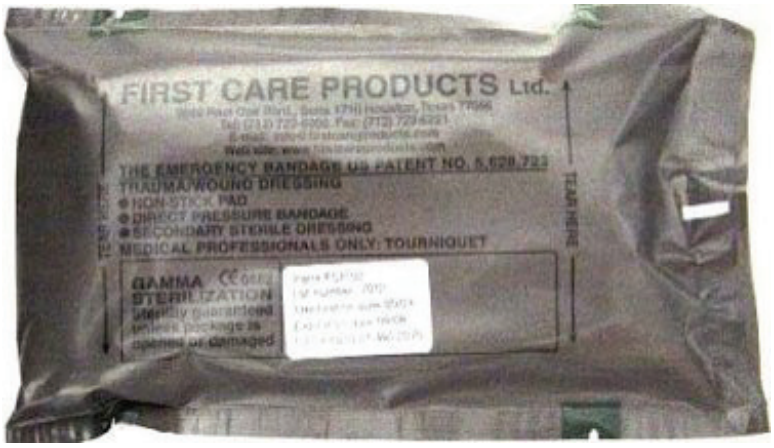
e. Pull the elastic bandage back over the top of the pressure bar, forcing the bar down onto the pad (figure 5-23 D).

f. Wrap the elastic bandage tightly over the pressure bar.

g. Continue to wrap the elastic bandage around the limb so that all edges of the pad are covered (figure 5-23 E).

h. Secure the hooking end of the closing bar into the elastic bandage (figure 5-23 F). The bandage is now secure.

i. Figure 5-24 shows the emergency trauma bandage applied to other wounds.



A. Emergency trauma bandage in its pouch.

B. Wrap bandage around pad.

C. Insert bandage into pressure bar.

D. Pull bandage over top of pressure bar.

E. Wrap bandage to seal the edges of the pad.

F. Secure closing bar.

Figure 5-23. Applying an emergency bandage to a wound on the forearm.

Figure 5-24. Emergency trauma bandage applied to various wounds.

5-18. CHITOSAN DRESSING

Chitosan is a polysaccharide found in shrimp shells. It has been incorporated into a dressing that will effectively stop arterial hemorrhage. When chitosan comes in contact with blood or other body fluids, it becomes extremely adhesive and works like super-glue to plug the holes in the injured blood vessels. It does not cause the blood to clot. Apply the chitosan dressing using the following steps. Figure 5-25 shows the chitosan dressing being applied to a wound on the extremity.

CAUTION: The chitosan dressing is used to control serious arterial bleeding. The chitosan dressing is not used for wounds with minimal to moderate bleeding. The chitosan dressing can be used in conjunction with a tourniquet to control severe arterial bleeding.

a. Hold the foil over-pouch so that the instructions can be read and the unsealed edges are at the top.

b. Grasp the unsealed edges (figure 5-25 A).

c. Peel open the over-pouch by pulling the unsealed edges apart (figure 5-25 B).

d. Use your hand and thumb to trap the dressing between the bottom foil and the green/black polyester backing (figure 5-25 C).

e. Hold the dressing by the nonabsorbent green/black backing and discard the foil over-pouch (figure 5-25 D).

NOTE: Do not let moisture from your hand come into contact with the dressing before you apply the bandage. The moisture could cause the sponge to become sticky.

NOTE: Do not let the bandage come into contact with the casualty's eyes.

f. Apply the light-colored sponge portion directly over the wound and apply pressure to the green/black backing with your fingers (figure 5-25 E).

g. Apply manual pressure and maintain the pressure until the dressing adheres and the bleeding stops (usually two to four minutes). Do not try to reposition the bandage once it is applied.

NOTE: If the bleeding does not stop within four minutes, remove the chitosan dressing, apply another chitosan dressing to the wound, and apply manual pressure again. Do not apply a new chitosan dressing over an old one. The old chitosan dressing must be removed so that the sponge portion of the new chitosan dressing can come into contact with the blood and fluids from the wound.

h. Apply a field dressing or a cravat to secure the chitosan dressing and to prevent contamination.

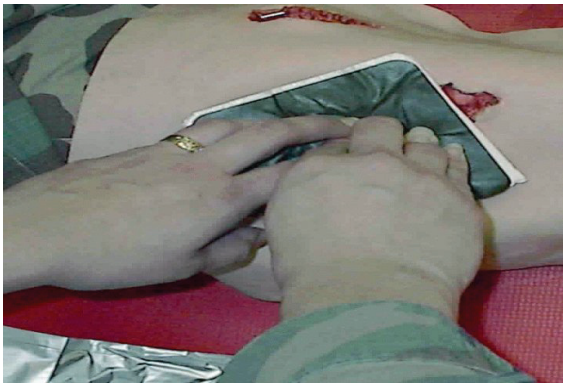
NOTE: For smaller wounds, you may want to cut the chitosan dressing before applying it to the wound. In this way, you will have a second dressing to apply if the first dressing is not sufficient to stop the bleeding or to use on another wound (for example, severe bleeding occurring from both an entrance wound and an exit wound).

A. Grasp the edges of the packet.

B. Open the packet.

C. Trap the dressing.

D. Apply white pad to wound.



E. Apply manual pressure.

Figure 5-25. Applying a chitosan dressing to a wound on the extremity.

Continue with Exercises

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LESSON EXERCISES: LESSON 5

INSTRUCTIONS: Answer the following exercises by marking the letter of the response that **best** answers the question or **best** completes the sentence or by writing the answer in the space provided.

After you have answered all of the exercises, check your answers against the "Solutions to Lesson Exercises" at the end of the exercises. For each exercise answered incorrectly, reread the lesson material referenced.

Exercises for Section I

1. What is the leading preventable cause of death on the battlefield?

   _____

2. The pad of material placed on the wound to absorb the blood is called the _____; the material used to keep the first pad of material from slipping off the wound is called the _____.

3. Why should you push away any loose clothing near a casualty's open wound before applying a field dressing?

   a. To allow the wound to get air.
   b. To provide a sterile work area.
   c. To see the extent of the wound.
   d. To apply ointment to the wound.

4. A casualty is bleeding from a wound in the leg. Part of the trouser material next to the wound is stuck to the wound. You should:

   a. Tear or cut around the stuck material so as to not pull the material from the wound.
   b. Gently pull the material from the wound area.

5. What part of the field dressing should be applied directly over an open wound?

   a. Olive-drab tails.
   b. Top side of the dressing (side to which tails are attached).
   c. White side of the dressing.
   d. Either side of the dressing.

6. When applying a field dressing to a bleeding wound on the arm, the tails should be tied in a nonslip knot:

   a. Directly over the center of the wound.
   b. Over the outer edge of the dressing.
   c. On the other side of the arm (away from the wound).
   d. Wherever the tails happen to cross.

7. You have just applied a field dressing to a wound on the casualty's arm. Under what circumstance would you loosen the field dressing?

   a. The bleeding has stopped.
   b. The casualty has lost consciousness.
   c. The casualty complains of thirst.
   d. There is no pulse in the limb below (distal to) the bandage.

8. You have applied a field dressing to a bleeding wound on the casualty's forearm.

   The limb is not fractured. You should also apply _____ _____

   directly over the wound and _____ the arm.

9. You have applied a field dressing, manual pressure, and elevation to a wound on the casualty's thigh, but blood is still leaking from the dressing. What should you do now?

   _____

10. A pressure dressing is usually:

    a. Another field dressing.
    b. Folded material secured by a cravat.

11. The "wad" of material that is part of a pressure dressing is placed:

    a. Two to four inches above (proximal to) the field dressing.
    b. On top of the field dressing and over the wound.
    c. Two to four inches below (distal to) the field dressing.

12. When applying a pressure dressing, the tails should be tied:

    a. Directly over the wound.
    b. Over the outer edge of the dressing.
    c. On the other side of the arm (side opposite the wound).
    d. Wherever the tails happen to cross.

13. The portion of the limb below the pressure dressing is cool to the touch and the nail beds on the limb are bluish. The pressure dressing should be _____and _____. If the condition does not improve, _____ the casualty.

14. You are going to apply digital pressure to help control severe bleeding from an open wound on the thigh. Use _____ to apply pressure to the pressure point at the front, center part of the crease in the groin in order to press the artery against the bone.

Exercises for Section II

15. Which of the following is applied with the intent of stopping blood circulation?

    a. Field dressing.
    b. Manual pressure.
    c. Pressure dressing.
    d. Tourniquet.

16. Both you and the casualty are in a place of safety and you have sufficient time to treat the casualty. In which of the following situations, if any, would you apply a tourniquet without first trying to control the bleeding with a pressure dressing?

    a. Severe bleeding from a wound on the leg.
    b. Severe bleeding from a wound on the forearm.
    c. Amputation of the forearm four inches below the elbow.
    d. None of the above.

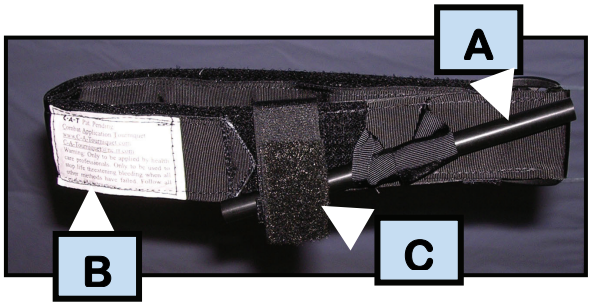
17. What is shown below? _____

    Identify the three labeled parts.

    A _____

    B _____

    C _____



18. When applying the CAT, the friction adaptor buckle is not necessary for proper application to a(n) _____ , but it must be used as added protection when using two hands to apply the CAT to a(n) _____ .

19. Which one of the following would be preferred for an improvised tourniquet band?

    a. A wire that is 36 inches long.
    b. A square of cloth (about 36 inches on each side) cut diagonally and folded into a cravat.
    c. A strong rubber band.
    d. A bootlace.

20. You are going to apply an improvised tourniquet band made from a muslin bandage. The tourniquet band should be at least _____ wide when folded.

    a. One-half inch.
    b. One inch.
    c. One and a half inches.
    d. Two inches.

21. If the amputation site is about one inch below the elbow joint, the tourniquet band should be applied:

    a. Between the wound and the elbow.
    b. Directly over the elbow.
    c. Two inches above the elbow.
    d. Two inches distal to the shoulder joint.

22. A soldier has just had his forearm amputated slightly above the wrist. The bleeding from the amputation site is not severe. What should you do first?

    a. Apply a field dressing to the wound.
    b. Apply a tourniquet two inches above the amputation site.
    c. Apply a pressure dressing to the stump.
    d. Apply a tourniquet two inches above the elbow.

23. Which one of the following statements gives a proper rule for tightening a tourniquet?

    a. A tourniquet should be loose enough so that you can slip two fingers under the tourniquet band.
    b. A tourniquet should be loose enough so that you can slip the tip of one finger under the tourniquet band.
    c. A tourniquet is to be tightened until the bright red bleeding has stopped; darker blood oozing from the wound can be ignored.
    d. A tourniquet is to be tightened until both the bright red bleeding and the darker venous bleeding have stopped completely.

24. Once you have tightened an improvised tourniquet, you must:

    a. Secure the windlass so that the tourniquet will not unwind.
    b. Apply a field dressing over the windlass.
    c. Remove the windlass and tie the tails in a nonslip knot.

25. The lower part of the casualty's arm has been amputated. You have applied a tourniquet. How is the stump treated?

    a. The stump is dressed and bandaged.
    b. The stump is left exposed to facilitate drainage.

26. You have applied a tourniquet to a casualty's left leg. Which one of the following is a proper method of marking the casualty?

    a. Write a "T" and the time of application on the casualty's forehead.
    b. Write a "T" and the time of application on the dressing over the stump.
    c. Write "LL" and the time of application on the casualty's forehead.
    d. Write "LL" and the time of application on the dressing over the stump.
    e. Write your initials on the casualty's chest.

Exercises for Section III

27. You have controlled the bleeding from a wound on the casualty's thigh. The casualty lost a good deal of blood. Also, the casualty's skin appears to be pale, cool, and clammy. His is breathing faster than normal and he is acting agitated. The casualty is probably suffering from:

    a. Shock.
    b. Cardiac arrest.
    c. Hypothermia.
    d. Blocked airway.

28. In most cases, the casualty's legs are placed on a stable object so that his feet are slightly higher than the level of his heart to help control shock. In which of the following circumstances would another position be used?

    a. The casualty has an open abdominal wound.
    b. The casualty has an open chest wound.
    c. Either of the above.

29. A casualty has a severe wound on the forearm, but the forearm is not fractured. Should you apply a splint to a forearm?

    a. Yes.
    b. No.

30. You have controlled the bleeding to a casualty with a severe wound to the arm and immobilized the arm. The casualty will be evacuated by improvised litter. What other thing should you do before having the casualty evacuated?

    _____

31. You are preparing a casualty with a tourniquet in place for evacuation. Should you cover the tourniquet with a blanket, poncho, or similar material to protect it from contamination by dirt and dust?

    a. Yes.
    b. No.

Exercises for Section IV

32. You are applying an emergency trauma bandage to a wound on the limb. Indicate the order in which the following steps are performed by writing the numbers 1 (first) through 7 (last) in the blanks before the steps?

    ___ Insert the elastic bandage completely into the pressure bar.

    ___ Place the dressing pad on the wound.

    ___ Wrap the elastic bandage around the wounded limb.

    ___ Wrap the elastic bandage tightly over the pressure bar.

    ___ Secure the hooking end of the closing bar into the elastic bandage.

    ___ Continue to wrap the elastic bandage around the limb so that all edges of the pad are covered.

    ___ Pull the elastic bandage back over the top of the pressure bar, forcing the bar down onto the pad.

33. The chitosan dressing is used for:

    a. Minor bleeding.
    b. Serious arterial bleeding
    c. A complete amputation of an upper arm or thigh in lieu of a tourniquet.

34. The chitosan dressing pouch is opened by:

    a. Pulling the unsealed edges of the pouch apart.
    b. Cutting the pouch along the dotted line.
    c. Ripping the pouch open (notch on edge to notch on opposing edge.

35. After you apply the chitosan dressing to a wound, you should:

    a. Apply a pressure dressing over the chitosan dressing.
    b. Apply a tourniquet above the chitosan dressing.
    c. Apply manual pressure to the chitosan dressing.
    d. Apply a tourniquet below the chitosan dressing

36. You have been applying manual pressure to a chitosan dressing for about two minutes. The bleeding appears to have stopped and the chitosan dressing is stuck to the wound. What should you do?

    a. Continue to apply manual pressure for a total of seven to eight minutes.
    b. Remove the chitosan dressing and apply a field dressing to the wound.
    c. Remove the chitosan dressing and apply a pressure dressing to the wound.
    d. Apply a field dressing or cravat over the chitosan dressing.

37. You have been applying manual pressure to a chitosan dressing for four minutes and the bleeding has not stopped. What should you do?

    a. Continue to apply manual pressure for a total of seven to eight minutes.
    b. Remove the chitosan dressing and apply a field dressing to the wound.
    c. Remove the chitosan dressing and apply another chitosan dressing to the wound.
    d. Apply another chitosan dressing over the first chitosan dressing.

38. The chitosan dressing works by:

    a. A chemical reaction that promotes blood clotting.
    b. A chemical reaction that helps to seal damaged blood vessels.
    c. Causing the blood vessels to expand, thus reducing blood pressure.
    d. Providing oxygen to the wound.

39. If possible, practice performing the following tasks:
    Apply a field dressing to an open wound on an extremity.
    Apply a pressure dressing to an open wound on an extremity.
    Apply a Combat Application Tourniquet to an extremity.
    Apply an improvised tourniquet to an extremity.
    Apply an emergency trauma bandage to a wound on an extremity.

Check Your Answers on Next Page

SOLUTIONS TO LESSON EXERCISES: LESSON 5

Exercises for Section I

1. Bleeding (hemorrhaging) from an extremity (limb). (para 5-1a)
2. dressing; bandage. (paras 5-2b, c)
3. c (para 5-3a)
4. a (para 5-3a Caution)
5. c (para 5-3d)
6. b (para 5-3e(4))
7. d (paras 5-3f, f(1), f(2))
8. manual pressure; elevate. (paras 5-4, 5-5)
9. Apply a pressure dressing. (para 5-6)
10. b (para 5-6a, b)
11. b (para 5-6a)
12. a (para 5-6c)
13. loosened, retied (or reapplied); evacuate. (para 5-6e Caution)
14. the heel of your hand or your knee. (para 5-7b(2))

Exercises for Section II

15. d (para 5-8)
16. c (paras 5-8a, b(2))
17. Combat Application Tourniquet (CAT)
    A--Windlass
    B--Self-adhering band
    C--Windlass strap. (figure 5-15)
18. arm (upper extremity); leg (lower extremity). (para 5-9d Note, figure 5-16j)

19. b (para 5-10a(1))

20. d (para 5-10a(1))

21. c (paras 5-9c, c Caution, 5-10b(2))

22. b (paras 5-8b(2), 5-9c, c Caution, 5-10b(2))

23. c (paras 5-9e, 5-10c(5))

24. a (paras 5-10c (6), (7))

25. a (para 5-12)

26. a (para 5-11)

Exercises for Section III

27. a (para 1-13)

28. c (paras 5-14a(2), (3))

29. a (para 5-14c)

30. Initiate a saline lock. (para 5-14b)

31. b (para 5-15a)

Exercises for Section IV

32. The steps of applying the emergency bandage are given in correct sequence.

    1. Place the dressing pad on the wound.
    2. Wrap the elastic bandage around the wounded limb.
    3. Insert the elastic bandage completely into the pressure bar.
    4. Pull the elastic bandage back over the top of the pressure bar, forcing the bar down onto the pad.
    5. Wrap the elastic bandage tightly over the pressure bar.
    6. Continue to wrap the elastic bandage around the limb so that all edges of the pad are covered.
    7. Secure the hooking end of the closing bar into the elastic bandage.

    (para 5-17)

33. b (para 5-18 Caution)

34. a (paras 5-19b, c)

35. c (para 5-18g)

36. d (paras 5-18g, h)

37. c (para 5-18g Note)

38. b (para 5-18)

39. See the following checklists. It is recommended that you form a team of three -- one playing the role of the combat lifesaver, one playing the casualty, and one performing the evaluation using the performance checklist. If a checklist allows variation (for example, applying a tourniquet to a leg or arm), it is suggested that all of the variations be practiced.

    If an appropriate manikin is available, use it as the casualty.

    Simulate tightening a tourniquet if the "casualty" is an actual person. Do not actually stop arterial blood flow.

    If you cannot actually perform the task, perform it mentally. As you describe the steps you would go through, have an person using the checklist evaluate your performance.

PERFORMANCE CHECKLIST

APPLY A FIELD DRESSING TO AN OPEN WOUND ON AN EXTREMITY

Situation: You have located a casualty (simulated) with severe bleeding from a wound on an extremity (wound is marked or indicated on arm, forearm, thigh, or leg).

Supplies: Field dressing(s), scissors.

	GO	NO-GO
Exposes wound.	_____	_____
Checks for entrance and exit wounds. (If two wounds are found, treats the more serious wound first.)	_____	_____
Removes the field dressing from plastic and paper wrappers without contaminating the white side of the dressing.	_____	_____
Grasps the tails of the field dressing with both hands, holds the dressing directly over the wound with the white side down, pulls the dressing open, and places the dressing pad directly over the wound.	_____	_____
Holds (or has casualty hold) the dressing in place and wraps one tail around the injured limb, covering one exposed edge of the dressing.	_____	_____
Wraps other tail in opposite direction so the other edge of the dressing pad is covered.	_____	_____
Ties the tails into a nonslip knot over outer edge of the dressing (not over the wound). Dressing should be secure, but loose enough to insert two fingers under the knot.	_____	_____
Checks the casualty's blood circulation below the bandage.	_____	_____
Loosens and reties tails if the circulation is impaired.	_____	_____
Applies direct manual pressure over the dressing (or has the casualty apply pressure if he is able).	_____	_____
Checks limb for fracture.	_____	_____
Elevates the wound above the level of the heart if the limb is not fractured.	_____	_____
OVERALL EVALUATION (circle one) (A no-go on any step gives an overall evaluation of no-go.)	GO	NO-GO

PERFORMANCE CHECKLIST

Section I: APPLY A PRESSURE DRESSING TO AN OPEN WOUND ON AN EXTREMITY

Situation: (Continuation of the field dressing scenario.) You have properly applied a field dressing, manual pressure, and elevation. However, the casualty is still losing a good deal of blood from a wound. You have decided to apply a pressure dressing. Do so now.

Supplies: Gauze or other material appropriate to serve as the wad, triangular bandage or other material appropriate to make a cravat, scissors (if needed).

	GO	NO-GO
Folds material as necessary to form pressure dressing wad (pad).	_____	_____
Places wad on top of the dressing directly over the wound.	_____	_____
Wraps a cravat (or other appropriate material) tightly around the wad and limb.	_____	_____
Ties a nonslip knot directly over the wound to secure the wad. (Should be able to insert only one fingertip under the knot of the pressure dressing.)	_____	_____
Checks the casualty's blood circulation below the pressure dressing.	_____	_____
Loosens and reties the cravat if circulation is impaired.	_____	_____
Applied direct manual pressure over the pressure dressing.	_____	_____
OVERALL EVALUATION (circle one) (A no-go on any step gives an overall evaluation of no-go.)	GO	NO-GO

PERFORMANCE CHECKLIST

APPLY A COMBAT APPLICATION TOURNIQUET® TO AN EXTREMITY

Situation: You have decided to apply a Combat Application Tourniquet (CAT) to a casualty. However, do not tighten the tourniquet all the way. Tell the evaluator what you would do at that point, then continue as though the tourniquet band were tightened.

Supplies: Combat Application Tourniquet, pen.

	GO	NO-GO
Opens pouch and removes the CAT.	_____	_____
Slides the wounded extremity through the self-adhering band loop.	___	____
Correctly positions the CAT about two inches above the wound.	_____	_____
Pulls the free running end of the self-adhering band tight and securely fastens it back on itself (does not adhere the band past the windlass clip).	_____	_____
If leg, routes the self-adhering band through the fiction adaptor buckle.	_____	_____
Twists the windlass rod until the bleeding has stopped. [Simulate if practicing on a person.]	_____	_____
Locks the rod in place with the windlass clip.	_____	_____
Secures the windlass rod with the windlass strap.	___	____
If small extremity, secures the self-adhering band under the windlass strap and continues to wind the band around the extremity and over the windlass rod.	___	____
Grasps the windlass strap, pulls it tight, and adheres it to the Velcro on the windlass clip.	___	____
Marks the casualty's forehead with a "T" and writes the time. of application.	_____	_____
OVERALL EVALUATION (A no-go on any step gives an overall evaluation of no-go.)	GO	NO GO

PERFORMANCE CHECKLIST

APPLY AN IMPROVISED TOURNIQUET TO AN EXTREMITY

Situation: Continuation of the field dressing and pressure dressing scenario. You have properly applied a field dressing, manual pressure, elevation, and a pressure dressing. However, the casualty continues to lose a good deal of blood from the wound. You have decided to apply a tourniquet. Do so now. However, do not tighten the tourniquet all the way. Tell the evaluator what you would do at that point, then continue as though the tourniquet band were tightened appropriately.

Supplies: Triangular bandages (or other material appropriate to make a cravat and secure the rigid object), windlass made from seven or eight tongue depressors wrapped in tape, scissors. tape, pen.

	GO	NO-GO
Makes a band (cravat) at least two inches wide.	_____	_____
Wraps the tourniquet band around the limb two to four inches. above the wound (or above the joint, if applicable).	_____	_____
Ties a half-knot.	_____	_____
Places the rigid object (stick) on top of the half-knot.	_____	_____
Ties a full knot over the rigid object.	_____	_____
Twists the stick to tighten the tourniquet. [Simulate if practicing on a person.]	_____	_____
Secures the windlass to prevent tourniquet from untwisting using strip of cloth, cravat, or tape wrapped around the limb. If a cravat or strip of cloth is used, the tails are tied in a nonslip knot.	_____	_____
Marks the casualty's forehead with a "T" and writes the time of application.	_____	_____
OVERALL EVALUATION (A no-go on any step gives an overall evaluation of no-go.)	GO	NO GO

PERFORMANCE CHECKLIST

Section III: APPLY AN EMERGENCY TRAUMA BANDAGE TO AN OPEN WOUND ON AN EXTREMITY

Situation: You have located a casualty (simulated) who is losing a good deal of blood from a wound on an extremity (wound is marked or indicated on arm, forearm, thigh, or leg).

Supplies: Emergency trauma bandage.

	GO	NO-GO
Removes the emergency trauma bandage from its pouch.	_____	_____
Places the pad (dressing) on the wound.	_____	_____
Wraps the elastic bandage around the extremity.	_____	_____
Inserts the elastic bandage completely into the pressure bar.	_____	_____
Pulls the elastic bandage back over the top of the pressure bar, forcing the bar down onto the pad.	_____	_____
Wraps the elastic bandage tightly over the pressure bar.	_____	_____
Continues to wrap the elastic bandage around the limb so that all edges of the dressing are covered.	_____	_____
Secures the hooking end of the closing bar into the elastic bandage.	_____	_____
The bandage is tight enough to secure the dressing, but not tight enough to interfere with distal blood circulation.	_____	_____
OVERALL EVALUATION (A no-go on any step gives an overall evaluation of no-go.)	GO	NO GO

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LESSON 6

INITIATING A SALINE LOCK AND INTRAVENOUS INFUSION

TASK

Initiate a saline lock and intravenous infusion.

CONDITIONS

Given a simulated casualty and supplies from a combat lifesaver aid bag.

STANDARD

Score a GO on the performance checklist.

6-1. HYPOVOLEMIC SHOCK

One of the most important tasks of the combat lifesaver is to control hypovolemic shock. Hypovolemic shock is caused by a decrease in the volume of blood in the casualty's circulatory system. It is usually caused by serious bleeding, such as from a cut artery on an extremity or from an amputation. Hypovolemic shock can also result from internal bleeding (such as bleeding into the abdominal cavity from a blow to the abdomen), severe burns, or dehydration due to severe vomiting, diarrhea, or profuse sweating. On the battlefield, preventing hypovolemic shock is usually accomplished by controlling bleeding (thus preventing additional blood loss) and by increasing the fluid in the circulatory system by adding fluids intravenously (intravenous infusion). Often, the intravenous infusion is referred to simply as an "IV." Likewise, the bag containing the fluid to be used intravenously is called the IV bag, the tubing used in an intravenous infusion is called the IV tubing, and so fourth.

6-2. SALINE LOCK

a. **Saline Lock Before an Intravenous Infusion.** Even if the casualty does not require intravenous fluids immediately, he may later on. The longer you wait, the more difficult it will be to establish an intravenous infusion. (It becomes difficult to insert a catheter/needle into the casualty's vein as the vein begins to collapse.) For this reason, you should establish a saline lock. Basically, a saline lock is like the first part of initiating an intravenous infusion. A catheter is inserted into the vein, but fluids are not passed through the catheter into the vein. It is, basically, an IV in waiting. The IV can quickly be established once the saline lock is in place.

b. **Saline Lock After an Intravenous Infusion.** If an IV has been established without a saline lock, a saline lock can be established once the IV is discontinued. This is done to keep the catheter in the vein for future use.

6-3. ESTABLISHING A SALINE LOCK

The procedures for performing a venipuncture and establishing a saline lock are given in the following paragraphs.

NOTE: Venipuncture means "puncture of a vein."

a. **Obtain Needed Supplies**. You will need the following items from your combat lifesaver aid bag.

(1) 18 gauge IV catheter/needle unit.

(2) Saline lock adapter plug.

(3) Constricting band.

(4) Tegaderm® dressing.

(5) Alcohol or povidone-iodine pad.

(6) Gloves.

(7) 21 gauge 1 1/4 inch needle (for flushing, if needed).

(8) 5 milliliter syringe (for flushing, if needed).

(9) Hextend® IV bag (for flushing, if needed).

b. **Select the Site**. For combat lifesavers, the preferred sites for initiating an IV or saline lock are the peripheral veins of the antecubital fossa (the area anterior to and just below the elbow--see the illustration on the left in figure 6-1) because they are among the largest, most visible, and most accessible veins in the arm. Other sites that may be used are on the back of his hand (see the illustration on the right in figure 6-1). If a casualty's arm is injured, select a site on the uninjured arm. If both arms are uninjured, select a site on the casualty's nondominant arm (left arm if the casualty is right handed).

(1) Expose possible infusion sites by removing, tearing, or cutting away clothing as needed.

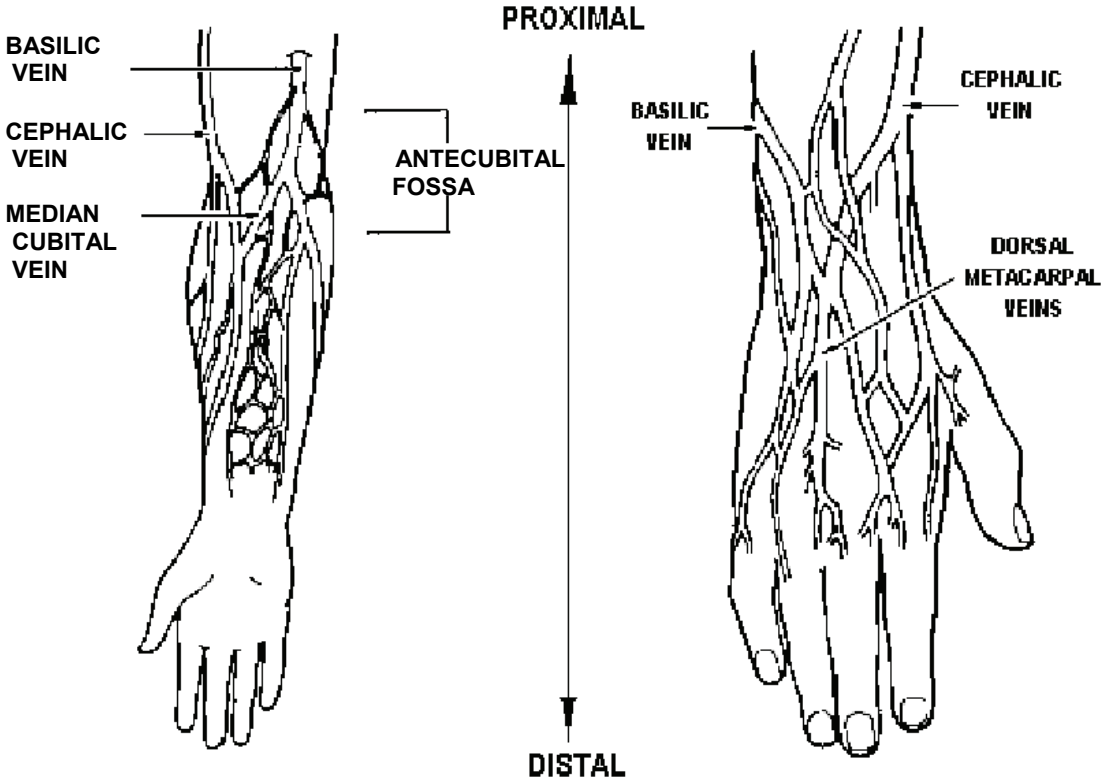

Figure 6-1. Veins in the forearm and hand (right arm).

(2) Look and feel (palpate) for a vein. If possible, select a vein that can be felt and seen. Make sure the vein is large enough to accommodate the catheter/needle that will be used. Make sure the site is free of scars, moles, and excessive hair.

(3) Avoid joints, areas where a pulse is palpable, and veins near or below the site of injury.

(4) Select a straight vein that feels springy when touched and does not roll.

(5) If you have difficulty finding a vein, lower the arm below the level of the heart. If you still cannot find a vein on the arm or hand, try to find a vein on the foot. If this fails, try to find a vein on the leg.

NOTE: Attempt to penetrate the vein at the most distal point (the one closest to the end of the extremity) that is practical. If you are unsuccessful the first time, move up (toward the heart) for your second attempt.

c. **Apply Constricting Band**. Apply the constricting band (tubing) about two inches above the selected infusion (venipuncture) site in such a manner that the band can be released using only one hand.

NOTE: The purpose of the constricting band is to constrict the vein, stopping the blood in the vein from flowing back to the heart. This causes the vein to enlarge and become easier to locate. The constricting band should not be applied so tight that the arterial blood flow stops. The casualty should still have a pulse distal to the band after the constricting band had been applied.

(1) Stretch the band slightly.

(2) Wrap the band around the limb so that one end of the remaining band is longer than the other end (figure 6-2, left figure).

(3) Loop the longer end and draw it under the shorter end. Be sure the tails point away from the infusion site (figure 6-2, right figure).

CAUTION: The constricting band should not remain in place more than two minutes.

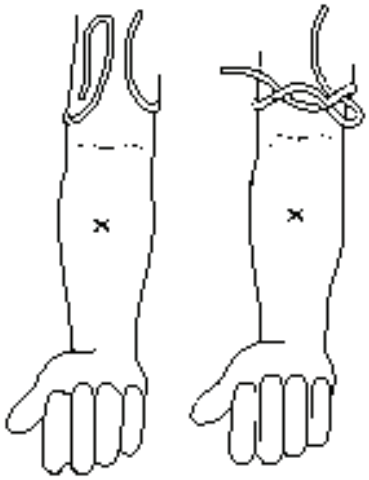

Figure 6-2. Applying a constricting band for venipuncture in right forearm.

d. **Prepare the Site**.

(1) Ask the casualty (if conscious) to clench and relax his fist several times, then keep his fist clenched. If the casualty is unconscious, place the limb below the level of heart.

(2) Palpate the vein with your fingertips again (after the clenching) to make sure that the vein is still suitable (figure 6-3).

(3) Open a packet containing an alcohol or povidone-iodine pad and cleanse the skin at the selected infusion site. Wipe the site using a circular motion, beginning at the center of the site and spiraling outward (figure 6-4).

Figure 6-3. Palpating the site again.

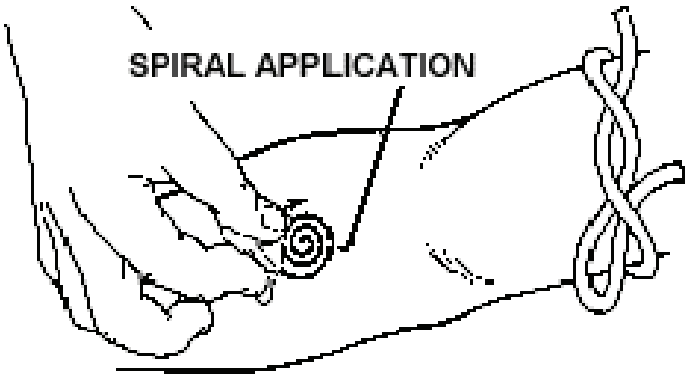

Figure 6-4. Cleansing the site with an alcohol or povidone-iodine pad.

e. **Put on Your Gloves**. Cleanliness is the main reason for wearing gloves when you initiate an IV. In battle, you and the casualty may be smeared with dirt, sand, mud, or blood. The gloves will reduce the chance of various possible infections resulting from the IV puncture for both you and the casualty. In addition, the gloves provide protection from casualties infected with human immunodeficiency virus (HIV), hepatitis B virus (HBV), or other blood-borne diseases.

f. **Perform the Venipuncture**.

(1) Open the packaging of the catheter/needle unit and remove the unit.

(2) Hold the unit with your dominant hand.

(3) Use your other hand to remove the protective cap from the unit without contaminating the needle.

(4) Hold the flash chamber of the unit with the thumb and forefinger of your dominant hand. Position the unit so that the bevel of the needle is up (figure 6-5).

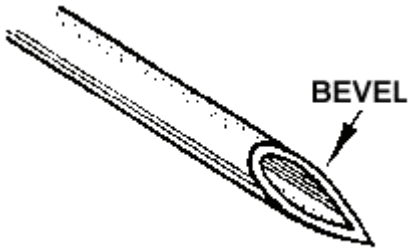

Figure 6-5. Needle with bevel up.

CAUTION: Do not touch the exposed needle or catheter.

(5) Position the needle (bevel up) so that it is directly above the selected vein or slightly to one side of the vein.

(6) Pull the skin over the venipuncture site taut by pressing approximately one inch below the infusion site with the thumb of your non-dominant hand.

(7) Position the point of the needle (bevel up) about 1/2 inch below the site selected for the venipuncture. The needle should be at approximately a 20 to 30 degree angle (figure 6-6).

Figure 6-6. Catheter/needle positioned above vein

(8) Insert the needle tip (bevel up) into the skin. Insert only the bevel of the needle beneath the skin.

(9) Lower the angle of the catheter/needle until it is almost parallel to the skin surface.

(10) Direct the point of the needle toward the vein.

(11) Continue advancing the catheter/needle until the wall of the vein is pierced.

NOTE: A slight "give" is felt as the needle enters the vein.

(12) Check for blood in the flash chamber (figure 6-7). Blood in the flash chamber indicates that the vein has been successfully punctured.

Figure 6-7. Blood in the flash chamber of the catheter/needle unit.

(13) When you have blood in the flash chamber, advance the catheter/needle unit approximately 1/8 inch farther to ensure that the catheter itself is in the vein.

(14) Stabilize the flash chamber with your dominant hand and grasp the catheter hub with your non-dominant hand (figure 6-8).

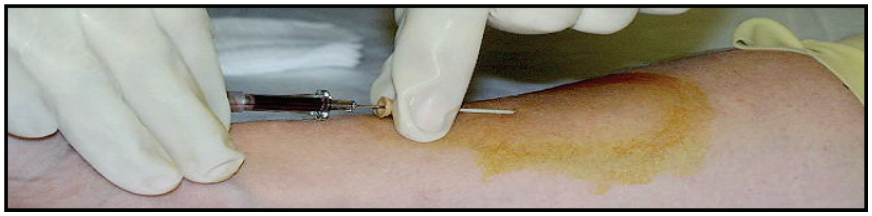

Figure 6-8. Threading the catheter into the vein.

(15) Thread the entire length of the catheter (up to the hub) into the vein.

CAUTION: Only the catheter is advanced into the vein. The needle is not advanced. Hold the needle in place as you push the catheter.

(16) While continuing to hold the catheter hub with your non-dominant hand, use a finger of the non-dominant hand to press lightly on the skin just beyond the catheter tip.

NOTE: This pressure decreases or stops the flow of blood from the vein after the needle is removed.

(17) With your dominant hand, remove the flash chamber with the attached needle from the catheter and lay the flash chamber/needle aside.

NOTE: Be sure to properly dispose of the needle later.

(18) Tell the casualty to unclench his fist.

NOTE: Notice that the catheter in the vein is pointing in the direction of the blood flow, not against it. When IV fluids are administered, the fluids will join the natural flow of blood back to the heart, not fight against the flow.

g. **Release Constricting Band**. Without switching hands, release the constricting band from around the casualty's limb. Continue to apply pressure to the vein with the other hand.

h. **Apply Saline Lock**.

(1) Quickly uncap and insert the male end of the saline lock adapter plug into the hub of the catheter.

(2) Release pressure from over the vein. The saline lock will prevent the loss of blood from the catheter.

i. **Apply Tegaderm® Dressing**. Apply a Tegaderm® dressing to the site. The dressing should cover 100 percent of the site, to include insertion site and saline lock adapter plug. The dressing will secure the saline lock and also protect against outside contamination.

NOTE: The Tegaderm® dressing is transparent (clear) and rectangular in shape with a visible, removable border around the edges. Apply the dressing with the border side up. After the dressing has been firmly applied, remove and discard the border.

NOTE: When an IV is needed, the needle of the IV can penetrate the Tegaderm® dressing. If the IV is terminated, the IV needle can be removed and the Tegaderm® dressing left in place. If another IV is needed, the new IV needle can be inserted through the Tegaderm® dressing.

6-4. FLUSHING THE SALINE LOCK

If an IV is not to be started immediately, you should flush the catheter and examine the site for signs of infiltration (fluids going into the tissues rather than the vein). Hextend®, normal saline, or Ringer's lactated solution may be used to flush the saline lock. The fluid used for flushing the saline lock will come from the IV bag in your combat lifesaver bag. Since you are using a sterile needle to withdraw fluid from the IV bag, the fluid inside the IV bag will remain sterile.

a. **Flushing**.

(1) Attach the 21-gauge needle to the 5 ml syringe.

(2) Fill the syringe with sterile fluid.

(3) Penetrate the Tegaderm® dressing with the needle.

(4) Insert the needle into the saline lock.

(5) Inject the sterile fluid into the catheter.

(6) Look for signs of infiltration (see paragraph b below).

(7) Withdraw the needle from the lock and dressing. (The saline lock will prevent blood or fluid from escaping from the catheter.)

(8) Discard the needle in a safe manner.

b. **Infiltration**. Check the infusion site again for signs of infiltration. Some signs and symptoms of infiltration are:

(1) Unusual pain felt by casualty at site of infusion.

(2) Swelling at the site of the infusion.

(3) Redness at the site of the infusion.

(4) Site is cool to the touch.

(5) Clear fluid leaking around the site.

6-5. INITIATING FLUIDS THROUGH A SALINE LOCK

a. **Obtain Needed Supplies**. You will need the following items from your combat lifesaver aid bag. See figure 6-9 for an example of IV supplies. The actual supplies in your aid bag may be somewhat different in appearance.

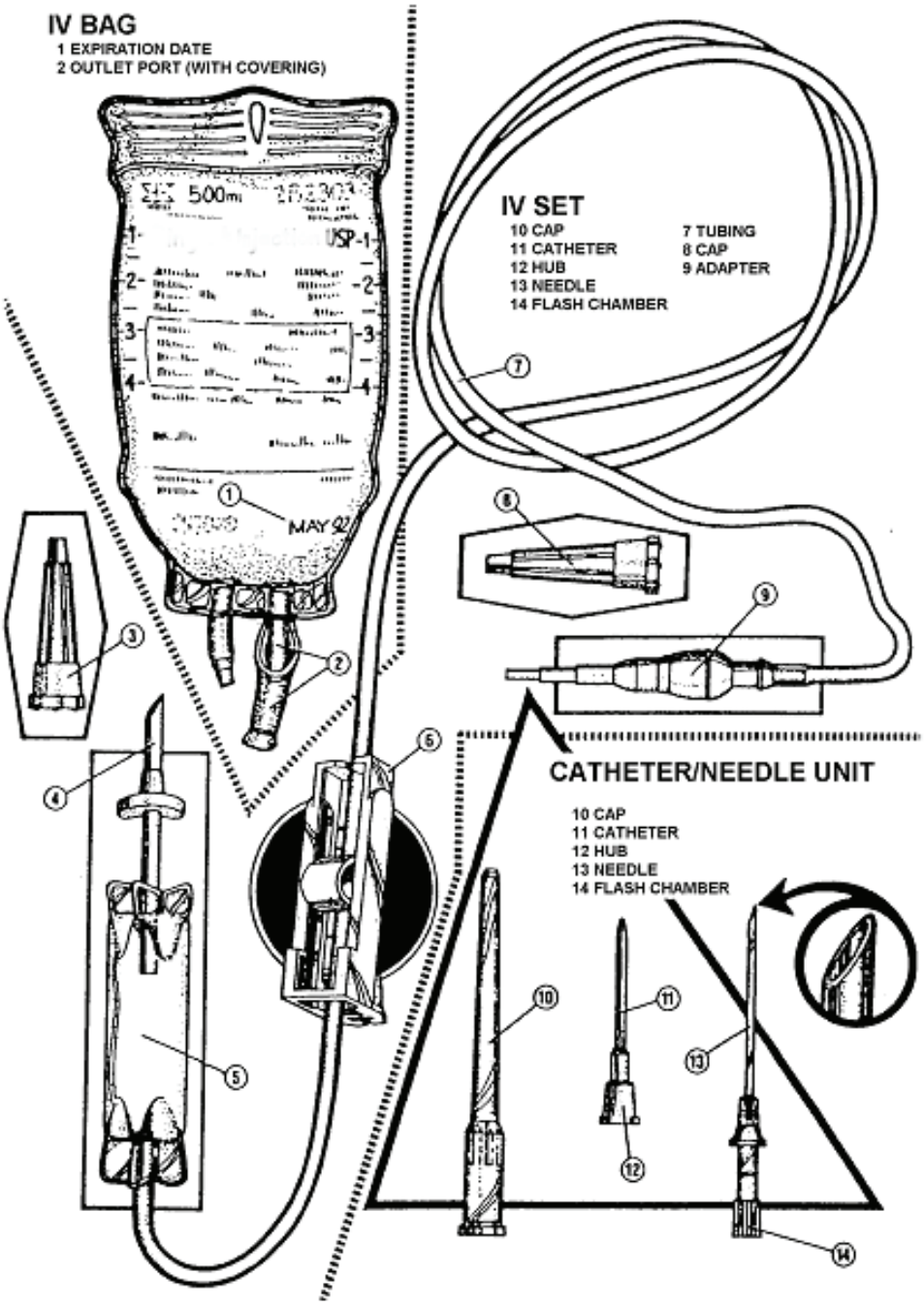

Figure 6-9. Example of intravenous infusion supplies.

(1) Intravenous infusion bag (Hextend®, 500 ml).

(2) Intravenous infusion set.

(3) 18 gauge catheter/needle unit.

(4) Tape.

(5) Scissors.

b. **Establish a Saline Lock**. Perform a venipuncture and establish a saline lock using the procedures given in paragraph 6-3. If fluids are to be administered immediately through the saline lock, the lock does not need to be flushed.

c. **Prepare Intravenous Infusion**.

(1) Remove the infusion set from the package.

(2) Loosen the clamp, move the clamp along the tubing until it is six to eight inches from the drip chamber, and tighten the clamp.

(3) Remove the protective covering from the outlet port (long spout) on the IV bag. Do not let the tip of the outlet port touch anything until the spike is inserted.

(4) Remove the protective cap from the spike on the infusion set.

(a) Grasp the drip chamber with one hand and the spike cap with the other hand.

(b) Remove the cap with a twisting motion without touching the spike.

(5) Insert the spike into the exposed IV outlet port with a twisting motion. The spike will penetrate the seal in the outlet port. Do not touch the end of the port or the spike during the procedure.

(6) Hang the bag on an object above the level of the casualty's heart, if possible, or hold the bag up until you have completed removing air from the tubing.

(7) Squeeze the drip chamber until half of the chamber is filled with IV solution.

(8) Remove the air from the tubing.

(a) Hold the end of the tubing above the bottom of the bag.

(b) Release or loosen the tubing clamp. (This allows the fluid to flow into the tubing.)

(c) Loosen the protective cap over the adapter. (This allows the air to escape from the tubing.)

(d) Gradually lower the tubing (figure 6-10) until the solution reaches the end of the adapter.

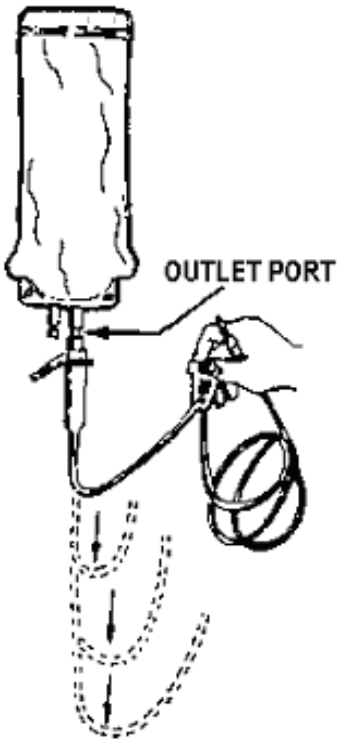

Figure 6-10. Lowering the IV tubing to remove air from the tubing.

(e) Once the fluid has forced out the air, reclamp the tubing and retighten the cap over the adapter.

(9) Place the IV tubing where it will not get damaged and where the tubing is in easy reach.

WARNING

If air is not removed from the tubing, it can enter the bloodstream and rapidly move to the heart. This can cause the casualty's heart to stop beating (cardiac arrest). It is essential that you make sure there is no air in the tubing.

d. **Insert Catheter/Needle Into Saline Lock.**

(1) Remove the 18-gauge catheter/needle unit from its packaging and discard the packaging.

(2) Hold the catheter/needle unit in your dominant hand.

(3) Stabilize the saline lock adapter with the thumb and forefinger of your non-dominant hand.

NOTE: The pressure is applied on top of the Tegaderm® dressing.

(4) Insert the catheter/needle through the Tegaderm® dressing and saline lock adapter until it rests at the hub of the catheter.

(5) Remove your non-dominant hand from the saline lock, place a finger or thumb of the non-dominant hand over the vein just beyond the catheter tip, and apply pressure to the vein.

(6) Retract the needle from the catheter/needle unit and discard the needle.

NOTE: Make sure that the catheter of the catheter/needle unit stays in place.

NOTE: Place the needle in a safe location where you or the casualty will not be accidentally stuck. After the procedure is completed, dispose of the needle properly.

e. **Connect Intravenous Infusion Bag to Catheter**.

(1) Grasp the end of the IV tubing with your dominant hand and remove the adapter from the IV tubing.

(2) Grasp the hub of the catheter that is outside the Tegaderm® dressing with the thumb and forefinger of your non-dominant hand.

(3) Insert the end of the tubing into the hub of the catheter.

f. **Adjust Intravenous Flow**. Loosen the clamp on the IV tubing to allow the IV solution to flow. Fluid will also begin to flow (drip) into the drip chamber. Normally, the clamp should be adjusted so the IV tubing is clamped (constricted) about half way. The fluid should be flowing fast enough that you can barely count the individual drops of fluid.

g. **Secure the Intravenous Tubing**. Use the tape from your aid bag to secure the IV tubing to the casualty's limb. Use scissors to cut the tape or tear the tape as needed.

(1) Unroll about two inches of the tape and place it on the casualty's limb and under the IV tubing a few inches beyond the catheter hub and beyond the Tegaderm® dressing. Make sure the sticky side of the tape is up.

(2) Fold the strip of tape back over the IV tubing, trapping the tubing between the sticky sides of the tape. The tape is locked on itself, thus securing it to the IV tubing.

(3) Wrap the roll of tape around the casualty's limb. The sticky side of the tape will be down and will adhere to the casualty's limb.

(4) Bring the tape back over the IV tubing and beyond the tubing.

(5) Cut/tear the tape, making sure that the end of the tape extends several inches beyond the IV tubing and is over the tape wrapped around the limb.

(6) Make sure the end of the tape adheres to the tape used to go around the limb.

(7) Check to make sure the IV tubing is secure and the flow of IV fluids is not impeded.

h. **Check for Infiltration**. Check the infusion site for signs and symptoms of infiltration. Signs and symptoms of infiltration include:

(1) Unusual pain felt by casualty at site of infusion.

(2) Swelling at the site of the infusion.

(3) Redness at the site of the infusion.

(4) Site is cool to the touch.

(5) Clear fluid leaking around the site.

WARNING

If signs of infiltration are present, clamp the IV tubing, remove the catheter from the casualty, obtain a new catheter/needle unit, and attempt the infusion at a site <u>above</u> the last attempt.

6-6. POSSIBLE PROBLEMS

a. If the first attempt at venipuncture is not successful (no blood in the flash chamber), pull the catheter/needle unit back slightly, but do not pull the bevel above the skin surface. Attempt to direct the point of the needle into the vein again.

b. If you are still unsuccessful, release the constricting band, withdraw the catheter/needle completely, obtain another catheter/needle unit, and attempt another venipuncture at a point proximal to (above) the previous attempt or on another limb.

c. If the second venipuncture attempt is not successful, obtain medical assistance, if available. Do not attempt another venipuncture. If medical assistance is not available, evacuate the casualty as soon as practical.

WARNING

After the needle is removed, do not attempt to reinsert it into the catheter. Reinsertion could cause a portion of the catheter to be sheared off, enter the bloodstream, and move to the heart where it could cause cardiac arrest.

d. Dispose of all used needles so that soldiers will not injure themselves on them. If an appropriate waste container is available, use it. Otherwise, drive the needle into the ground.

6-7. DOCUMENTING PROCEDURES ON A FIELD MEDICAL CARD

Document the initiation of IV fluids on DD Form 1380, United States Field Medical Card. If you must leave the casualty or the casualty is being evacuated, tear the original card from the FMC pad and attach the card to the casualty (tie the wire onto the casualty's clothing). Information on this form is found in Lesson 7.

6-8. DISCONTINUING AN IV

An IV may need to be discontinued due to evacuation, the fluid in the IV bag being used up, or other reasons.

a. **With Saline Lock.** If a saline lock was established before the IV was started:

(1) Adjust the clamp on the tubing so the flow of fluid is stopped.

(2) Loosen and remove the strip of tape securing the IV tubing to the casualty's limb.

(3) Remove the IV catheter hub that is outside the Tegaderm® dressing. Once the catheter is removed, the saline lock adapter will prevent bleeding from the catheter still in the casualty's vein. The Tegaderm® dressing will continue to protect the saline lock adapter and catheter hub beneath the dressing from additional contamination. Another IV can be started using the saline lock at a later time, if needed.

b. **Without Saline Lock**. If a saline lock was not in place before the IV was started:

(1) Adjust the clamp on the tubing so the flow of fluid is stopped.

(2) Loosen and remove the strip of tape securing the IV tubing to the casualty's limb.

(3) Remove the IV tubing from the catheter hub.

NOTE: Make sure that the catheter does not come out of the in the vein.

(4) Install a saline lock adapter into the catheter hub.

(5) Cover the saline lock and the infusion site with a Tegaderm® dressing. Another IV can now be started using the saline lock at a later time.

c. **Complete Removal**. It may become necessary to remove the catheter from the vein; for example, if infiltration develops. Steps for removing the catheter are given below.

(1) Adjust the clamp on the tubing so the flow of fluid is stopped.

(2) Loosen and remove the strip of tape securing the IV tubing to the casualty's limb.

(3) Remove the catheter from the vein by pulling it out at the same angle used in inserting the needle (almost parallel to the skin).

(4) Cover the IV puncture site with a self-adhesive bandage or with a gauze dressing.

(5) Tape the dressing in place.

(6) Apply pressure to the puncture site until the bleeding has stopped.

6-9. CHECKING INTRAVENOUS INFUSION SUPPLIES

Before you go on a mission, check your aid bag to make sure that all needed supplies are present (see Appendix). Also check the IV items to make sure they are undamaged and not expired.

a. **Intravenous Bag**. Check the bag for:

(1) Expiration date. (Do not use outdated solutions.)

(2) Clearness of the fluid. (Make sure the fluid is clear and has no floating particles in the solution.)

(3) Leaks. (Discard any leaky bag; the IV solution inside is no longer sterile.)

CAUTION: If there is any doubt about the sterility of the solution, do not use it. Obtain another bag.

b. **Intravenous Infusion Set**. Check the packaging of the IV set for tears and watermarks. Tears and watermarks indicate that the set may no longer be sterile. If possible, check the tubing for tears, discoloration, and cracks. Obtain another IV set if your set is damaged.

c. **Catheter/Needle Units**. Check the packaging of the catheter/needle unit for tears and watermarks. Obtain another catheter/needle unit if yours is damaged.

NOTE: Consult your local standing operating procedures (SOP) for instructions on obtaining medical supplies for your aid bag.

Continue with Exercises

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LESSON EXERCISES: LESSON 6

INSTRUCTIONS: Answer the following exercises by marking the letter of the response that **best** answers the question or **best** completes the sentence or by writing the answer in the space provided.

After you have answered all of the exercises, check your answers against the "Solutions to Lesson Exercises" at the end of the exercises. For each exercise answered incorrectly, reread the lesson material referenced.

1. Intravenous infusions are used in an effort to control _____

   _____.

2. You are treating a casualty that does not require IV fluids now, but you know that evacuation will be delayed and that the casualty will probably require IV fluids before he can be evacuated. What should you do?

   a. Begin treatment with IV fluids immediately.
   b. Install a saline lock for future use.
   c. Wait until the casualty requires fluids, then initiate an IV

3. Another combat lifesaver started administering fluids to a casualty by IV, but did not use a saline lock adapter. You are now taking care of the casualty and have to stop the IV due to evacuation. Can you disconnect the IV fluids and install a saline lock so that fluids can be administered later without having to do another venipuncture?

   a. Yes.
   b. No.

4. You are going to install a saline lock on a casualty with an injured left arm. Which of the following sites would you probably use?

   a. Forearm of injured arm.
   b. Forearm of uninjured arm.
   c. Hand of injured arm.
   d. Hand of uninjured arm.

5. You are going to initiate a saline lock. What type of blood vessel should you use?

    a. A straight artery that can be easily felt.
    b. An artery located on a joint.
    c. A straight vein that can be easily felt.
    b. A vein located on a joint.

6. The constricting band should be applied about:

    a. Six inches above the infusion site.
    b. Six inches below the infusion site.
    c. Two inches below the infusion site.
    d. Two inches above the infusion site.

7. A constricting band should not be left in place more than _____.

8. You are cleansing the site for venipuncture using an alcohol pad. How should you wipe the area?

    _____.

9. How do you draw the skin over the insertion site taut prior to the venipuncture?

    a. Place the thumb of your non-dominant hand about one inch below the site and press.
    b. Place the thumb of your non-dominant hand about one inch above the site and press.
    c. Place the thumb of your dominant hand about one inch below the site and press.
    d. Place the thumb of your dominant hand about one inch above the site and press.

10. The needle should be inserted into the skin with the bevel:

    a. Down.
    b. To the side.
    c. Up.

11. You are inserting a catheter/needle into a casualty's arm. Suddenly, there is blood in the chamber above the catheter hub. What should you do?

    a. You have entered an artery. Pull the catheter/needle back and try again.
    b. You have entered the blood vessel. Stop advancing the catheter/needle.
    c. You have entered the blood vessel. Advance the catheter/needle about 1/8 inch more.
    d. The site has become infiltrated. Remove the catheter/needle from the arm.

12. You have the catheter/needle in the casualty's vein. You should now advance the:

    a. Catheter/needle about half way to the hub of the catheter.
    b. Catheter/needle up to the hub of the catheter.
    c. Catheter about half way to the hub, but without advancing the needle.
    d. Catheter up to the hub, but without advancing the needle.

13. You have performed a venipuncture. How is the saline lock adapter applied?

    _____

14. You are going to administer IV fluids to a casualty. When you remove the infusion set from its box/package, you should:

    a. Loosen the clamp, move it so that it is six to eight inches from the drip chamber, and retighten the clamp.
    b. Loosen the clamp, move it so that it is about two inches from the drip chamber, and retighten the clamp.
    c. Remove the clamp, turn it upside down, and replace it six to eight inches from the drip chamber.
    d. Remove the clamp, turn it upside down, and replace it about two inches from the drip chamber.

15. You are preparing to insert the spike of the IV tubing into the IV bag. Into which of the tubes (ports) of the bag should you insert the spike?

    a. The short one.
    b. The long one.

16. Before attaching the IV tubing to the catheter hub, you must make sure that all of the _____ has been removed from the tubing.

    a. Air.
    b. Fluid.

17. You are preparing an IV bag and tubing. The drip chamber should be:

    a. Completely full of fluid.
    b. About half full of fluid.
    c. Completely empty of fluid.

18. You have prepared the IV bag and tubing. The casualty has a saline lock in place. What should you do now?

    a. Remove the transparent dressing over the site and connect the tubing to the saline lock.
    b. Remove the transparent dressing over the site and the saline lock device, then connect the tubing to the catheter hub.
    c. Remove the transparent dressing over the site, attach a catheter/needle to the tubing, and insert the catheter/needle into the saline lock.
    d. Insert a catheter/needle through the transparent dressing and the saline lock, then attach the IV tubing to the catheter/needle unit.
    e. Insert a catheter/needle through the transparent dressing and the saline lock, then remove the needle and attach the IV tubing to the catheter hub.

19. You have initiated an IV. How should you set the clamp on the IV tubing?

    a. Fully open so that the fluid in the drip chamber is a steady stream.
    b. About half open so that the fluid in the drip chamber is flowing fast enough so you can barely count the individual drops.
    c. About half open so that the fluid in the drip chamber is flowing at about 10 drops per minute.
    d. Completely closed.

20. You have initiated an IV using a site on the casualty's arm and adjusted the flow rate. What else needs to be done to the IV tubing?

    _____

21. After initiating an IV, you should check the IV site for signs of _____.

22. List three signs of infiltration.

_____

_____

_____

23. You have initiated an IV and are monitoring the casualty. What else should you do?

_____

24. If you have access to an IV artificial arm or an appropriate manikin and needed supplies, practice initiating a saline lock and administering IV fluids.

CAUTION: Do not practice on another person unless you are under qualified medical supervision.

Check Your Answers on Next Page

SOLUTIONS TO LESSON EXERCISES: LESSON 6

1. hypovolemic shock. (para 6-1)
2. b (para 6-2a)
3. a (para 6-2b)
4. b (para 6-3b)
5. c (paras 6-3b(2), (3))
6. d (para 6-3c)
7. Two minutes. (para 6-3c(3) Caution)
8. Beginning at the center of the site and spiral outwards. (para 6-3d(3))
9. a (para 6-3f(6)
10. c (para 6-3f(8)
11. c (para 6-3f(13)
12. d (paras 6-3f(15), Caution)
13. Male end is inserted into the catheter hub. (para 6-3h(1))
14. a (para 6-5c(2))
15. b (paras 6-5c(5), c(3))
16. a (para 6-5c(8), Warning
17. b (para 6-5c(7)
18. e (paras 6-5d(4), (6), e(3)
19. b (para 6-5f(1)
20. Secure the tubing to the casualty's arm with tape. (para 6-5g)
21. Infiltration. (para 6-5f)

22. Any three of the below:
    Unusual pain felt by casualty at site of infusion.
    Swelling at the site of the infusion.
    Redness at the site of the infusion.
    Site is cool to the touch.
    Clear fluid leaking around the site.

23. Document the procedures of the Field Medical Card. (para 6-7)

24. See the following checklists.

INITIATE A SALINE LOCK
(Page 1 of 3)

Given: Simulated conscious or conscious casualty lying on his back.
18 gauge IV catheter/needle unit.
Saline lock adapter plug.
Constricting band.
Tegaderm® dressing.
Alcohol or povidone-iodine pad.
Gloves.
21 gauge 1 1/4" needle (for flushing).
5 milliliter syringe (for flushing).
Hextend® IV bag (for flushing)

		GO	NO-GO
1.	Exposes site.	_____	_____
2.	Palpates vein.	_____	_____
3.	Selects appropriate vein (straight, springy. does not roll) and site (avoids scars, moles, excessive hair, joints, injuries), usually on arm or back of hand.	_____	_____
4.	Applies constricting band about two inches above the selected site. (The band should cause vein to be easier to locate without stopping arterial blood flow).	_____	_____
5.	Has casualty to clench and relax fist several times (if conscious).	_____	_____
6.	Palpates vein again to ensure the vein is still suitable.	_____	_____
7.	Cleanses the selected infusion site with an alcohol or povidone-iodine pad, beginning at the center of the site and spiraling outward.	_____	_____
8.	Puts on gloves.	_____	_____
9.	Removes catheter/needle unit from packaging.	_____	_____

(Go to next page)

INITIATE A SALINE LOCK
(Page 2 of 3)

		GO	NO-GO
10.	Removes protective cap from needle.	_____	_____
11.	Holds flash chamber of catheter/needle unit with thumb and forefinger of dominant hand.	_____	_____
12.	Pulls the skin over the venipuncture site taut by pressing approximately one inch below the infusion site with the thumb of the non-dominant hand.	_____	_____
13.	Positions needle with bevel up about 1/2 inch below selected site at 20 to 30 degree angle and inserts the needle tip into skin.	_____	_____
14.	Lowers the needle and advances the needle until the wall of the vein is penetrated.	_____	_____
15.	Checks for blood in the flash chamber (successful penetration).	_____	_____
16.	Advances catheter/needle about 1/8 inch farther into vein.	_____	_____
17.	Stabilizes flash chamber with dominant hand while holding the catheter hub with the thumb and forefinger of the non-dominant hand.	_____	_____
18.	Threads entire length of catheter into vein up to the hub without advancing the needle.	_____	_____
19.	Presses on vein just beyond the catheter tip with a finger of his non-dominant hand with enough pressure to help control bleeding from the vein.	_____	_____
20.	Removes flash chamber and attached needle from catheter.	_____	_____
21.	Releases constricting band.	_____	_____

(Go to next page)

INITIATE A SALINE LOCK
(Page 3 of 3)

		GO	NO-GO
22.	Constricting band has not been in place for more than two minutes.	_____	_____
23.	Uncaps and inserts the male end of the saline lock adapter into the catheter hub.	_____	_____
24.	Releases pressure from over vein.	_____	_____
25.	Applies Tegaderm® dressing to site (adhesive side down).	_____	_____
26.	Tegaderm® dressing covers the insertion site and saline lock adapter plug.	_____	_____
27.	Attaches 21-gauge needle to 5 ml syringe.	_____	_____
28.	Fills syringe with sterile fluid from IV bag.	_____	_____
29.	Inserts the needle through the dressing and saline lock adapter plug.	_____	_____
30.	Injects the fluid into the catheter.	_____	_____
31.	Withdraws the needle completely.	_____	_____
32.	Disposes of needle properly.	_____	_____
33.	Identifies any signs or symptoms of infiltration that occur.	_____	_____
	OVERALL EVALUATION (A no-go on any step will result in a no-go for the entire task)	GO	NO-GO

INITIATE AN INTRAVENOUS INFUSION
(Page 1 of 3)

Given: Simulated casualty lying on his back with saline lock in place.
Intravenous infusion bag (Hextend®, 500 ml).
Intravenous infusion set.
18 gauge catheter/needle unit.
Tape.
Scissors.

		GO	NO-GO
1.	Removes infusion set from packet.	_____	_____
2.	Loosens the clamp, moves the clamp along the tubing until it is six to eight inches from the drip chamber, and tightens the clamp.	_____	_____
3.	Removes the protective covering from the outlet port without touching the tip of the outlet port.	_____	_____
4.	Removes the protective cap from the spike on the infusion set with a twisting motion.	_____	_____
5.	Inserts the spike into the exposed IV outlet port with a twisting motion.	_____	_____
6.	Hangs the bag on an object above the level of the casualty's heart or holds the bag up until air has been removed from the tubing.	_____	_____
7.	Squeezes the drip chamber until half of the chamber is filled with IV solution.	_____	_____
8.	Removes the air from the IV tubing by holding the end of the tubing above the bottom of the bag, loosening the tubing clamp and the protective cap over the adapter, gradually lowering the tubing until the solution reaches the end of the adapter, reclamping the tubing, and retightening the cap over the adapter.	_____	_____

(Go to next page)

INITIATE AN INTRAVENOUS INFUSION
(Page 2 of 3)

		GO	NO-GO
9.	Removes the 18-gauge catheter/needle unit from its packaging and discard the packaging.	_____	_____
10.	Holds the catheter/needle unit in the dominant hand while stabilizing the saline lock adapter with the thumb and forefinger of the non-dominant hand.	_____	_____
11.	Inserts the catheter/needle through the Tegaderm® dressing and saline lock adapter until it rests at the hub of the catheter.	_____	_____
12.	Applies pressure with the finger or thumb of the non-dominant hand over the vein just beyond the catheter tip.	_____	_____
13.	Retracts the needle from the catheter/needle unit and discards the needle.	_____	_____
14.	Grasps the end of the IV tubing with the dominant hand and removes the adapter from the IV tubing.	_____	_____
15.	Stabilizes the hub of the catheter that is outside the Tegaderm® dressing with the thumb and forefinger of the non-dominant hand.	_____	_____
16.	Inserts the end of the tubing into the hub of the catheter using the dominant hand.	_____	_____
17.	Loosens the clamp on the IV tubing to allow the IV solution to flow.	_____	_____
18.	Adjusts the clamp so the IV tubing is constricted about half way.	_____	_____

(Go to next page)

INITIATE AN INTRAVENOUS INFUSION
(Page 3 of 3)

		GO	NO-GO
19.	Unrolls about two inches of tape and placed it sticky side up on the casualty's limb and under the IV tubing a few inches beyond the catheter hub and beyond the dressing.	_____	_____
20.	Folds the strip of tape back over the IV tubing, wraps the tape around the limb and beyond the IV tubing again.	_____	_____
21.	Tears/cuts tape and secures end to looped tape.	_____	_____
22.	Intravenous infusion tubing is secure and the flow of IV fluids is not impeded.	_____	_____
23.	Checks for signs and symptoms of infiltration.	_____	_____
24.	If infiltration is present, discontinues IV and tries again at a proximal site.	_____	_____
25.	Sterility maintained with no additional injury to the casualty.	_____	_____
	OVERALL EVALUATION (A no-go on any step will result in a no-go for the entire task)	GO	NO-GO

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LESSON 7

INITIATING A FIELD MEDICAL CARD

TASK

Initiate a DD Form 1380, U.S. Field Medical Card.

CONDITIONS

Given information on a simulated casualty, a DD Form 1380 or a pad of DD Forms 1380, and a pencil or other writing instrument.

STANDARD

Enter the required information in the appropriate blocks.
Score a GO on the performance checklist.

REFERENCES

FM 8-10-6, Medical Evacuation in a Theater of Operations.

7-1. PURPOSE OF THE UNITED STATES FIELD MEDICAL CARD, DD FORM 1380

DD Form 1380, U.S. Field Medical Card, is usually called the Field Medical Card (FMC). A Field Medical Card is prepared on any casualty treated within a theater of operations. The Field Medical Card was designed to be used in forward combat areas by North Atlantic Treaty Organization (NATO) troops; therefore, the printed instructions on the form are in French as well as in English. The Field Medical Card provides medical personnel who see the casualty during evacuation with essential information about the casualty's injury or disease and the treatment already given. The Field Medical Card, as a record of events, may prevent accidental medication overdose and alert the receiving medical facility to any special care needed for treatment. It provides an accurate record of care already given. The front and the back of the Field Medical Card are illustrated in figures 7-1 and 7-2. Write legibly and concisely. Use approved abbreviations when possible. If an item is not known, leave it blank.

7-2. FIELD MEDICAL CARD PAD

Field Medical Cards are issued in a pad. Each pad contains 10 sets. A set consists of an original card with attached wire, a protective sheet, and a duplicate paper form. The front side of the card has spaces for the casualty's identification, a description of the injury or illness, and treatment rendered.

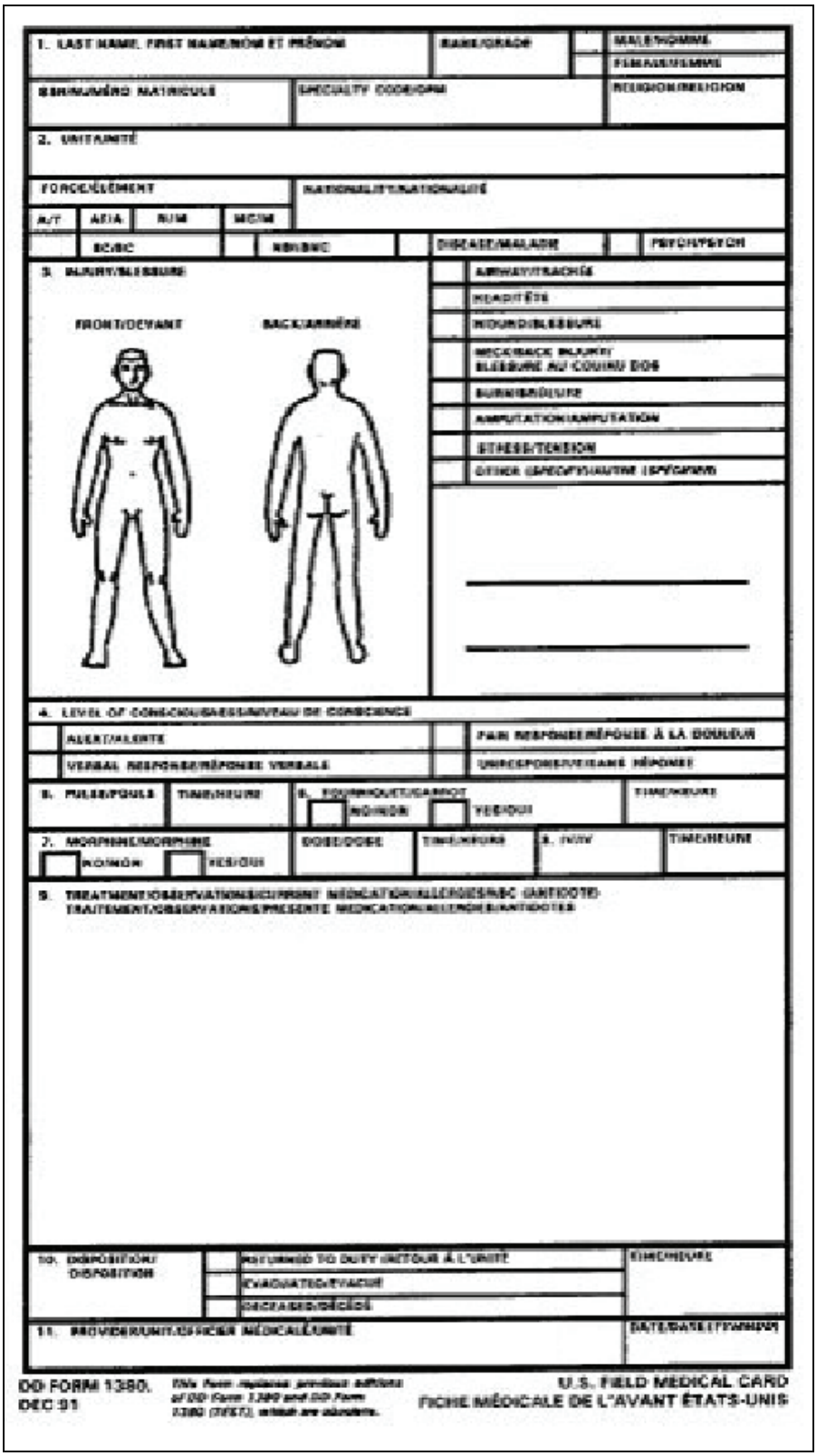
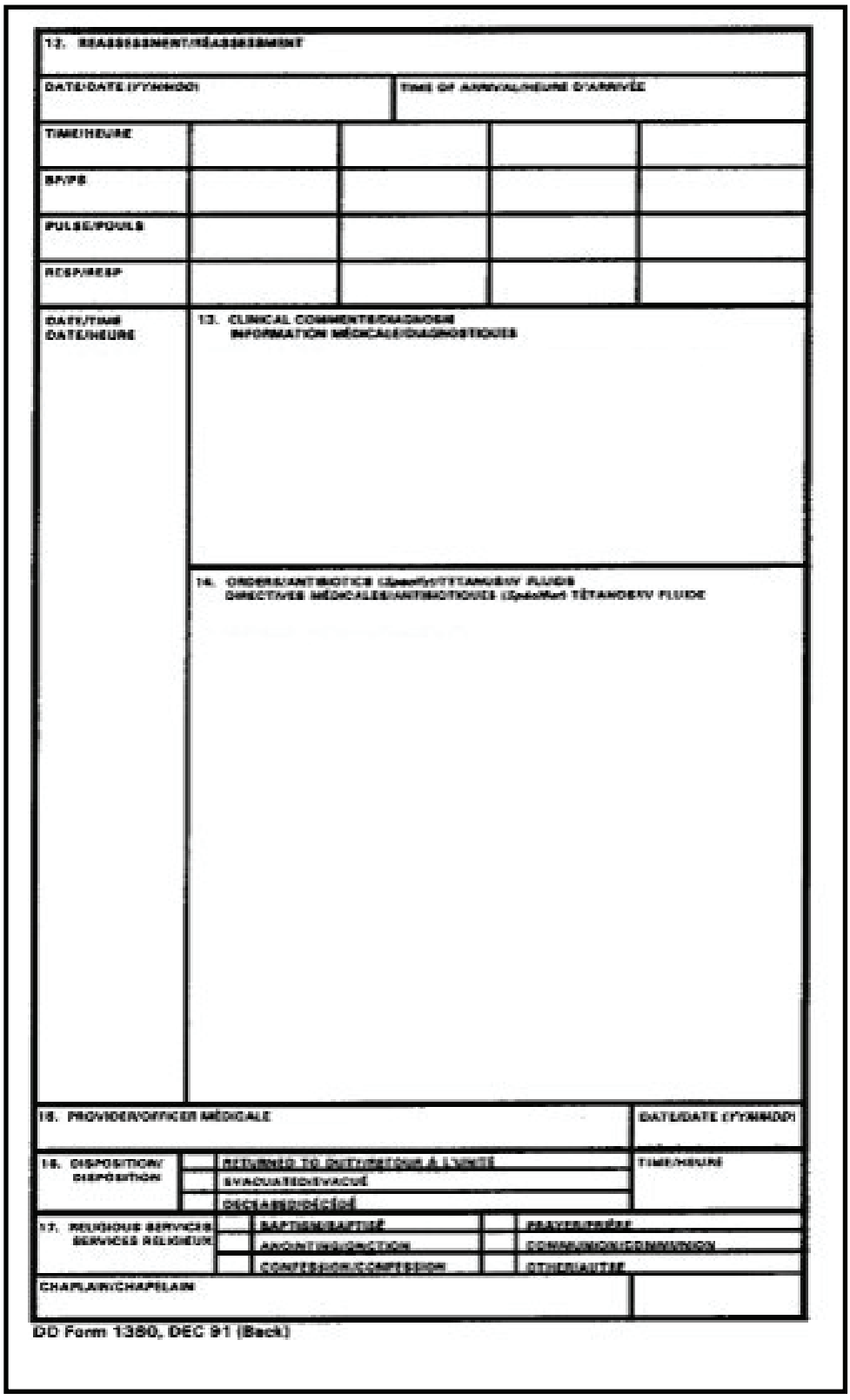


Figure 7-1. DD Form 1380, U.S. Field Medical Card (front).



DD Form 1380, DEC 91 (Back)

Figure 7-2. DD Form 1380, U.S. Field Medical Card (reverse).

7-3. INITIATING THE FIELD MEDICAL CARD

The Field Medical Card is usually initiated by the combat medic. However, the combat lifesaver can initiate the Field Medical Card if no combat medic is available or if the combat medic directs the combat lifesaver to initiate the card. A pad of Field Medical Cards is part of the combat lifesaver medical equipment set.

a. **Remove Protective Sheet**. When initiating the Field Medical Card, remove the protective sheet between the original card and the duplicate (white sheet). The back of the original card is impregnated so that the information written on the front of the card will also appear on the front of the duplicate sheet.

b. **Enter Primary Information**. Complete blocks 1, 3, 4, 9, and 11, if possible.

c. **Enter Secondary Information**. Complete blocks 2, 5, 6, 7, 8, 10, 12, 13, 14, 15, 16, and 17, if appropriate, as time permits.

7-4. PRIMARY INFORMATION

a. **Block 1**. An illustration of block 1 of the Field Medical Card is shown in figure 7-3. Information may be obtained by talking to the casualty, from the casualty's identification tags or uniform, or from other soldiers.

<table>
<tr><td colspan="2" rowspan="2">1. LAST NAME, FIRST NAME / NOM ET PRENOM</td><td rowspan="2">RANK/GRADE</td><td></td><td>MALE / HOMME</td></tr>
<tr><td></td><td>FEMALE / FEMME</td></tr>
<tr><td>SSN / NUMERO MATRICULE</td><td colspan="2">SPECIALTY CODE / GPM</td><td colspan="2">RELIGION / RELIGION</td></tr>
</table>

Figure 7-3. Block 1 of the FMC.

(1) Name. Enter the casualty's name in the box titled "LAST NAME, FIRST NAME/NOM ET PRENOM." Enter it in last name, first name, middle initial format.

(2) Rank. Enter the abbreviation of the casualty's rank (SGT, CPT, and so forth) in the box titled " RANK/GRADE."

(3) SSN. Enter the casualty's social security number in the box titled "SSN/NUMERO MATRICULE."

(a) If the casualty is a member of a foreign military, including a prisoner of war, enter the casualty's military service number instead.

(b) If the casualty is not military, leave the block blank.

(4) Military Occupation Specialty. Enter the casualty's military occupation specialty (MOS) code if enlisted or the casualty's area of concentration (AOC) if an officer in the box titled "SPECIALTY CODE/GPM."

(5) Sex. Mark the box to the left of ”MALE/HOMME" if the casualty is a male. Mark the box to the left of "FEMALE/FEMME" if the casualty is a female.

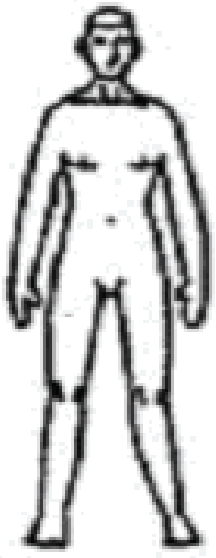
(6) Religion. Enter the casualty's religious preference in the box titled "RELIGION/RELIGION."

b. **Block 3**. An illustration of block 3 of the Field Medical Card is shown in figure 7-4.

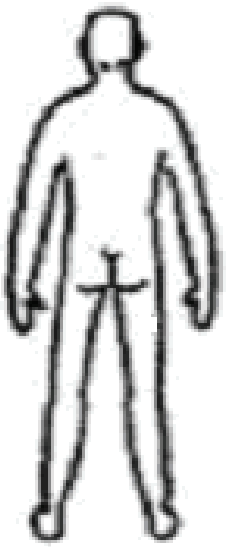
	BC / BC		NBC / NBC		DISEASE / MALADIE		PSYCH/PSYCH

3. INJURY / BLESSURE

FRONT / DEVANT



BACK / ARRIERE



	AIRWAY / TRACHEE
	HEAD / TETE
	WOUND / BLESSURE
	NECK/BACK INJURY / BLESSURE AU COU/AU DOS
	BURN / BRULURE
	AMPUTATION / AMPUTATION
	STRESS / TENSION
	OTHER (*Specify*) / AUTRE (*Specifier*)

_____

_____

Figure 7-4. Block 3 of the FMC.

(1) Mark the box to indicate the type of injury.

(a) If the casualty is suffering trauma (battle casualty), mark the box in front of "BC/BC."

(b) If the casualty is a nuclear, biological agent, or chemical agent casualty, mark the box in front of "NBC/NBC."

(c) If the casualty is ill and is not classifiable as one of the three other categories, mark the box in front of "DISEASE/MALADE."

(d) If the casualty is suffering from combat stress or other psychological injury, mark the box in front of "PSYCH/PSYCH."

(2) Use the figures in the left portion of the block to show the location of the casualty's injury or injuries. Note that there are two figures, one for injuries to the front and one for injuries to the back. Be sure that the casualty has been checked for both entrance wounds and exit wounds.

(3) Mark the appropriate box or boxes to describe the casualty's injury or injuries. If the box for "OTHER" is checked, enter the description in the area below the boxes/descriptions. If the casualty's condition has been covered in one of the boxes in the column, then the "OTHER" block should not be marked.

c. **Block 4**. Check the appropriate box for level of consciousness. Use the AVPU system described in paragraph 1-4c of Lesson 1. An illustration of block 4 of the Field Medical Card is shown in figure 7-5.

4. LEVEL OF CONCIOUSNESS / NIVEAU DE CONSCIENCE			
	ALERT / ALERTE		PAIN RESPONSE / REPONSE A LA DOULER
	VERBAL RESPONSE / REPONSE VEBALE		UNRESPONSIVE / SANS REPONSE

Figure 7-5. Block 4 of the FMC.

d. **Block 9**. Enter a brief description of the treatment given in block 9. Use approved abbreviations, if possible. (See paragraph 7-7 for a partial list of approved abbreviations.) If needed, use block 14 on the back of the card for additional space. An illustration of block 9 of the Field Medical Card is shown in figure 7-6.

9. TREATMENT/OBSERVATIONS/CURRENT MEDICATIONS/ALLERGIES/NBC (ANTIDOTE) TRAITEMENT/OBSERVATIONS/PRESENTE MEDICATION/ALLERGIES/ANTIDOTES

Figure 7-6. Block 9 of the FMC.

e. **Block 11**. Enter your initials in the far right of the signature box of block 11. This will let the medical officer at the medical treatment facility (usually the battalion aid station) know who initially treated the casualty and still leave room for the medical officer to sign the card. An illustration of block 11 of the Field Medical Card is shown in figure 7-7.

NOTE: These instructions assume that there is no combat medic present. If the combat medic is present, he should enter his initials in the box.

NOTE: Do not enter anything in the date box. This box is completed by the medical officer.

11. PROVIDER/UNIT / OFFICIER MEDICALE/UNITE	DATE/DATE *(YYMMDD)*

Figure 7-7. Block 11 of the FMC.

7-5. SECONDARY INFORMATION (FRONT OF FORM)

a. **Block 2**. An illustration of block 2 of the Field Medical Card is shown in figure 7-8.

(1) Enter the casualty's unit in the UNIT/UNITE box.

(2) Enter the country of whose armed forces he is a member in the NATIONALITY/NATIONALITÉ box.

(3) Check the box corresponding to the armed service of which the casualty is a member in the FORCE/ELEMENT section. Mark the "A/T" box for Army, the "AF/A" box for Air Force, the "N/M" box for Navy, and the "MC/M" box for Marine Corps.

<table>
<tr><td colspan="4">2. UNIT / UNITE</td></tr>
<tr><td colspan="4">FORCE / ELEMENT</td><td rowspan="2">NATIONALITY / NATIONALITÉ</td></tr>
<tr><td>A/T</td><td>AF/A</td><td>N/M</td><td>MC/M</td></tr>
</table>

Figure 7-8. Block 2 of the FMC.

b. **Block 5**. Enter the casualty's pulse rate in the first box of block 6 (PULSE/POULS). Enter the time that the pulse was measured in the second box (TIME/HEURE). Use military (24-hour) time. An illustration of block 5 of the Field Medical Card is shown in figure 7-9.

<table>
<tr><td>5. PULSE / POULS</td><td>TIME / HEURE</td><td>6. TOURNIQUET / GARROT
☐ NO / NON ☐ YES / OUI</td><td>TIME / HEURE</td></tr>
</table>

Figure 7-9. Blocks 5 and 6 of the FMC.

c. **Block 6**. If a tourniquet was applied, mark the YES/OUI box. If you check yes, also indicate the date in YY/MM/DD format (last two digits of the year/number of the month/number of the day of the month) and time that it was applied (use military 24-hour time) in the TIME/HEURE box of block 6. If a tourniquet was not applied, leave the block blank. An illustration of block 6 of the Field Medical Card is shown in figure 7-9.

NOTE: The year, month, and day are each two digits. For example: January 5, 2008 (month 01) (day 05) (year 08) is written as 08/01/05.

d. **Block 7**. If morphine was administered to the casualty, mark the YES/OUI box. If you mark yes, also indicate the amount of the dose administered and the date (YY/MM/DD) and time (military) that it was administered in the DOSE/DOSE and TIME/HEURE boxes. If morphine was not administered, leave the block blank. An illustration of block 7 of the Field Medical Card is shown in figure 7-10.

7. MORPHINE / MORPHINE ☐ NO / NON ☐ YES / OUI	DOSE / DOSE	TIME / HEURE	8. IV / IV	TIME / HEURE

Figure 7-10. Blocks 7 and 8 of the FMC.

e. **Block 8**. If an intravenous (IV) infusion has been initiated, write the type of IV fluid in the in the "IV/IV" box and the date (YY/MM/DD) and time (military) that the intravenous infusion was begun in the "TIME/HEURE" box. An illustration of block 8 of the Field Medical Card is shown in figure 7-10.

f. **Block 10**. Check box in front of the appropriate disposition classification (returned to duty, evacuated, or deceased). Enter the date (YY/MM/DD) and time (military) that the disposition was made in the "TIME/HEURE" box. If the casualty has been treated and returned to duty (cannot be evacuated due to the tactical situation, for example), check the box to the left of "RETURN TO DUTY." An illustration of block 10 of the Field Medical Card is shown in figure 7-11.

10. DISPOSITION / DISPOSITION		RETURNED TO DUTY / RETOUR A L'UNITE	TIME / HEURE
		EVACUATED / EVACUE	
		DECEASED / DECEDE	

Figure 7-11. Block 10 of the FMC.

7-6. REVERSE SIDE OF THE FIELD MEDICAL CARD

The reverse side of the Field Medical card is normally filled out by medical personnel or other personnel once the casualty reaches a medical treatment facility, such as a battalion aid station (BAS).

a. **Block 12**. An illustration of block 12 of the Field Medical Card is shown in figure 7-12.

(1) The date (YY/MM/DD) and time (military) of arrival at the medical treatment facility are entered in the appropriate boxes.

(2) The casualty's vital signs (blood pressure, pulse rate, and respiration rate), along with the times they were taken, are entered in the appropriate boxes. The block allows for multiple entries (vital signs taken over a period of time).

12. REASSESSMENT / REASSESSMENT				
DATE/DATE *(YYMMDD)*		TIME OF ARRIVAL / HEURE D'ARRIVÉE		
TIME / HEURE				
BP / PS				
PULSE / POULS				
RESP / RESP				

Figure 7-12. Block 12 of the FMC.

b. **Block 13**. Document the appropriate comments by the date and time of observation. An illustration of block 13 of the Field Medical Card is shown in figure 7-13.

DATE/TIME DATE/HEURE	13. CLINICAL COMMENTS/DIAGNOSIS L'INFORMATION MEDICALE/DIAGNOSTIOUES
	14. ORDERS/ANTIBIOTICS (*Specify*)/TETANUS/IV FLUIDS DIRECTIVES MEDICALES/ANTIBIOTIQUES ((*Specifier*))/TETANOS/IV FLUIDE

Figure 7-13. Blocks 13 and 14 of the FMC.

c. **Block 14**. Document the provider's orders by date and time. If a dose of tetanus is administered, record the date (YY/MM/DD) and the time (military) it was administered. If antibotics are administered, record the type and dose of antibiotic administered and the date (YY/MM/DD) and time (military) it was administered. An illustration of block 14 of the Field Medical Card is shown in figure 7-13.

d. **Block 15**. The medical officer or provider at the treatment facility signs and dates block 15. The date is entered in YY/MM/DD format; the time is entered in military format. An illustration of block 15 of the Field Medical Card is shown in figure 7-14.

15. PROVIDER / OFFICIER MEDICALE	DATE/DATE *(YYMMDD)*

Figure 7-14. Block 15 of the FMC.

e. **Block 16**. Disposition from the medical treatment facility is filled out using the same procedures as block 10 on the front of the form. An illustration of block 16 of the Field Medical Card is shown in figure 7-15.

16. DISPOSITION / DISPOSITION		RETURNED TO DUTY / RETOUR A L'UNITE	TIME/HEURE
		EVACUATED/EVACUE	
		DECEASED/DECEDE	

Figure 7-15. Block 16 of the FMC.

f. **Block 17**. Block 17 is completed by a member of the United Ministry Team. The appropriate box of the service provided is checked and the chaplain providing the service signs the bottom of the block. An illustration of block 17 of the Field Medical Card is shown in figure 7-16.

17. RELIGIOUS SERVICES SERVICES RELIGIEUX		BAPTISM/BAPTISE		PRAYER/PRIERE
		ANOITING/ONCTION		COMMUNION/COMMUNION
		CONFESSION/CONFESSION		OTHER/AUTRE
CHAPLAIN / CHAPILAIN				

Figure 7-16. Block 17 of the FMC.

7-7. AUTHORIZED ABBREVIATIONS

Listed below are some of the abbreviations authorized to be used on the Field Medical Card and other medical forms.

a. Abraded wound--Abr W

b. Contused wound--Cont W

c. Fracture (compound) open--FC

d. Fracture (compound) open comminuted--FCC

e. Fracture simple (closed)--FS

f. Gun Shot Wound---GSW

g. Lacerated wound--LW

h. Multiple wounds--MW

i. Penetrating wound--Pen W

j. Perforating wound--Perf W

k. Severe--SV

l. Slight--SL

7-8. ATTACHING THE FIELD MEDICAL CARD

a. **Remove Card**. After you have initiated the Field Medical Card, remove the original Field Medical Card from the pad. Be careful to not tear the duplicate (white sheet) out of the pad.

NOTE: Check the casualty's name, rank, and social security number on the duplicate to make sure the entries are legible.

NOTE: If the casualty has been returned to duty, do not remove the Field Medical Card from the pad. Both the card and duplicate remain in the pad.

b. **Attach Card**. The wire attached to the Field Medical Card is used to secure the card to the casualty's clothing. Attach the card to casualty's uniform by threading the wire through the top buttonhole of uniform and then twisting the wire. Position the Field Medical Card so that it remains in plain view, such as shown in figure 7-17. Medical personnel will use the information on the card to treat the casualty and will record the additional treatment on the card.

c. **Store Pad**. Return the pad to your aid bag. You will keep the duplicate sheets in the pad until you are told to turn them in.

Figure 7-17. Field Medical Card attached to a casualty's clothing.

Continue with Exercises

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LESSON EXERCISES: LESSON 7

INSTRUCTIONS: Answer the following exercises by marking the letter of the response that **best** answers the question or **best** completes the sentence or by writing the answer in the space provided.

After you have answered all of the exercises, check your answers against the "Solutions to Lesson Exercises" at the end of the exercises. For each exercise answered incorrectly, reread the lesson material referenced.

1. List the five blocks in which you would make entries (primary information) when initiating a Field Medical Card.

   _____

SPECIAL INSTRUCTIONS FOR LESSON EXERCISES 2 THROUGH 12. Match the information (Column I) with the block of the Field Medical Card (Column II) in which the information is recorded. Items in Column II may be used more than once.

COLUMN I

2. ____ Casualty's name and rank.
3. ____ Description of treatment the casualty received.
4. ____ Combat lifesaver's signature.
5. ____ AVPU notation.
6. ____ Casualty's social security number.
7. ____ Illustration of wound injury.
8. ____ Casualty is suffering from combat stress.
9. ____ Combat lifesaver's initials.
10. ____ Casualty's religious preference.
11. ____ Casualty has suffered serious burns.
12. ____ Casualty's MOS or AOC.

COLUMN II

a. Block 1.
b. Block 3.
c. Block 4.
d. Block 9.
e. Block 11.
f. This information is not entered on the FMC.

SPECIAL INSTRUCTIONS FOR LESSON EXERCISES 13 THROUGH 18. Match the information (Column I) with the block of the Field Medical Card (Column II) in which the information is recorded. Items in Column II may be used more than once.

COLUMN I		COLUMN II
13. ____	A tourniquet has been applied.	a. Block 2.
14. ____	Casualty returned to duty without additional treatment.	b. Block 5.
15. ____	Casualty is a member of the Canadian Army.	c. Block 6.
16. ____	You have initiated an intravenous infusion.	d. Block 7.
17. ____	The casualty's pulse rate.	e. Block 8.
18. ____	The casualty has received a morphine injection	f. Block 10.

19. You are treating a casualty while the casualty is being evacuated. You have used up the space in Block 9, but still need to record additional information. You should:

    a. Continue your entries in Block 10 of the FMC.
    b. Continue your entries in Block 14 of the FMC.
    c. Continue your entries in Block 9 of the duplicate white sheet.
    d. Stop making entries on the FMC.

20. What should you do before you begin writing on the Field Medical Card?

    _____

21. How many Field Medical Card sets are in a pad? _____

22. What should you do once you complete a Field Medical Card on a casualty that will be evacuated?

_____

_____

23. What should you do once you complete a Field Medical Card on a casualty that is being returned to duty?

_____

24. What is the correct abbreviation for a penetrating wound? _____

25. The Field Medical Card contains two languages. What are they?

_____

26. You are filling out a Field Medical Card on a casualty. The casualty is unconscious and his identification is missing. You can fill out most of Block 1 from your personal knowledge of the casualty, but you do not know his social security number or his religious preference. What should you do?

    a. Enter your social security number and religious preference in the blocks.
    b. Enter "Unknown" in the blocks.
    c. Leave the blocks blank so they can be filled in later.

27. A casualty has received a gun shot wound to the abdomen. You have marked the "Wound" box in Block 3. Should you explain the casualty's injury in more detail in the "Other" section of the block?

    a. Yes.
    b. No.

28. Practice filling out a Field Medical Card. Using the simulated Field Medical Card front on the next page, fill in the information for the following casualty.

Casualty suffered severe cut to front of upper right arm.
On AVPU scale, casualty rates V (verbal).
Emergency trauma bandage applied.
Tourniquet applied at 3:30 p.m.
IV (with saline lock) initiated and Hextend began being administered at 3:35 p.m.
Tactical situation prevents evacuation at this time.

You obtain the following information from his identification tags and other sources:

Joe Robinson
Corporal (E-4), U.S. Army
MOS 13F
Unit (not known)
SSN 445-79-2393
Protestant
The date is 25 October 2005
Your name is Ugeer R. Irving

1. LAST NAME, FIRST NAME / NOM ET PRENOM		RANK/GRADE		MALE / HOMME
				FEMALE / FEMME
SSN / NUMERO MATRICULE	SPECIALTY CODE / GPM			RELIGION / RELIGION

2. UNIT / UNITE

FORCE / ELEMENT				NATIONALITY / NATIONALITÉ
A/T	AF/A	N/M	MC/M	

	BC / BC		NBC / NBC		DISEASE / MALADIE		PSYCH/PSYCH

3. INJURY / BLESSURE

FRONT / DEVANT

BACK / ARRIERE

	AIRWAY / TRACHEE
	HEAD / TETE
	WOUND / BLESSURE
	NECK/BACK INJURY / BLESSURE AU COU/AU DOS
	BURN / BRULURE
	AMPUTATION / AMPUTATION
	STRESS / TENSION
	OTHER (*Specify*) / AUTRE (*Specifier*)

_____

_____

4. LEVEL OF CONCIOUSNESS / NIVEAU DE CONSCIENCE

	ALERT / ALERTE		PAIN RESPONSE / REPONSE A LA DOULER
	VERBAL RESPONSE / REPONSE VEBALE		UNRESPONSIVE / SANS REPONSE

5. PULSE / POULS	TIME / HEURE	6. TOURNIQUET / GARROT				TIME / HEURE
			NO / NON		YES / OUI	

7. MORPHINE / MORPHINE		DOSE / DOSE	TIME / HEURE	8. IV / IV	TIME / HEURE
NO / NON	YES / OUI				

9. TREATMENT/OBSERVATIONS/CURRENT MEDICATIONS/ALLERGIES/NBC (ANTIDOTE)
TRAITEMENT/OBSERVATIONS/PRESENTE MEDICATION/ALLERGIES/ANTIDOTES

10. DISPOSITION / DISPOSITION			TIME / HEURE
		RETURNED TO DUTY / RETOUR A L'UNITE	
		EVACUATED / EVACUE	
		DECEASED / DECEDE	

11. PROVIDER/UNIT / OFFICIER MEDICALE/UNITE	DATE/DATE *(YYMMDD*

DD FORM 1380 U.S. FIELD MEDICAL CARD

Check Your Answers on Next Page

SOLUTIONS TO EXERCISES: LESSON 7

1. Blocks 1, 3, 4, 9, 11
2. a (paras 7-4a(1), (2))
3. d (para 7-4d)
4. f (para 7-4e)
5. c (para 7-4c)
6. a (para 7-4a(3)
7. b (para 7-4b))
8. b (para 7-4b(1)(d)
9. e (para 7-4e)
10. a (para 7-4a(6)
11. b (para 7-4b(3), figure 7-4)
12. a (para 7-4a(4))
13. c (para 7-5c)
14. f (para 7-5f)
15. a (para 7-5a)
16. e (para 7-5e)
17. b (para 7-5b)
18. d (para 7-5d)
19. b (para 7-4d)
20. Remove the protective sheet between the FMC and the duplicate copy. (para 7-3a)
21. 10 (para 7-2)

22. Remove the FMC and use the attached wire to secure it to the casualty's clothing. (paras 7-8a, b)

23. Leave the FMC in the pad. (para 7-8a Second Note)

24. Pen W. (para 7-7i)

25 English and French. (para 7-1)

26. c (para 7-1)

27. b (para 7-4b(3))

28. See the following page. Note that the location of the wound is marked with an "X" in the figure.

1. LAST NAME, FIRST NAME / NOM ET PRENOM	RANK/GRADE		
ROBINSON, JOE	***CPL***	***X***	MALE / HOMME
			FEMALE / FEMME

SSN / NUMERO MATRICULE	SPECIALTY CODE / GPM	RELIGION / RELIGION
445-79-2393	***13F***	***PROT***

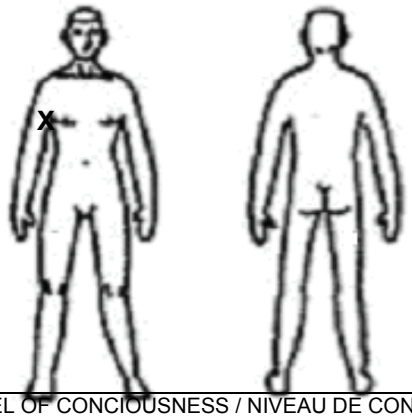
2. UNIT / UNITE

FORCE / ELEMENT				NATIONALITY / NATIONALITÉ
X A/T	AF/A	N/M	MC/M	***USA***

					DISEASE / MALADIE		PSYCH/PSYCH
X	BC / BC		NBC / NBC				

3. INJURY / BLESSURE

FRONT / DEVANT BACK / ARRIERE



	AIRWAY / TRACHEE
	HEAD / TETE
X	WOUND / BLESSURE
	NECK/BACK INJURY / BLESSURE AU COU/AU DOS
	BURN / BRULURE
	AMPUTATION / AMPUTATION
	STRESS / TENSION
	OTHER (*Specify*) / AUTRE (*Specifier*)

_____

_____

4. LEVEL OF CONCIOUSNESS / NIVEAU DE CONSCIENCE

	ALERT / ALERTE		PAIN RESPONSE / REPONSE A LA DOULER
X	VERBAL RESPONSE / REPONSE VEBALE		UNRESPONSIVE / SANS REPONSE

5. PULSE / POULS	TIME / HEURE	6. TOURNIQUET / GARROT				TIME / HEURE
			NO / NON	***X***	YES / OUI	***05/10/25 1530***

7. MORPHINE / MORPHINE		DOSE / DOSE	TIME / HEURE	8. IV / IV	TIME / HEURE
	NO / NON			***HEXTEND***	***05/10/25 1535***
	YES / OUI				

9. TREATMENT/OBSERVATIONS/CURRENT MEDICATIONS/ALLERGIES/NBC (ANTIDOTE)
TRAITEMENT/OBSERVATIONS/PRESENTE MEDICATION/ALLERGIES/ANTIDOTES

EMERGENCY TRAUMA BANDAGE APPLIED TO RT ARM

10. DISPOSITION / DISPOSITION			TIME / HEURE
		RETURNED TO DUTY / RETOUR A L'UNITE	
		EVACUATED / EVACUE	
		DECEASED / DECEDE	

11. PROVIDER/UNIT / OFFICIER MEDICALE/UNITE	***URI***	DATE/DATE *(YYMMDD*

DD FORM 1380 U.S. FIELD MEDICAL CARD

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LESSON 8

REQUESTING MEDICAL EVACUATION

TASK

Prepare and transmit a medical evacuation (MEDEVAC) request.

CONDITIONS

Given information on simulated casualty or casualties, MEDEVAC request guide, a pencil or other writing instrument, paper, and a simulated transmitting device.

STANDARD

Transmission includes all needed information in the proper sequence.
Correct brevity code items are used.
Correct radio-telephone procedures (pronunciation, beginning, ending, and so forth) are used.
Score a GO on the performance checklist.

REFERENCES

FM 8-10-6, Medical Evacuation in a Theater of Operations.

8-1. MEDICAL EVACUATION

Medical evacuation (MEDEVAC) is the timely and efficient movement and en route care by medical personnel (combat medics) of the wounded, injured, or ill persons from the battlefield and other locations to medical treatment facilities (MTF). Medical evacuation begins when medical personnel receive the injured or ill soldier. Although the combat lifesaver is not a medical person, he may be the person who initiates the medical evacuation by requesting that a casualty be evacuated by ground ambulance or air ambulance.

NOTE: Medical evacuation (MEDEVAC) is different from casualty evacuation (CASEVAC). In CASEVAC, nonmedical vehicles (trucks used to haul supplies, vehicles used to transport troops, and so forth) are used to evacuate casualties. In MEDEVAC, medical vehicles (ground ambulances) and medical helicopters (air ambulances) are used. Ground and air ambulances have medical personnel aboard to provide care to the casualties.

8-2. MEDICAL EVACUATION REQUESTS

Procedures for requesting medical evacuation support have been standardized. The same format used to request aeromedical evacuation is also used to request ground evacuation. The information contained in the evacuation request helps medical units to determine the correct priority for committing evacuation assets. This helps to control the evacuation flow so that medical resources are not overly strained.

8-3. OVERCLASSIFICATION

Overclassification is the tendency to classify a wound or injury as being more severe than it actually is. Overclassification has historically been a problem and is still a problem. Proper casualty classification is needed to ensure that those casualties in greatest need are evacuated first and receive the necessary care required to help ensure their survival. Casualties will be picked up as soon as possible, consistent with available resources and pending missions.

8-4. PREPARING A MEDICAL EVACUATION REQUEST

A special nine-line format has been developed to assist in requesting medical evacuation. Rather than stating what type of information is being transmitted, a line number is given. Brevity codes are used to identify specific information being transmitted. Brevity codes allow information to be easily and quickly transmitted. The information is transmitted in sequence (line 1, then line 2, and so forth). The information needed for wartime and peacetime evacuation requests is described in paragraphs 8-5 and 8-6. Lines 1 through 5 must be transmitted before the evacuation mission begins. The remainder should be transmitted at the same time if possible, but can be transmitted to the ground or air ambulance en route. Use Table 8-1 when making notes for transmitting a MEDEVAC request and when actually transmitting the request.

8-5. LINES 1 THROUGH 5 OF THE MEDICAL EVACUATION REQUEST

The following information is needed by ambulance personnel before they begin their mission.

a. **Line 1: Location of Pickup Site.** Using a map, determine the grid coordinates (eight digits) of the site where the air or ground ambulance will pick up the casualty or casualties. This information can often be obtained from your unit leader. This information allows the unit coordinating evacuation to plan the ambulance's route so it can pick up casualties from more than one site, if appropriate.

b. **Line 2: Radio Frequency, Call Sign, and Suffix.** Your radio frequency, call signal, and suffix of signal operation instructions can be obtained from the Signal Operating Instruction (SOI) or from the Automated Net Control Device (ANCD) or from the radio supervisor. This information is needed so the evacuation vehicle crew can contact the requesting unit while en route to obtain additional information (for example, to verify marking devices).

c. **Line 3: Number of Casualties by Precedence.** Based upon the actual evaluation of the casualties, determine how many are urgent, how many are urgent surgical, how many are priority, how many are routine, and how many are convenient. This information is used by the unit controlling evacuation to prioritize missions when more than one request is received. Definitions of these categories are given below.

(1) Urgent. Emergency case that should be evacuated as soon as possible and within a maximum of two hours in order to save live, limb, or eyesight.

(2) Urgent Surgical. Emergency case that should be evacuated within two hours to the nearest surgical unit.

(3) Priority. Sick or wounded person requiring prompt medical care and who should be evacuated within four hours or the casualty's medical condition could deteriorate to such a degree that he could become an urgent precedence.

(4) Routine. Sick or wounded person requiring evacuation, but whose condition is not expected to deteriorate significantly. The casualty should be evacuated within 24 hours.

(5) Convenient. Person who is being medically evacuated for medical convenience rather than necessity.

d. **Line 4: Special Equipment Required.** Based upon actual evaluation of the casualties, determine what special equipment, if any, will need to be placed aboard the ambulance before it begins the mission. The most common items for an air ambulance are hoist, Stokes litter, and forest penetrator. Another common special equipment requirement is a ventilator. This information is required so the equipment can be placed on board the evacuation vehicle before it leaves the medical treatment facility.

e. **Line 5: Number of Casualties by Type.** Based upon actual evaluation of the casualties, determine the number of casualties that will evacuated on a litter and the number of casualties that are able to sit (ambulatory). This information is needed to properly configure the vehicle to transport the casualties requiring evacuation.

8-6. LINES 6 THROUGH 9 OF THE MEDICAL EVACUATION REQUEST

The following information is transmitted with the information given in paragraph 8-5 if possible, but can be transmitted to the ambulance personnel after they have begin their mission.

a. **Line 6: Security of Pickup Site.** In wartime operations, determine whether proposed pickup site is secure. This information is normally obtained from your unit leader based upon his evaluation of the situation. The information will help the unit controlling evacuation to determine whether assistance (escort) is required to accomplish the mission. The situation is categorized as one of the following:

(1) No enemy troops in area.

(2) Possibly enemy troops in area; approach with caution.

(3) Enemy troops in area; approach with caution.

(4) Enemy troops in area; armed escort required.

NOTE: In peacetime, line 6 is not used for the security of the pickup site. Instead, line 6 gives the number and type of wound, injury, or illness. For example, two gunshot wounds and one compound fracture.

b. **Line 7: Method of Marking Pickup Site.** Determine how the pickup site is to be marked for identification. This information is usually used when the evacuation is to be by air ambulance. The method is usually determined by your unit leader based upon the military situation and the materials available. Common methods of marking the pickup site are:

(1) Panels.

(2) Pyrotechnic signal.

(3) Smoke signal.

(4) Signal person.

(5) Strips of fabric or parachute.

(6) Tree branches, pieces of wood, or stones placed together.

(7) Signal lamp, flashlight, or vehicle lights.

(8) Open flame.

NOTE: The information is required to assist the evacuation aircraft crew in identifying the specific location of the pickup site. The color of the panels, smoke, or other markings should not be transmitted until the evacuation vehicle contacts the unit just prior to arrival. For security reasons, the crew of the air ambulance should identify the color of the smoke (for example) and the person on the ground with the casualty should verify that the crew member has seen the correct color of smoke. This helps to prevent the air ambulance from being mislead by colored smoke coming from the enemy.

c. **Line 8: Casualty Nationality and Status.** Based upon information obtained from the casualties, determine which categories of those listed below are represented. The number of casualties in each category does not need to be determined. The information will help the unit coordinating the evacuation to identify which facilities should receive casualties and whether guards are needed. The categories are:

(1) United States (US) military.

(2) United States civilian.

(3) Military other than US military.

(4) Civilian other than US civilian.

(5) Enemy prisoner of war (EPW).

d. **Line 9: Nuclear Biological and Chemical Contamination**. In wartime operations, determine if chemical contamination, biological contamination, or radiological contamination is present. This information will assist the unit controlling evacuation. If there is no nuclear, biological, and chemical (NBC) contamination, this line is not transmitted.

NOTE: In peacetime, line 9 is used to give a description of the terrain (flat, hilly, wooded, open, sloping, and so forth). If possible, include the relationship of the landing area to prominent terrain features (mountain, lake, tower, and so forth). This information can assist the evacuation personnel determine the avenue of approach. This information can be obtained from personnel at the site or by an area survey.

8-7. TRANSMITTING RULES

a. During wartime, brevity codes must be used in preparing all medical evacuation requests. Brevity codes should be listed in the Signal Operating Instruction (SOI) or available from the Automated Net Control Device (ANCD). Locally devised brevity codes are not authorized.

b. General rules of radio transmission security are given below. Follow these basic rules to ensure transmission security. These rules are strictly enforced on all military radiotelephone circuits.

(1) No transmission will be made unless the proper authority authorizes the transmission.

(2) The following practices are specifically forbidden:

(a) Violation of radio silence.

(b) Unofficial conversation between operators.

(c) Transmission on a directed net without permission.

(d) Excessive tuning and testing.

(e) Transmission of the operator's personal sign or name.

(f) Unauthorized use of plain language.

(g) Use of other than authorized procedure words (prowords) (see Table 8-2).

(h) Unauthorized use of plain language in place of applicable prowords or operating signals.

(i) Association of classified call signs and address groups with unclassified call signs.

(j) Profane, indecent, or obscene language.

c. Call signs are used in radio communications to identify a communications facility, a command, an authority, or a unit. There are two forms of call signs: complete call signs and abbreviated call signs.

(1) Complete call signs consist of a letter-number-letter combination and a suffix. They are used when:

(a) Entering a net in which you do not normally operate.

(b) When so requested by another station in the net.

(2) Abbreviated call signs are used at all other times. For example, if A2D28 were the complete call sign, then D28 would be the abbreviated call sign.

(3) If no confusion exists as to which operators are on the radio net, no call signs need be used.

d. To avoid confusion and errors during voice transmission, special techniques have been developed for pronouncing letters and numerals. These special techniques resulted in the phonetic alphabet and phonetic numerals (Tables 8-3 and 8-4).

(1) The phonetic alphabet is used by the operator to spell difficult words and thereby prevent misunderstanding on the part of the receiving operator.

(2) The phonetic alphabet is also used for the transmission of messages. For example, the cipher group CMVVX is spoken "CHARLIE MIKE VICTOR VICTOR XRAY."

(3) Numbers are spoken digit by digit, except that exact multiples of thousands may be spoken as such. For example, 84 is "AIT FOW ER," 2,500 is "TOO FIFE ZE RO ZE RO," and 16,000 is "WUN SIX TOUSAND."

(4) The date-time group is always spoken digit by digit, followed by the time zone indication. For example, 291205Z is "TOO NIN-ER WUN TOO ZE-RO FIFE ZOO-LOO."

(5) Map coordinates and call sign suffixes also are spoken digit by digit. To keep voice transmission as short and clear as possible, radio operators use procedure words (prowords) to take the place of long sentences.

e. Paragraph 8-7c(2) give an example of a call sign. If this was the call sign of your station, you would identify yourself using prowords and phonetics as follows: "This is al-fah too dell-tah too ait." If abbreviated call signs were being used, you would say, "This is dell-tah too ait."

8-8. TRANSMITTING A MEDICAL EVACUATION REQUEST

a. **Collect Information**. Collect the information that you need before beginning the transmission.

b. **Begin Transmission**.

(1) Provide the opening statement: "I HAVE A MEDEVAC REQUEST. OVER."

(2) Break for acknowledgement by receiving operator. Wait one to three seconds for acknowledgment. If there is no answer or if contact is interrupted, repeat the statement.

c. **Transmit Request**. The first five lines of the MEDEVAC request must be transmitted at this time. If possible, the remaining lines should also be transmitted at this time. If the remaining lines cannot be transmitted at this time, they should be transmitted as soon as possible.

NOTE: A guide that can be used in making a medical evacuation request is given in Table 8-1.

NOTE: Commonly used prowords are given in Table 8-2.

(1) Give the line number identifier followed by applicable information.

(2) Letters and numbers are to be pronounced according to standard radio procedure (see Tables 8-3 and 8-4).

d. **End Transmission**. After transmitting the request, state "OVER" and wait for acknowledgment of the transmission or request for additional information from the receiving station.

e. **Monitor Frequency**. After the transmission has ended, monitor the frequency given in line 2 of the request. The air or ground ambulance will contact you on this frequency, if needed.

f. **Prepare Site**. Prepare and mark the pickup site as indicated in line 7 of the MEDEVAC request, if needed.

NOTE: An example of a MEDEVAC request is given in figure 8-1.

TYPE OF INFORMATION	*INFORMATION*	*TRANSMITTED REMARKS/ SPECIAL INSTRUCTION*
Location of Pickup Site	**Line 1** Grid coordinates of pickup site	To preclude misunderstanding, a statement should be made that grid zone letters are included in the message.
Radio Frequency, Call Sign and Suffix	**Line 2** Frequency of the radio at the pickup site Call sign and suffix	The call sign and suffix is that of the person to be contacted at the pickup site.
Number of Casualties by Precedence	**Line 3** Number of casualties Brevity code	Brevity Codes: **A** (Urgent)--within 2 hours **B** (Urgent surgical)--within 2 hrs **C** (Priority)--within 4 hours **D** (Routine)--within 24 hours **E** (Convenience) If two or more categories must be reported in the same request, insert the proword BREAK between each category.
Special Equipment Required	**Line 4** Brevity code	Brevity Codes: **A** (None) **B** (Hoist) **C** (Extraction equipment) **D** (Ventilator)
Number of Casualties by Type	**Line 5** Number of casualties Brevity code	Brevity Codes: **L** (Litter) **A** (Ambulatory) If both types are included in the same request, insert the proword BREAK between the types.

Table 8-1. MEDEVAC request guide (continued).

TYPE OF INFORMATION	*INFORMATION*	*TRANSMITTED REMARKS/ SPECIAL INSTRUCTION*
Security of Pickup Site (wartime)	**Line 6** Brevity code	Brevity Codes: **N** (No enemy troops in area) **P** (Possible enemy troops in area; approach with caution) **E** (Enemy troops in area; approach with caution) **X** (Enemy troops in area; armed escort required)
Methods of Marking Pickup Site	**Line 7** Brevity code	Brevity Codes: **A** (Panels) **B** (Pyrotechnic signal) **C** (Smoke signal) **D** (None) **E** (Other)
Casualty Nationality and Status	**Line 8** Brevity code	Brevity Codes: **A** (Military, U.S) **B** (Civilian, U.S) **C** (Military, non-US) **D** (Civilian, non-US) **E** (Enemy prisoner of war) The number of casualties in each category is not transmitted.
NBC Contamination (wartime)	**Line 9** Brevity code	Brevity Codes: **N** (Nuclear) **B** (Biological) **C** (Chemical) This line is included only when applicable. **Do not** transmit line 9 if no CBR contamination is present.

Table 8-1. MEDEVAC request guide (concluded).

PROWORD	*MEANING*
ALL (or WORD)	The portion of the message to which I have reference is AFTER all (or the word) which follows _____.
ALL (or WORD) BEFORE	The portion of the message to which I have reference is all (or the word) which precedes _____.
BREAK	I hereby indicate the separation of the text from other portions of the message.
CALL SIGN	The group that follows is a call sign.
CORRECT	You are correct, or what you have transmitted is correct.
CORRECTION	An error has been made in this transmission. Transmission will continue with the last word correctly transmitted (or the correct version is _____).
DISREGARD THIS TRANSMISSION-OUT	This transmission is in error. Disregard it. (Not used to cancel any message that has been completely transmitted and acknowledgment has been received.)
FIGURES	Numerals follow.
FROM	The originator of this message is indicated by the address designation immediately following.
I READ BACK	The following is my response to your instruction to read back.
I SAY AGAIN	I am repeating transmission or portion indicated.
I SPELL	I shall spell the next word phonetically.
OUT	This is the end of my transmission to you and no answer is required or expected
OVER	This is the end of my transmission to you and a response is necessary. Go ahead and transmit.

Table 8-2. Commonly used prowords (continued).

PROWORD	*MEANING*
READ BACK	Repeat this entire transmission back to me exactly as received.
RELAY (TO)	Transmit this message to addressees immediately following this proword.
ROGER	I have received your last transmission satisfactorily.
SAY AGAIN	Repeat all of your last transmission. (If followed by identification data, repeat portion indicated.)
SILENCE SILENCE SILENCE	Cease transmission immediately. Silence will be maintained until instructed to resume.
SILENCE LIFTED	Silence is lifted
THIS IS	This transmission is from the station whose designation immediately follows.
TIME	That which immediately follows is the time or date/time group of this message.
TO	The addressee(s) immediately following is (are) addressed for action.
VERIFY	Verify entire message (or portion indicated) with the originator and send correct version.
WAIT	I must pause for a few seconds.
WAIT-OUT	I must pause longer than a few seconds.
WILCO	I have received your message, understand it, and will comply. (Used only by the addressee.) Note: Since the meaning of ROGER is included in that of WILCO, the two prowords are never used together.)
WRONG	Your last transmission was incorrect. The correct version is _____.

Table 8-2. Commonly used prowords. (concluded)

LETTER	*WORD*	*SPOKEN AS*
A	ALPHA	AL-FAH
B	BRAVO	BRAH-VOH
C	CHARLIE	CHAR-LEE
D	DELTA	DELL-TAH
E	ECHO	ECK-OH
F	FOXTROT	FOKS-TROT
G	GOLF	GOLF
H	HOTEL	HOH-TELL
I	INDIA	IN-DEE-AH
J	JULIETT	JEW-LEE-ETT
K	KILO	KEY-LOH
L	LIMA	LEE-MAH
M	MIKE	MIKE
N	NOVEMBER	NO-VEM-BER
O	OSCAR	OSS-CAH
P	PAPA	PAH-PAH
Q	QUEBEC	KEH-BECK
R	ROMEO	ROW-ME-OH
S	SIERRA	SEE-AIR-RAH
T	TANGO	TANG-GO
U	UNIFORM	YOU-NEE-FORM
V	VICTOR	VICK-TOR
W	WHISKEY	WISS-KEY
X	X-RAY	ECKS-RAY
Y	YANKEE	YANG-KEY
Z	ZULU	ZOO-LOO

Table 8-3. Phonetic alphabet.

NUMBER	*SPOKEN AS*
0	ZE-RO
1	WUN
2	TOO
3	TREE
4	FO-WER
5	FIFE
6	SIX
7	SEV-EN
8	AIT
9	NIN-ER

Table 8-4. Phonetic numerals.

Foks-trot tree dell-tah ait wun, THIS IS keh-beck sev-en zoo-loo nin-er fo-wer. I have a MEDEVAC request. OVER.
Keh-beck sev-en zoo-loo nin-er fo-wer. THIS IS foks-trot tree dell-tah ait wun. Send your request. OVER.
Foks-trot tree dell-tah ait wun, THIS IS keh-beck sev-en zoo-loo nin-er fo-wer.
Line wun letters included, golf, hotel, wun, tree, tree, fo-wer, fo-wer, wun, too, six.
Line too, foks-trot, mike, tree, ait, fife, ze-ro. keh-beck sev-en zoo-loo nin-er fo-wer
Line tree, wun, al-fah, BREAK wun char-lee.
Line fo-wer, dell-tah
Line fife, wun,lee-mah, BREAK, wun, al-fah
Line six, pah-pah
Line sev-en, char-lee
Line ait, al-fah
OVER.
Keh-beck sev-en zoo-loo nin-er fo-wer. THIS IS Foks-trot tree dell-tah ait wun. ROGER. OUT.

Figure 8-1. Example of a MEDEVAC request.

Continue with Exercises

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LESSON EXERCISES: LESSON 8

INSTRUCTIONS: Answer the following exercises by marking the letter of the response that **best** answers the question or **best** completes the sentence or by writing the answer in the space provided.

After you have answered all of the exercises, check your answers against the "Solutions to Lesson Exercises" at the end of the exercises. For each exercise answered incorrectly, reread the lesson material referenced.

1. The MEDEVAC request format is used to request evacuation by:

   a. Air ambulances only.
   b. Ground ambulances only.
   c. Either air or ground ambulance.

2. Of the nine lines of information in a wartime evacuation request, the first _____ lines must be transmitted before the ambulance begins its mission.

3. Assume you are calling in a MEDEVAC request using the MEDEVAC wartime guidelines given in this lesson. State what type of information is reported on each line of the request.

   Line 1. _____

   Line 2. _____

   Line 3. _____

   Line 4. _____

   Line 5. _____

   Line 6. _____

   Line 7. _____

   Line 8. _____

   Line 9_____

4. Of the nine lines of information in a wartime evacuation request, which line is omitted if it is not applicable?

   _____

5. What has historically been a problem requests for medical evacuation?

   _____

6. What proword means you have finished your transmission and a response from the receiving station is needed?

   _____

7. When is the term "ROGER WILCO" used in making a MEDEVAC request?

   _____

8. A "priority" casualty should be evacuated within:

   a. 1 hour.
   b. 2 hours.
   c. 4 hours.
   d. 8 hours.
   e. 24 hours.

9. A "urgent" or "urgent surgical" casualty should be evacuated within:

   a. 1 hour.
   b. 2 hours.
   c. 4 hours.
   d. 8 hours.
   e. 24 hours.

10. Casualties are divided into two types (line 5). They are:

    a. Surgical and nonsurgical.
    b. Military and civilian.
    c. Ambulatory and litter.
    d United States and non-US

11. You are making a MEDEVAC request for a ground ambulance during wartime. The casualty has a broken arm and no other injuries. What should be transmitted for Line 4?

    a. The word "None."
    b. The word "Routine."
    c. The code "A."
    d. None of the above. The line need not be transmitted.

12. Prepare a MEDEVAC request for the following situation.

You are a combat lifesaver assigned to an infantry squad that came under enemy fire while patrolling in Baghdad. You sustained one US military casualty with a penetrating chest wound, which you have stabilized. Your squad leader instructs you to call for MEDEVAC. You are located at a casualty collection point at GH23541334. Your call sign and suffix is Bandaid 10. The pickup site will be marked with smoke. There may be enemy still in the area.

Note: The casualty may require oxygen during evacuation. According to your operating procedures, the brevity code for oxygen is the letter O.

Line 1	
Line 2	
Line 3	
Line 4	
Line 5	
Line 6	
Line 7	
Line 8	
Line 9	

13. Prepare a MEDEVAC request for the following situation.

You are a combat lifesaver assigned to an artillery squad. While on convoy, the vehicle in front of you struck an IED and its two US military occupants were thrown from the vehicle. One casualty had an amputation of his left hand. You have controlled the bleeding with a tourniquet and a pressure dressing. The other casualty sustained a penetrating shrapnel wound to the mid abdomen. After you stabilized both casualties, your battery commander tells you to call for a MEDEVAC. You are located at a casualty collection point at GH11723541. Your call sign and suffix is Battle 7. The pickup site will be marked with an orange panel. There are no enemy troops in the area.

Line 1	
Line 2	
Line 3	
Line 4	
Line 5	
Line 6	
Line 7	
Line 8	
Line 9	

14. Practice making the evacuation request given in exercises 12 and 13. Use all appropriate transmitting rules. Use prowords and use the proper pronunciation of letters and numbers. Have someone listen to detect any problems with your simulated transmission. An evaluation form is found in the Solutions to Exercises.

Check Your Answers on Next Page

SOLUTIONS TO LESSON EXERCISES: LESSON 8

1. c (para 8-2)

2. Five (para 8-4)

3. Line 1: Location of pickup site
   Line 2: Radio frequency, call sign, suffix
   Line 3. Number of casualties by precedence
   Line 4. Special equipment requirements
   Line 5. Number of casualties by type
   Line 6. Security of pickup site
   Line 7. Method of marking pickup site
   Line 8. Casualty nationality and status.
   Line 9. NBC contamination. (paragraphs 8-5 and 8-6, Table 8-1)

4. Line 9 (para 8-6d, Table 8-1, figure 8-1)

5. Overclassification (para 8-3)

6. Over (Table 8-2)

7. Never. The term should not be used. (Table 8-2, WILCO)

8. c (para 8-5c(3), Table 8-1)

9. b (paras 8-5c(1), (2), Table 8-1)

10. c (para 8-5e, Table 8-1)

11. c (Table 8-1, line 4)

12. See following.

13. See following.

14. See following.

12.

Line 1	**GH23541334**
Line 2	**Bandaid 10**
Line 3	**1B**
Line 4	**O**
Line 5	**1L**
Line 6	**P**
Line 7	**C**
Line 8	**A**
Line 9	

13.

Line 1	**GH11723541**
Line 2	**Battle 7**
Line 3	**2B**
Line 4	**A**
Line 5	**2L**
Line 6	**N**
Line 7	**A**
Line 8	**A**
Line 9	

14. (Feedback is provided by the observer.)

	GO	NO GO
a. Collected all information needed for the MEDEVAC request line items 1 through 9.		
b. Recorded the information using authorized brevity codes, as appropriate.		
c. Contacted the unit controlling evacuation.		
d. Stated the purpose of the radio message in clear text. (1) State, "I have a MEDEVAC request, over." (2) Wait 1 to 3 seconds for acknowledgment, if there is no answer or if contact is interrupted, repeat the statement.		
e. Transmitted the MEDEVAC request information within 3 minutes. (1) The request included all needed information in the proper sequence for transmission. (2) Corrected brevity code items are used. (3) Letters and numbers pronounced IAW appropriate radio telephone procedures. (4) Followed the procedure in the "explanation" column to transmit other required information. (5) Ended the transmission by stating, "Over," and listened for acknowledgement.		
f. Kept the radio on and listened for additional instructions or contact from the evacuation unit.		

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LESSON 9

EVACUATING A CASUALTY USING A SKED® OR IMPROVISED LITTER

TASK

Prepare and use a SKED® litter or improvised litter to evacuate a casualty.

CONDITIONS

Given a simulated casualty, a SKED® litter or appropriate materials to make an improvised litter, and personnel to act as litter bearers.

STANDARD

Score a GO on the performance checklist.

REFERENCES

FM 8-10-6, Medical Evacuation in a Theater of Operations.

9-1. EVACUATION

Being able to evacuate casualties in a quick and efficient manner will result in saving lives. There are times when a standard medical litter is available for evacuation. However, in many situations, you will need to use a SKED® litter. If a SKED® litter is not available, you may need to construct an improvised litter from available materials.

9-2. SKED® LITTER

The SKED® litter (made by SKEDCO, Incorporated) is a compact and lightweight transport system used to evacuate a casualty over land. It can also be used to rescue a casualty in water. A SKED® litter is illustrated in figure 9-1. Note the four handholds. Also note the dragline at the head of the litter.

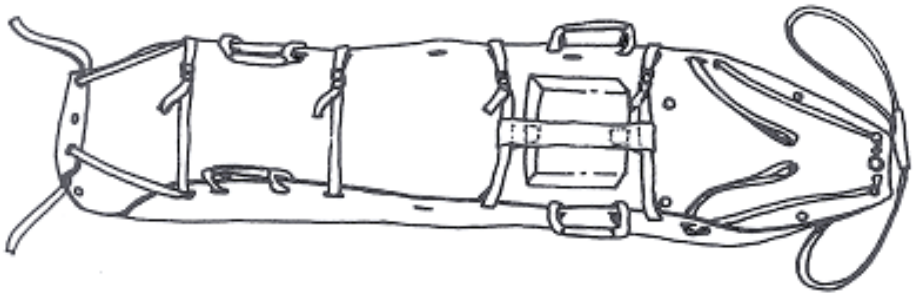

Figure 9-1. SKED® litter.

a. **Prepare the SKED®.**

(1) Remove the SKED® litter from its pack and place it on the ground.

(2) Unfasten the retainer strap.

(3) Step on the foot end of the SKED® litter and unroll the SKED® completely.

(4) Bend the SKED® litter in half and back roll. Repeat with the opposite end of the litter. The SKED® litter should now lay flat.

b. **Place the Casualty on the SKED®.**

(1) Place the SKED® litter next to the casualty. Make sure the head end of the litter is next to the casualty's head.

(2) Place the cross straps under the SKED® litter.

(3) Log roll the casualty onto his side in a steady and even manner. If additional personnel are available, use them to help you roll the casualty and to support the casualty's head and neck.

(4) Slide the SKED® litter as far under the casualty as possible (litter is to the casualty's back).

(5) Gently roll the casualty until he is again lying on his back with the litter beneath him.

(6) Slide the casualty to the middle of the SKED® litter, keeping his spinal column as straight as possible.

c. **Secure the Casualty to the SKED®.**

(1) Pull out the straps from under the SKED® litter.

(2) Bring the straps across the casualty.

(3) Lift the sides of the SKED® litter and fasten the four cross straps to the buckles directly opposite the straps.

(4) Lift the foot portion of the SKED® litter.

(5) Feed the foot straps over the casualty's lower extremities and through the unused grommets at the foot end of the SKED® litter.

(6) Fasten the straps to the buckles.

(7) Check to make sure the casualty is secured to the SKED® litter.

d. **Transport the Casualty**.

(1) Ideally, you and three other soldiers will be available to evacuate the casualty. A four-man carry can be used to quickly and safely transport a casualty on a SKED® litter to a nearby collection point where he can be transferred to a ground or air ambulance.

(a) Each bearer kneels at one of the handles. They should kneel on the knee closest to the litter and face in the same direction, usually so that the casualty's feet are in the direction of travel. The leader of the litter team should position himself at the handle nearest the casualty's right shoulder and direct the other bearers. This position allows the leader to monitor the casualty during the evacuation.

(b) Upon command from the leader, the bearers stand up in unison, lifting the casualty.

(c) Upon command from the leader, the bearers carry the casualty, adjusting as needed to keep the casualty as level as possible.

(2) If only one other soldier is available, position yourself on opposite sides of the litter and face toward the casualty, kneel on one knee, and grab the two near handholds. Upon the command from the leader, both rise in unison, lifting the casualty.

(3) If no other person is available, use the dragline at the head of the litter to drag the casualty.

9-3. IMPROVISED LITTERS

There are times when a casualty may have to be moved and a standard litter or SKED® litter is not available. The distance may be too great for manual carries or the casualty may have an injury that would be aggravated by manual transportation. In these situations, litters can be improvised from materials at hand. Improvised litters must be as well constructed as possible to avoid the risk of dropping or further injuring the casualty. Improvised litters are emergency measures and should be replaced by standard litters at the first opportunity. Many different types of litters can be improvised, depending upon materials available. Some are described in the following paragraphs.

9-4. BLANKET AND POLE LITTER

An improvised litter can be made using two tent poles and a blanket. When the casualty is placed on the litter, his weight will hold the litter together. Steps for improvising such a litter are shown in figure 9-2.

a. Open the blanket and lay it flat on the ground.

b. Place a pole in the middle of the blanket dividing its length into two equal sections.

c. Lift one edge of the blanket and bring the blanket section over the pole so that it lies on top of the other half of the blanket (figure 9-2 A).

d. Place a second pole so that it divides the doubled blanket into two equal sections (figure 9-2 B).

e. Bring the far edge of the blanket over the second pole and place the edge next to the first pole (figure 9-2 C). The improvised litter is now ready to receive the casualty.

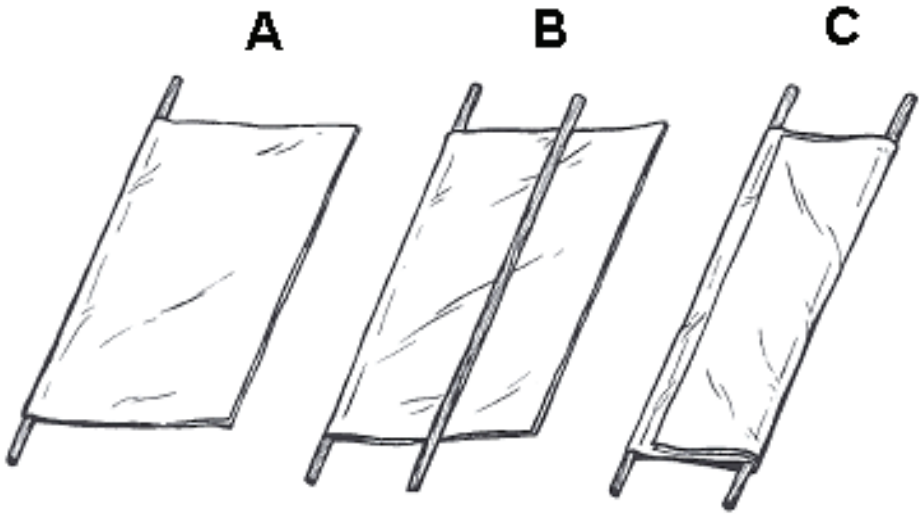

Figure 9-2. Blanket and pole improvised litter.

NOTE: The "bed" of the litter contains four layers of material.

9-5. PONCHO AND POLE LITTER

There are many variations of the blanket and pole improvised litter. Straight tree limbs or other similar rigid objects can be substituted for the poles. A poncho, tent half, waterproof canvas, or other material can be used instead of a blanket. Instructions for improvising a litter using two tent poles and a poncho are given below.

a. Open the poncho and lay it flat on the ground.

b. Lay two poles across the poncho so that the poncho is divided into thirds (figure 9-3 A).

c. Reach in and pull the hood of the poncho toward you and lay it flat on the poncho. Make sure the drawstrings are not hanging out of the hole. (The hood and drawstrings could catch on brush or other obstacles if left hanging.)

d. Fold one outer third of the poncho over the pole and bring the outer edge of the poncho mater next to the far pole (figure 9-3 B).

e. Fold the other outer third of the poncho over its pole in the same manner (figure 9-3 C).

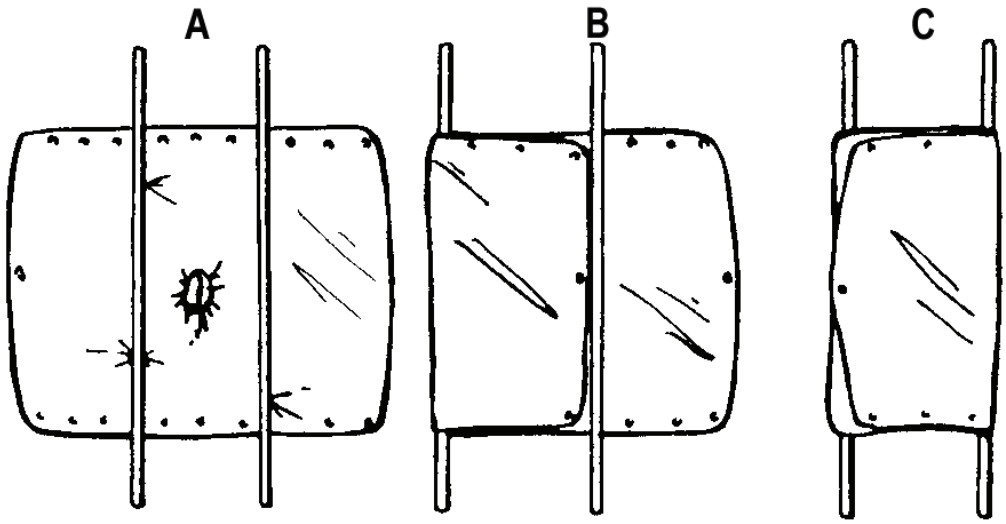

Figure 9-3. Poncho and pole improvised litter.

NOTE: The "bed" of the litter contains three layers of material.

9-6. JACKET AND POLE LITTER

An improvised litter can be made using two tent poles and two or three field jackets. Tree limbs or other straight, rigid objects can be used instead of the poles. Heavy shirts, BDU/ACU shirts, or other jackets can be used instead of field jackets.

a. Close (zip or button) the jackets (or other garments).

b. Turn the garments inside out, but leave the sleeves inside (figure 9-4 A).

NOTE: Turning the garments inside out puts buttons and zippers on the inside. This keeps the casualty from lying on buttons or zippers (if on top) and keeps them from getting snagged on bushes or other obstacles (if on bottom).

c. Place one garment below the other so that the sleeves are aligned.

d. Slide the poles through the sleeves (figure 9-4B).

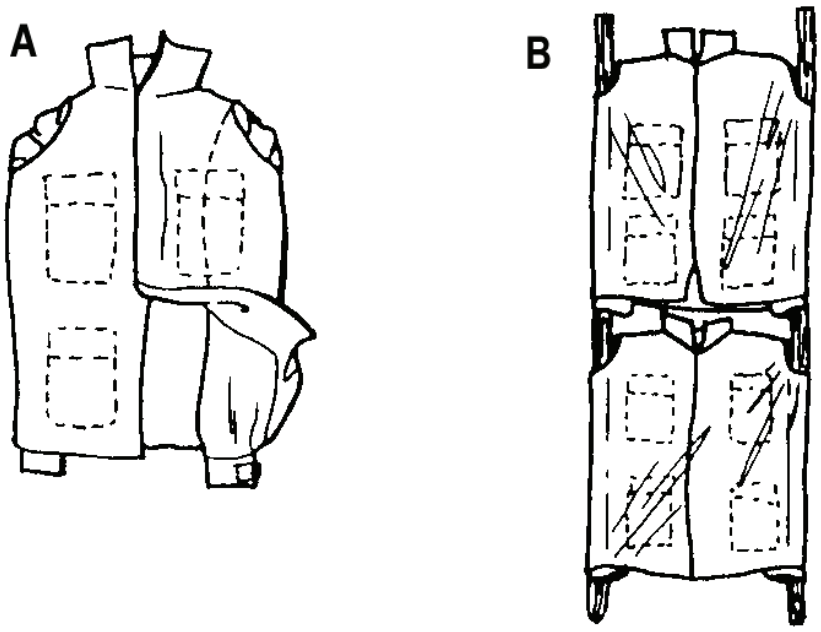

Figure 9-4. Jacket and pole improvised litter.

9-7. SACK AND POLE LITTER

An improvised litter can be made using two tent poles or similar rigid objects and two empty heavy fabric sacks, such as potato sacks. A pole and sack improvised litter is shown in figure 9-5.

a. Cut holes in the two corners of the closed end of each sack.

b. Place the sacks lengthwise so the open ends of the sacks are facing each other.

c. Slide the poles or limbs through the holes.

d. Overlap the open ends of the sacks about three inches to provide extra strength in the middle of the litter.

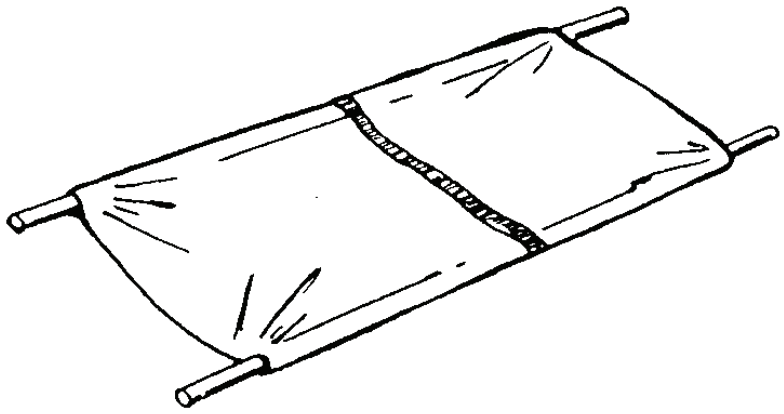

Figure 9-5. Sack and pole improvised litter.

9-8. BLANKET LITTER

An improvised litter can be made using only a blanket or other material. The blanket is laid on the ground and two opposite edges of the blanket are rolled toward the middle (figure 9-6). When the casualty is placed on the blanket, the rolled edges of the blanket are used as grips. Four or more litter bearers should be used when transporting a casualty using the blanket litter (figure 9-7).

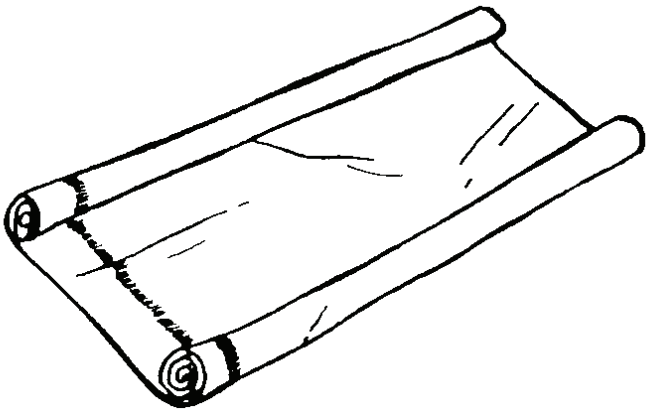

Figure 9-6. Blanket improvised litter.

Figure 9-7. Evacuating a casualty using an improvised blanket litter.

Continue with Exercises

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LESSON EXERCISES: LESSON 9

INSTRUCTIONS: Answer the following exercises by marking the letter of the response that **best** answers the question or **best** completes the sentence or by writing the answer in the space provided.

After you have answered all of the exercises, check your answers against the "Solutions to Lesson Exercises" at the end of the exercises. For each exercise answered incorrectly, reread the lesson material referenced.

1. The dragline is located at the _____ of the SKED® litter.

   a. Head.
   b. Foot.

2. In the SKED®, the casualty's feet are secured by:

   a. The same straps used to secure his torso.
   b. A separate set of straps.

3. You and three other soldiers are preparing to lift a casualty lying on a litter. The litter bearers be positioned facing the same direction with:

   a. Both knees on the ground.
   b. The knee nearest the litter on the ground.
   c. The knee farther from the litter on the ground.

4. When a litter team rises:

   a. The two litter bearers at the casualty's head rise first.
   b. The two litter bearers at the casualty's feet rise first.
   c. All four litter bearers rise at the same time.

5. If possible, obtain a SKED® litter. Have four people (one to play the role of the casualty, the other to play the roles of the litter bearers) help you practice preparing and using a SKED® litter to transport a casualty.

6. Practice making improvised litters from available materials.

Check Your Answers on Next Page

SOLUTIONS TO LESSON EXERCISES: LESSON 9

1. a (para 9-2)
2. b (para 9-2c)
3. b (para 9-2d(1)(a))
4. c (para 9-2d(1)(b))
5. See the following checklist (two pages)
6. See the checklists following the SKED® checklist.

EVACUATE A CASUALTY USING A SKED® LITTER
(Page 1 of 2)

Given: Simulated unconscious casualty lying on his back
SKED® litter (rolled up)
Three soldiers acting as assistants when so instructed

		GO	NO-GO
1.	Removes the SKED® litter from its pack and places it on the ground.	_____	_____
2.	Unfastens the retainer strap.	_____	_____
3.	Steps on the foot end of the SKED® litter and unrolls the SKED® completely.	_____	_____
4.	Bends the SKED® litter in half and back roll, then repeats with the opposite end of the litter so the litter lays flat.	_____	_____
5.	Places the SKED® litter next to the casualty with the head end of the litter next to the casualty's head.	_____	_____
6.	Places the cross straps under the SKED® litter.	_____	_____
7.	Log rolls the casualty onto his side. Uses assistants to rolls the casualty in a steady and even manner while keeping the head and neck supported.	_____	_____
8.	Slides (or has assistant slide) the SKED® litter as far under the casualty as possible.	_____	_____
9.	Gently rolls (with help from assistance) the casualty until he is lying on his back with the litter beneath him.	_____	_____
10.	Slides (with assistance) the casualty to the middle of the SKED® litter, keeping his spinal column as straight as possible.	_____	_____

(Go to next page)

EVACUATE A CASUALTY USING A SKED® LITTER
(Page 2 of 2)

		GO	NO-GO
11.	Pulls out the straps from under the SKED® litter and brings the straps across the casualty. (May have assistants assist in this step.)	_____	_____
12.	Lifts the sides of the SKED® litter and fastens the four cross straps to the buckles directly opposite the straps. (May have assistants assist in this step.)	_____	_____
13.	Lifts the foot portion of the SKED® litter, feeds the foot straps over the casualty's lower extremities and through the unused grommets at the foot end of the SKED® litter, and fasten the straps to the buckles. (May have assistants assist in this step.)	_____	_____
14.	The casualty is safely secured to the SKED® litter.	_____	_____
15.	Kneels at a handle of the SKED® litter had has assistants kneel at the other three handles.	_____	_____
16.	Orders assistants to lift the casualty so that the casualty is lifted in unison and the bearers are facing in the same direction.	_____	_____
	OVERALL EVALUATION (A no-go on any step will result in a no-go for the entire task)	GO	NO-GO

MAKE A BLANKET AND POLE IMPROVISED LITTER

Given: Blanket
Two tent poles

		GO	NO-GO
1.	Opens the blanket and lays it flat on the ground.	_____	_____
2.	Places a pole in the middle of the blanket dividing the blanket into two sections.	_____	_____
3.	Lifts one edge of the blanket and brings it over the pole so that the section lies on top of the other half of the blanket.	_____	_____
4.	Places a second pole so that it divides the doubled blanket into two parts.	_____	_____
5.	Brings the far edge of the blanket over the second pole and places the edge next to the first pole.	_____	_____
	OVERALL EVALUATION (A no-go on any step will result in a no-go for the entire task)	GO	NO-GO

MAKE A PONCHO AND POLE IMPROVISED LITTER

Given: Poncho
Two tent poles

		GO	NO-GO
1.	Opens the poncho and lays it flat on the ground.	_____	_____
2.	Lays two poles across the poncho so that the poncho is divided into thirds.	_____	_____
3.	Pulls the hood out and lays it flat on the poncho. Drawstrings do not hang out of the hole.	_____	_____
4.	Folds one outer third of the poncho over its pole.	_____	_____
5.	Folds other one outer third of the poncho over its pole.	_____	_____

	OVERALL EVALUATION (A no-go on any step will result in a no-go for the entire task)	GO	NO-GO

MAKE A JACKET AND POLE IMPROVISED LITTER

Given: Two field jackets
Two tent poles

		GO	NO-GO
1.	Zips the jackets closed.	_____	_____
2.	Turns the garments inside out, leaving the sleeves inside	_____	_____
3.	Places one garment below the other so that the sleeves are aligned.	_____	_____
4.	Slides the poles through the sleeves.	_____	_____

	GO	NO-GO
OVERALL EVALUATION (A no-go on any step will result in a no-go for the entire task)		

MAKE A SACK AND POLE IMPROVISED LITTER

Given: Two potato sacks (or similar objects)
Two tent poles
Scissors (from combat lifesaver MES)

		GO	NO-GO
1.	Cuts holes in the two corners of the closed end of each sack.	_____	_____
2.	Places the sacks lengthwise so the open ends of the sacks are facing each other.	_____	_____
3.	Slides the poles through the holes.	_____	_____
4.	Overlap the open ends of the sacks about three inches.	_____	_____
	OVERALL EVALUATION (A no-go on any step will result in a no-go for the entire task)	GO	NO-GO

APPENDIX A

COMBAT LIFESAVER MEDICAL EQUIPMENT SET

1245 COMBAT LIFESAVER BAG NSN 6545-01-532-3674

NSN	Nomenclature	U/I	Qty
6545015370686	BAG,TC3,COMBAT CASUALTY CARE	EA	1
6505009269083	ATROPINE INJECTION AQUEOUS TYPE 0.7ML SYRINGE WITH NEEDLE	EA	5
6505012740951	DIAZEPAM INJECTION USP 5MG/ML 2ML SYRINGE-NEEDLE UNIT AUTO INJ	EA	5
6515015195778	ADAPTER CATHETER TO LUER SYRINGE SHORT LOCKING 5S	PG	ea
6510009268884	ADHESIVE TAPE SURGICAL POROUS WOVEN 3 INCHES BY 10 YARDS 4S	PG	1 roll
6515012331917	AIRWAY NASOPHARYNGEAL 9MM ID 12MM OD KINK RES SMOOTH RD EDGES10S	PG	1 ea
6510002011755	BANDAGE MUSLIN COMPRESSED OLIVE DRAB37X37X52" TRIANG W/SFTY PINS	EA	3
6510009355823	BANDAGE ELASTIC FLESH ROLLED NONSTERILE 6"X 4.5 YDS 12S	PG	1 ea
6510015032117	BANDAGE GAUZE COTTON 6 PLY WHITE 4.5" WIDE 4.1 YDS LONG	RO	2 rolls
6510014922275	BANDAGE KIT ELASTIC	EA	2
6510005977469	BANDAGE ADH.75X3" FLESH/CLEAR STER DRESS AFFIXED TO PLAS ADH100S	PG	5 ea
6515014841327	CATHETER IV INTROCAN SAFETY 18GAX1-1/4"LG WINGED NDL TEFLON 200S	PG	4 ea
6515011535373	CATHETER-NDL UNIT IV 14GAX3.25" LUER HUB AND NDL GUARD RADPQ 50S	PG	1 ea
6510002017425	DRESSING FIRST AID FIELD CAMOUFLAGED 11.5-12"W 11.5-12"LG ABS	EA	1
6510 15198421	DRESSING OCCLUSIVE ADHESIVE CLEAR 4.75X4" 5S	PG	2 ea
6515014915719	GLOVE PATIENT EXAMINING & TREATMENT SZ 10LG PURPLE 4.3MIL 100S	PG	4 ea
6505014988636	HETASTARCH IN LACTATED ELECTROLYTE INJECTION, 500ML	PG	2 ea
6515014523445	ADMINISTRATION SET INFUSION PUMP VENTED/UNVENTED	PG	1 ea
6505001117829	LUBRICANT SURGICAL 5 GRAM 144S	PG	1 ea
6505011978809	ORAL REHYDRATION SALTS USP 27.9GM FOIL PACKET 125 PER PACKAGE	PG	2 ea
6510007863736	PAD ISOPROPYL ALCOHOL IMPREGNATED NONWVN COTTON/RAYON WHITE 200S	PG	6 ea
6510010100307	PAD POVIDONE-IODINE IMPRE STER COTTON/RAYON 2X1.375" BROWN 100S	PG	6 ea
6515009357138	SCISSORS BANDAGE 7.25" LG ANG TO HDL 1.50" CUT LG BLUNT PTS CRS	EA	1
6515014941951	SPLINT UNIVERSAL ALUM 36"O/A LG 4.25"W GRAY & OLIVE DRAB REUSE	EA	1
6515015195872	SYRINGE AND NEEDLE HYPODERMIC SAFETY 3ML 23GA STER DISP 25S	PG	1 EA
6515011467794	TOURNIQUET NONPNEUMATIC ADULT 14X1" BLD TAKING DSGN RUBBER O/A	EA	1
6515015217976	TOURNIQUET COMBAT APPLICATION ONE-HANDED	EA	1
6515015196764	TUBE DRAINAGE SURGICAL PENROSE 1"X18" RUBBER RADIOPAGUE STER 6S	PG	1 EA

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