

## APPENDIX B

# RESCUE AND TRANSPORTATION PROCEDURES

### B-1. General

A basic principle of first aid is to treat the casualty before moving him. However, adverse situations or conditions may jeopardize the lives of both the rescuer and the casualty if this is done. It may be necessary *first to rescue* the casualty before first aid can be effectively or safely given. The life and/or the well-being of the casualty will depend as much upon the manner in which he is *rescued and transported* as it will upon the treatment he receives. Rescue actions must be done quickly and safely. Careless or rough handling of the casualty during rescue operations can aggravate his injuries and possibly cause death.

### B-2. Principles of Rescue Operations

a. When faced with the necessity of rescuing a casualty who is threatened by hostile action, fire, water, or any other immediate hazard, DO NOT take action without first determining the extent of the hazard and your ability to handle the situation. DO NOT become a casualty.

b. The rescuer must evaluate the situation and analyze the factors involved. This evaluation involves three major steps:

- Identify the task.
- Evaluate circumstances of the rescue.
- Plan the action.

### B-3. Task (Rescue) Identification

First determine if a rescue attempt is actually needed. It is a waste of time, equipment, and personnel to rescue someone not in need of rescuing. It is also a waste to look for someone who is not lost or needlessly risk the lives of the rescuer(s). In planning a rescue, attempt to obtain the following information:

- Who, what, where, when, why, and how the situation happened?
- How many casualties are involved and the nature of their injuries?

- What is the tactical situation?
- What are the terrain features and the location of the casualties?
- Will there be adequate assistance available to aid in the rescue/evacuation?
- Can treatment be provided at the scene; will the casualties require movement to a safer location?
- What equipment will be required for the rescue operation?
- Will decon procedures and equipment be required for casualties, rescue personnel and rescue equipment?

#### **B-4. Circumstances of the Rescue**

a. After identifying the job (task) required, you must relate to the circumstances under which you must work. Do you need additional people, security, medical, or special rescue equipment? Are there circumstances such as mountain rescue or aircraft accidents that may require specialized skills? What is the weather like? Is the terrain hazardous? How much time is available?

b. The time element will sometimes cause a rescuer to compromise planning stages and/or treatment which can be given. A *realistic* estimate of *time available* must be made as quickly as possible to determine action time remaining. The key elements are the casualty's condition and the environment.

c. Mass casualties are to be expected on the modern battlefield. All problems or complexities of rescue are now multiplied by the number of casualties encountered. In this case, time becomes the critical element.

#### **B-5. Plan of Action**

a. The casualty's ability to endure is of primary importance in estimating the time available. Age and physical condition will differ from casualty to casualty. Therefore, to determine the time available, you will have to consider—

- Endurance time of the casualty.

- Type of situation.
- Personnel and/or equipment availability.
- Weather.
- Terrain.

*b.* In respect to terrain, you must consider altitude and visibility. In some cases, the casualty may be of assistance because he knows more about the particular terrain or situation than you do. Maximum use of secure/reliable trails or roads is essential.

*c.* When taking weather into account, ensure that blankets and/or rain gear are available. Even a mild rain can complicate a normally simple rescue. In high altitudes and/or extreme cold and gusting winds, the time available is critically shortened.

*d.* High altitudes and gusting winds minimize the ability of fixed-wing or rotary wing aircraft to assist in operations. Rotary wing aircraft may be available to remove casualties from cliffs or inaccessible sites. These same aircraft can also transport the casualties to a medical treatment facility in a comparatively short time. Aircraft, though vital elements of search, rescue or evacuation, cannot be used in all situations. For this reason, do not rely entirely on their presence. Reliance on aircraft or specialized equipment is a poor substitute for careful planning.

## **B-6. Mass Casualties**

In situations where there are multiple casualties, an orderly rescue may involve some additional planning. To facilitate a mass casualty rescue or evacuation, recognize separate stages.

- *First Stage.* Remove those personnel who are not trapped among debris or who can be evacuated easily.
- *Second Stage.* Remove those personnel who may be trapped by debris but require only the equipment on hand and a minimum amount of time.
- *Third Stage.* Remove the remaining personnel who are trapped in extremely difficult or time-consuming situations, such as under large amounts of debris or behind walls.
- *Fourth Stage.* Remove the dead.

## B-7. Proper Handling of Casualties

a. You may have saved the casualty's life through the application of appropriate first aid measures. However, his life can be lost through rough handling or careless transportation procedures. Before you attempt to move the casualty—

- Evaluate the type and extent of his injury.
- Ensure that dressings over wounds are adequately reinforced.
- Ensure that fractured bones are properly immobilized and supported to prevent them from cutting through muscle, blood vessels, and skin. Based upon your evaluation of the type and extent of the casualty's injury and your knowledge of the various manual carries, you must select the best possible method of manual transportation. If the casualty is conscious, tell him how he is to be transported. This will help allay his fear of movement and gain his cooperation and confidence.

b. Buddy aid for chemical agent casualties includes those actions required to prevent an incapacitated casualty from receiving additional injury from the effects of chemical hazards. If a casualty is physically unable to decontaminate himself or administer the proper chemical agent antidote, the casualty's buddy assists him and assumes responsibility for his care. Buddy aid includes—

- Administering the proper chemical agent antidote.
- Decontaminating the incapacitated casualty's exposed skin.
- Ensuring that his protective ensemble remains correctly emplaced.
- Maintaining respiration.
- Controlling bleeding.
- Providing other standard first aid measures.
- Transporting the casualty out of the contaminated area.

## B-8. Transportation of Casualties

a. Transportation of the sick and wounded is the responsibility of medical personnel who have been provided special training and

equipment. Therefore, unless a good reason for you to transport a casualty arises, wait for some means of medical evacuation to be provided. When the situation is urgent and you are unable to obtain medical assistance or know that no medical evacuation facilities are available, you will have to transport the casualty. For this reason, you must know how to transport him without increasing the seriousness of his condition.

*b.* Transporting a casualty by litter (FM 8-35) is safer and more comfortable for him than by manual means; it is also easier for you. Manual transportation, however, may be the only feasible method because of the terrain or the combat situation; or it may be necessary to save a life. In these situations, the casualty should be transferred to a litter as soon as one can be made available or improvised.

### **B-9. Manual Carries (081-831-1040 and 081-831-1041)**

Casualties carried by manual means must be carefully and correctly handled, otherwise their injuries may become more serious or possibly fatal. Situation permitting, evacuation or transport of a casualty should be organized and unhurried. Each movement should be performed as deliberately and gently as possible. Casualties should not be moved before the type and extent of injuries are evaluated and the required emergency medical treatment is given. The exception to this occurs when the situation dictates immediate movement for safety purposes (*for example*, it may be necessary to remove a casualty from a burning vehicle); that is, the situation dictates that the urgency of casualty movement outweighs the need to administer emergency medical treatment. Manual carries are tiring for the bearer(s) and involve the risk of increasing the severity of the casualty's injury. In some instances, however, they are essential to save the casualty's life. Although manual carries are accomplished by one or two bearers, the two-man carries are used whenever possible. They provide more comfort to the casualty, are less likely to aggravate his injuries, and are also less tiring for the bearers, thus enabling them to carry him farther. The distance a casualty can be carried depends on many factors, such as—

- Strength and endurance of the bearer(s).
- Weight of the casualty.
- Nature of the casualty's injury.
- Obstacles encountered during transport.

*a.* *One-man Carries (081-831-1040).*

(1) *Fireman's carry (081-831-1040)*. The fireman's carry (Figure B-1) is one of the easiest ways for one person to carry another. After an unconscious or disabled casualty has been properly positioned, he is raised from the ground. An alternate method for raising him from the ground is illustrated (Figure B-1 I). However, it should be used only when the bearer believes it to be safer for the casualty because of the location of his wounds. When the alternate method is used, take care to prevent the casualty's head from snapping back and causing a neck injury. The steps for raising a casualty from the ground for the fireman's carry are also used in other one-man carries.



A

KNEEL AT THE CASUALTY'S UNINJURED SIDE. PLACE HIS ARMS ABOVE HIS HEAD AND CROSS HIS ANKLE FARTHER FROM YOU OVER THE ONE CLOSER TO YOU. PLACE ONE OF YOUR HANDS ON THE SHOULDER FARTHER FROM YOU AND YOUR OTHER HAND IN THE AREA OF HIS HIP OR THIGH.



B

ROLL HIM TOWARD YOU ONTO HIS ABDOMEN.

*Figure B-1. Fireman's carry (Illustrated A thru N).*



- C** AFTER ROLLING THE CASUALTY ONTO HIS ABDOMEN, STRADDLE HIM; THEN PLACE YOUR HANDS UNDER HIS CHEST AND LOCK THEM TOGETHER.



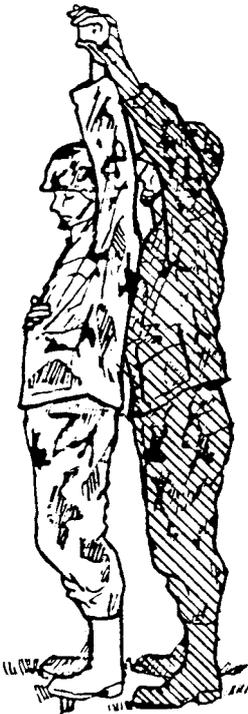
- D** RAISE/LIFT THE CASUALTY TO HIS KNEES AS YOU MOVE BACKWARD.

- E** CONTINUE TO MOVE BACKWARD, THUS STRAIGHTENING THE CASUALTY'S LEGS AND LOCKING HIS KNEES.



*Figure B-1. Continued.*

- F WALK FORWARD, BRINGING THE CASUALTY TO A STANDING POSITION BUT TILTED SLIGHTLY BACKWARD TO PREVENT HIS KNEES FROM BUCKLING.

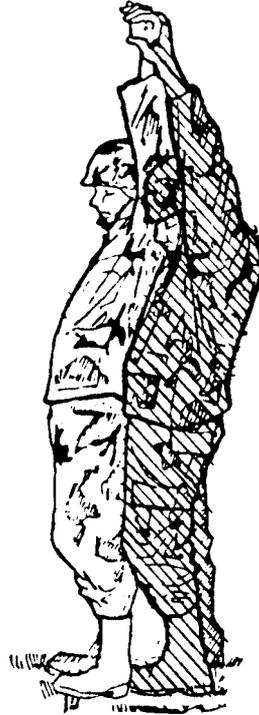


- G AS YOU MAINTAIN CONSTANT SUPPORT OF THE CASUALTY WITH ONE ARM, FREE YOUR OTHER ARM, QUICKLY GRASP HIS WRIST, AND RAISE HIS ARM HIGH.

*Figure B-1. Continued.*

H

INSTANTLY PASS YOUR HEAD UNDER HIS RAISED ARM, RELEASING IT AS YOU PASS UNDER IT.



I

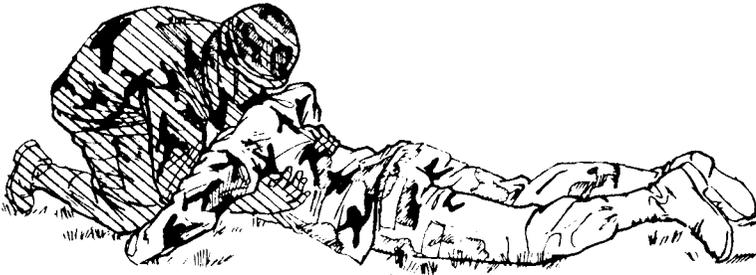
MOVE SWIFTLY TO FACE THE CASUALTY AND SECURE YOUR ARMS AROUND HIS WAIST. IMMEDIATELY PLACE YOUR FOOT BETWEEN HIS FEET AND SPREAD THEM (APPROXIMATELY 6 TO 8 INCHES APART).

*Figure B-1. Continued.*

### NOTE

The alternate method of raising the casualty from the ground should be used only when the bearer believes it to be safer for the casualty because of the location of his wounds. When the alternate method is used, take care to prevent the casualty's head from snapping back and causing a neck injury.

**J** ALTERNATE METHOD OF LIFTING.



- 1 KNEEL ON ONE KNEE AT THE CASUALTY'S HEAD, FACING HIS FEET, THEN EXTEND YOUR HANDS UNDER HIS ARMPITS, DOWN HIS SIDES, AND ACROSS HIS BACK.

- 2 AS YOU RISE, LIFT THE CASUALTY TO HIS KNEES; THEN SECURE A LOWER HOLD AND RAISE HIM TO A STANDING POSITION WITH HIS KNEES LOCKED.



*Figure B-1. Continued.*



- 3 SECURE YOUR ARMS AROUND THE CASUALTY'S WAIST, WITH HIS BODY TILTED SLIGHTLY BACKWARD TO PREVENT HIS KNEES FROM BUCKLING. PLACE YOUR FOOT BETWEEN HIS FEET AND SPREAD THEM (ABOUT 6 TO 8 INCHES APART).

- K GRASP THE CASUALTY'S WRIST AND RAISE HIS ARM HIGH OVER YOUR HEAD.



*Figure B-1. Continued.*

L

STOOP/BEND DOWN AND PULL THE CASUALTY'S ARM OVER AND DOWN YOUR SHOULDER, THUS BRINGING HIS BODY ACROSS YOUR SHOULDERS. AT THE SAME TIME, PASS YOUR ARM BETWEEN HIS LEGS.



M

GRASP THE CASUALTY'S WRIST WITH ONE HAND AND PLACE YOUR OTHER HAND ON YOUR KNEE FOR SUPPORT.



*Figure B-1. Continued.*

(N)

RISE WITH THE CASUALTY CORRECTLY POSITIONED.  
YOUR OTHER HAND IS FREE FOR USE AS NEEDED.



*Figure B-1. Continued.*

(2) *Support carry (081-831-1040).* In the support carry (Figure B-2), the casualty must be able to walk or at least hop on one leg, using the bearer as a crutch. This carry can be used to assist him as far as he is able to walk or hop.

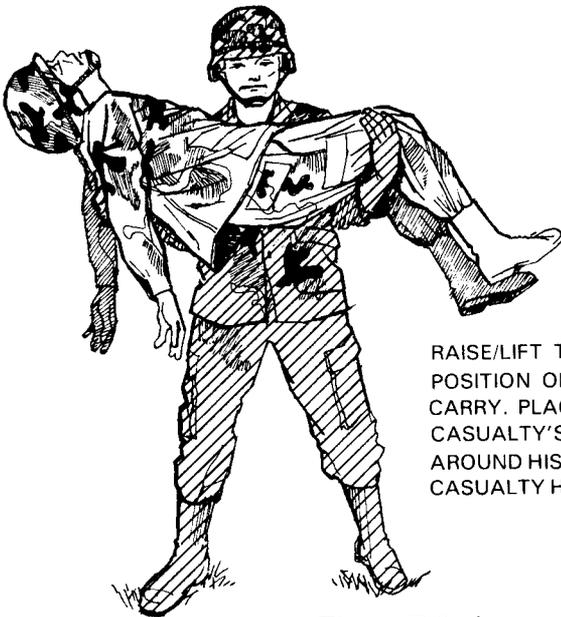
RAISE THE CASUALTY TO A STANDING POSITION FROM GROUND AS IN FIREMAN'S CARRY. GRASP THE CASUALTY'S WRIST AND DRAW HIS ARM AROUND YOUR NECK. PLACE YOUR ARM AROUND HIS WAIST.

(THE CASUALTY IS THUS ABLE TO WALK, USING YOU AS A CRUTCH.)



*Figure B-2. Support carry.*

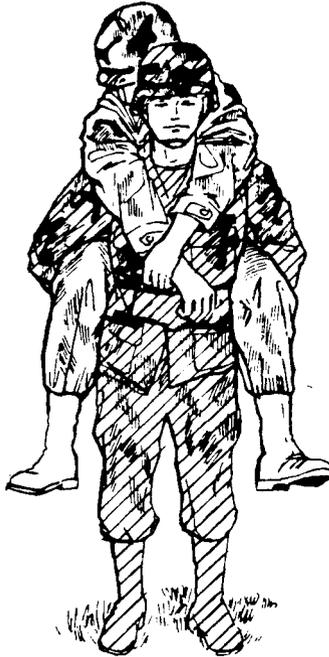
(3) *Arms carry (081-831-1040)*. The arms carry is used when the casualty is unable to walk. This carry (Figure B-3) is useful when carrying a casualty for a short distance and when placing him on a litter.



RAISE/LIFT THE CASUALTY TO A STANDING POSITION OFF GROUND AS IN FIREMAN'S CARRY. PLACE ONE ARM UNDER THE CASUALTY'S KNEES AND YOUR OTHER ARM AROUND HIS BACK AND LIFT. CARRY CASUALTY HIGH TO LESSEN FATIGUE.

*Figure B-3. Arms carry.*

(4) *Saddleback carry (081-831-1040)*. Only a conscious casualty can be transported by the saddleback carry (Figure B-4), because he must be able to hold onto the bearer's neck.



RAISE CASUALTY TO UPRIGHT POSITION AS IN FIREMAN'S CARRY. SUPPORT CASUALTY BY PLACING AN ARM AROUND HIS WAIST AND MOVE IN FRONT OF HIM (YOUR BACK TO HIM). HAVE CASUALTY ENCIRCLE HIS ARMS AROUND YOUR NECK. STOOP, RAISE HIM UPON YOUR BACK, AND CLASP YOUR HANDS TOGETHER BENEATH HIS THIGHS IF POSSIBLE.

*Figure B-4. Saddleback carry.*

(5) *Pack-strap carry (081-831-1040)*. This carry is used when only a moderate distance will be traveled. In this carry (Figure B-5), the casualty's weight rests high on the bearer's back. To eliminate the possibility of injury to the casualty's arms, the bearer must hold the casualty's arms in a palms-down position.

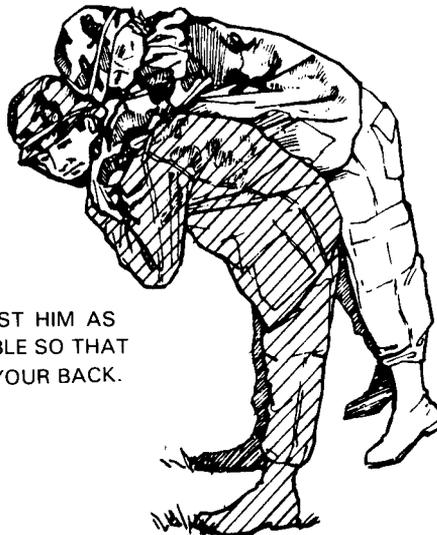
A

LIFT CASUALTY FROM GROUND TO A STANDING POSITION AS IN FIREMAN'S CARRY. SUPPORTING THE CASUALTY WITH YOUR ARMS AROUND HIM, GRASP HIS WRIST CLOSER TO YOU AND PLACE HIS ARM OVER YOUR HEAD AND ACROSS YOUR SHOULDER. MOVE IN FRONT OF HIM WHILE SUPPORTING HIS WEIGHT AGAINST YOUR BACK. GRASP HIS OTHER WRIST, AND PLACE THIS ARM OVER YOUR SHOULDER.



B

BEND FORWARD AND RAISE/HOIST HIM AS HIGH ON YOUR BACK AS POSSIBLE SO THAT ALL HIS WEIGHT IS RESTING ON YOUR BACK.

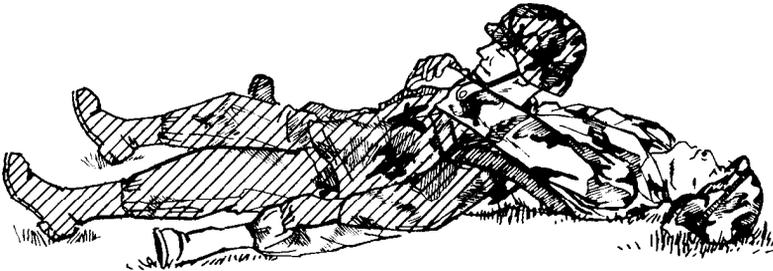


*Figure B-5. Pack-strap carry (Illustrated A and B).*

(6) *Pistol-belt carry (081-831-1040)*. The pistol-belt carry (Figure B-6) is the best one-man carry when the distance to be traveled is long. The casualty is securely supported by a belt upon the shoulders of the bearer. The hands of both the bearer and the casualty are left free for carrying a weapon or equipment, climbing banks, or surmounting obstacles. With his hands free and the casualty secured in place, the bearer is also able to creep through shrubs and under low hanging branches.

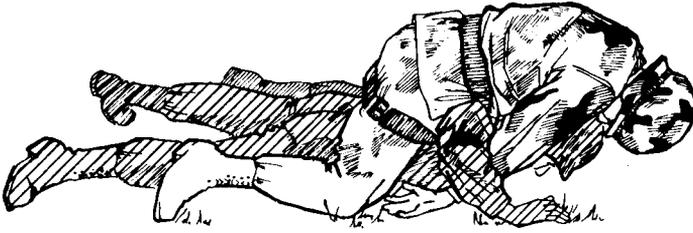


- A** LINK TWO PISTOL BELTS (OR THREE, IF NECESSARY) TOGETHER TO FORM A SLING. (IF PISTOL BELTS ARE NOT AVAILABLE FOR USE, OTHER ITEMS, SUCH AS ONE RIFLE SLING, TWO CRAVAT BANDAGES, TWO LITTER STRAPS, OR ANY SUITABLE MATERIAL WHICH WILL NOT CUT OR BIND THE CASUALTY, MAY BE USED.) PLACE THIS SLING UNDER THE CASUALTY'S THIGHS AND LOWER BACK SO THAT A LOOP EXTENDS FROM EACH SIDE.



- B** LIE FACE UP BETWEEN THE CASUALTY'S OUTSTRETCHED LEGS. THRUST YOUR ARMS THROUGH THE LOOPS, GRASP HIS HAND AND TROUSER LEG ON HIS INJURED SIDE.

*Figure B-6. Pistol-belt carry (Illustrated A thru F).*



C

ROLL TOWARD THE CASUALTY'S UNINJURED SIDE ONTO YOUR ABDOMEN, BRINGING HIM ONTO YOUR BACK. ADJUST SLING AS NECESSARY.



D

RISE TO A KNEELING POSITION. THE BELT WILL HOLD THE CASUALTY IN PLACE.

E

PLACE ONE HAND ON YOUR KNEE FOR SUPPORT AND RISE TO AN UPRIGHT POSITION.



*Figure B-6. Continued.*



F

THE CASUALTY IS NOW SUPPORTED ON YOUR SHOULDERS. CARRY THE CASUALTY WITH YOUR HANDS FREE FOR USE IN RIFLE-FIRING, CLIMBING BANKS, OR SURMOUNTING OBSTACLES.

*Figure B-6. Continued.*

(7) *Pistol-belt drag (081-831-1040)*. The pistol-belt drag (Figure B-7) and other drags are generally used for short distances. In this drag the casualty is on his back. The pistol-belt drag is useful in combat. The bearer and the casualty can remain closer to the ground in this drag than in any other.

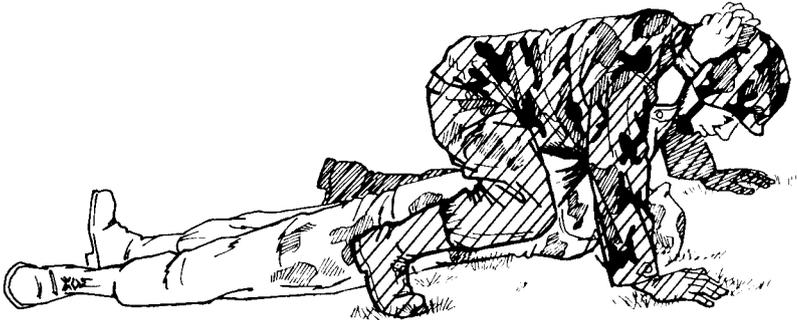


*Figure B-7. Pistol-belt drag.*

ADJUST/EXTEND TWO PISTOL BELTS (OR THREE, IF NECESSARY) OR SIMILAR OBJECTS TO THEIR FULL LENGTH AND JOIN THEM TOGETHER TO MAKE ONE LOOP. ROLL THE CASUALTY ONTO HIS BACK. PASS THE LOOP OVER THE CASUALTY'S HEAD AND POSITION IT ACROSS HIS CHEST AND UNDER HIS ARMPITS; THEN CROSS THE REMAINING PORTION OF THE LOOP, THUS FORMING A FIGURE EIGHT. KEEP TENSION ON THE BELTS SO THEY DO NOT BECOME UNHOOKED. LIE ON YOUR SIDE FACING THE CASUALTY, RESTING ON YOUR ELBOW. SLIP THE LOOP OVER YOUR ARM AND SHOULDER THAT YOU ARE LEANING ON AND TURN AWAY FROM THE CASUALTY ONTO YOUR ABDOMEN, THUS ENABLING YOU TO DRAG THE CASUALTY AS YOU CRAWL.

*Figure B-7. Continued.*

(8) *Neck drag (081-831-1040)*. The neck drag (Figure B-8) is useful in combat because the bearer can transport the casualty when he creeps behind a low wall or shrubbery, under a vehicle, or through a culvert. This drag is used only if the casualty does not have a broken/fractured arm. In this drag the casualty is on his back. If the casualty is unconscious, protect his head from the ground.



TIE THE CASUALTY'S HANDS TOGETHER AT THE WRISTS. IF CASUALTY IS CONSCIOUS, HE MAY CLASP HIS HANDS TOGETHER AROUND YOUR NECK. STRADDLE THE CASUALTY IN A KNEELING FACE-TO-FACE POSITION. LOOP THE CASUALTY'S TIED HANDS OVER/AROUND YOUR NECK. CRAWL FORWARD, LOOKING FORWARD, DRAGGING THE CASUALTY WITH YOU. IF THE CASUALTY IS UNCONSCIOUS, PROTECT HIS HEAD FROM THE GROUND.

*Figure B-8. Neck drag.*

(9) *Cradle drop drag (081-831-1040)*. The cradle drop drag (Figure B-9) is effective in moving a casualty up or down steps. In this drag the casualty is lying down.

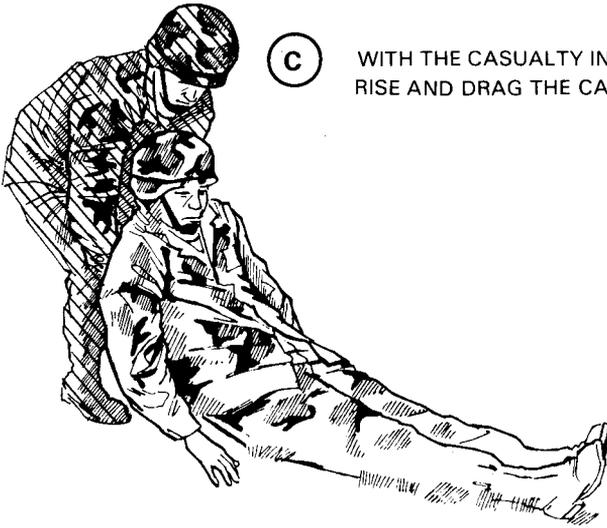


- A** WITH THE CASUALTY LYING ON HIS BACK, KNEEL AT HIS HEAD. THEN SLIDE YOUR HANDS, WITH PALMS UP, UNDER THE CASUALTY'S SHOULDERS AND GET A FIRM HOLD UNDER HIS ARMPITS.

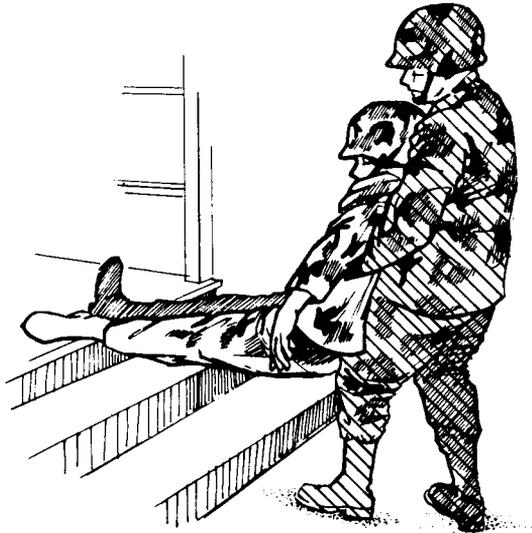


- B** PARTIALLY RISE, SUPPORTING THE CASUALTY'S HEAD ON ONE OF YOUR FOREARMS. (YOU MAY BRING YOUR ELBOWS TOGETHER AND LET THE CASUALTY'S HEAD REST ON BOTH OF YOUR FOREARMS.)

*Figure B-9. Cradle drop drag (Illustrated A thru D).*



**C** WITH THE CASUALTY IN A SEMI-SITTING POSITION, RISE AND DRAG THE CASUALTY BACKWARDS.



**D** THEN BACK DOWN THE STEPS, SUPPORTING THE CASUALTY'S HEAD AND BODY AND LETTING HIS HIPS AND LEGS DROP FROM STEP TO STEP. IF THE CASUALTY NEEDS TO BE MOVED *UP* THE STEPS, THEN YOU SHOULD BACK UP THE STEPS, USING THE SAME PROCEDURE.

*Figure B-9. Continued.*

*b. Two-man Carries (081-831-1041).*

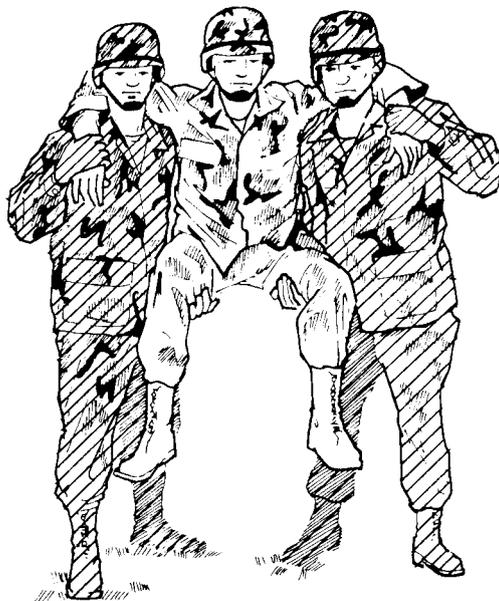
(1) *Two-man support carry (081-831-1041).* The two-man support carry (Figure B-10) can be used in transporting both conscious or unconscious casualties. If the casualty is taller than the bearers, it may be necessary for the bearers to lift the casualty's legs and let them rest on their forearms.



**A**

TWO BEARERS HELP THE CASUALTY TO HIS FEET AND SUPPORT HIM WITH THEIR ARMS AROUND HIS WAIST. THEY GRASP THE CASUALTY'S WRISTS AND DRAW HIS ARMS AROUND THEIR NECKS.

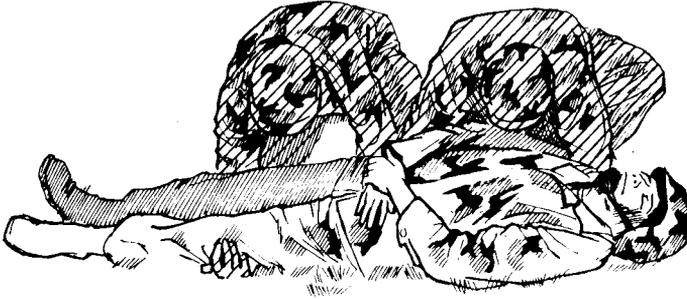
*Figure B-10. Two-man support carry (Illustrated A and B).*



- B** IF A CASUALTY IS TALLER THAN THE BEARERS, IT MAY BE NECESSARY FOR THE BEARERS TO LIFT HIS LEGS AND LET THEM REST ON THEIR FOREARMS.

*Figure B-10. Continued.*

(2) *Two-man arms carry (081-831-1041)*. The two-man arms carry (Figure B-11) is useful in carrying a casualty for a moderate distance. It is also useful for placing him on a litter. To lessen fatigue, the bearers should carry him high and as close to their chests as possible. In extreme emergencies when there is no time to obtain a board, this manual carry is the safest one for transporting a casualty with a back/neck injury. Use two additional bearers to keep his head and legs in alignment with his body.



**A**

TWO BEARERS KNEEL AT ONE SIDE OF THE CASUALTY AND PLACE THEIR ARMS BENEATH THE CASUALTY'S BACK (SHOULDERS), WAIST, HIPS, AND KNEES.



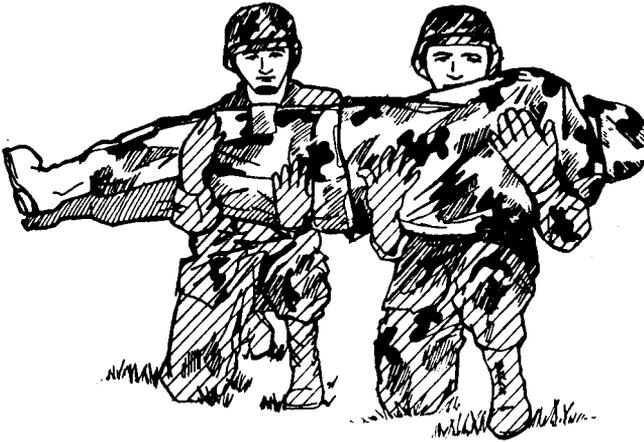
**B**

THE BEARERS LIFT THE CASUALTY AS THEY RISE TO THEIR KNEES.

**NOTE**

Keeping the casualty's body level will prevent unnecessary movement and further injury.

*Figure B-11. Two-man arms carry (Illustrated A thru D).*



- (C) AS THE BEARERS RISE TO THEIR FEET, THEY TURN THE CASUALTY TOWARD THEIR CHESTS.



- (D) THEY CARRY HIM HIGH TO LESSEN FATIGUE.

*Figure B-11. Continued.*

(3) *Two-man fore-and-aft carry (081-831-1041)*. The fore-and-aft carry (Figure B-12) is a most useful *two-man carry* for transporting a casualty for a long distance. The taller of the two bearers should position himself at the casualty's head. By altering this carry so that both bearers face the casualty, it is also useful for placing him on a litter.



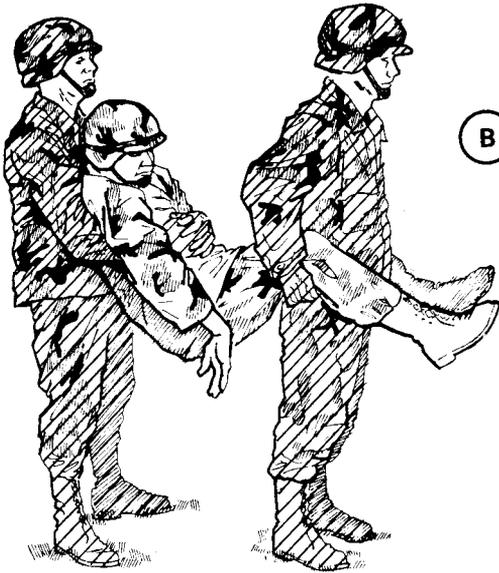
A

THE SHORTER BEARER SPREADS THE CASUALTY'S LEGS, KNEELS BETWEEN THE LEGS WITH HIS BACK TO THE CASUALTY, AND POSITIONS HIS HANDS BEHIND THE CASUALTY'S KNEES. THE OTHER (TALLER) BEARER KNEELS AT THE CASUALTY'S HEAD, SLIDES HIS HANDS UNDER THE ARMS AND ACROSS, AND LOCKS HIS HANDS TOGETHER.

#### NOTE

The taller of the two bearers should position himself at the casualty's head.

*Figure B-12. Two-man fore-and-aft carry (Illustrated A thru C).*



**B**

THE BEARERS RISE TOGETHER,  
LIFTING THE CASUALTY.

**C**

ALTERNATE POSITION—  
FACING CASUALTY.



**NOTE**

By altering the carry so that both bearers face the casualty, it is also useful for placing him on a litter.

*Figure B-12. Continued.*

(4) *Two-hand seat carry (081-831-1041).* The two-hand seat carry (Figure B-13) is used in carrying a casualty for a short distance and in placing him on a litter.



**A** FRONT VIEW

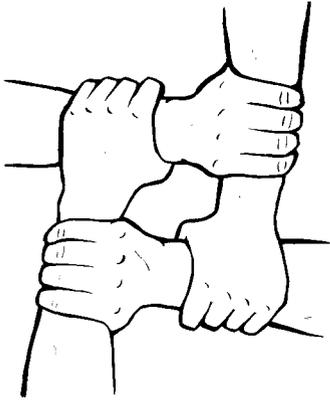
WITH CASUALTY LYING ON HIS BACK, A BEARER KNEELS ON EACH SIDE OF HIM AT THE CASUALTY'S HIPS. EACH BEARER PASSES HIS ARMS UNDER THE CASUALTY'S THIGHS AND BACK, AND GRASPS THE OTHER BEARER'S WRISTS. THE BEARERS RISE, LIFTING THE CASUALTY.

**B** BACK VIEW



*Figure B-13. Two-hand seat carry (Illustrated A and B).*

(5) *Four-hand seat carry (081-831-1041)*. Only a conscious casualty can be transported with the four-hand seat carry (Figure B-14) because he must help support himself by placing his arms around the bearers' shoulders. This carry is especially useful in transporting the casualty with a head or foot injury and is used when the distance to be traveled is moderate. It is also useful for placing a casualty on a litter.



A

EACH BEARER GRASPS ONE OF HIS WRISTS AND ONE OF THE OTHER BEARER'S WRISTS, THUS FORMING A PACKSADDLE.

B

THE TWO BEARERS LOWER THEMSELVES SUFFICIENTLY FOR THE CASUALTY TO SIT ON THE PACKSADDLE; THEN THEY HAVE THE CASUALTY PLACE HIS ARMS AROUND THEIR SHOULDERS FOR SUPPORT BEFORE THEY RISE TO AN UPRIGHT POSITION.



*Figure B-14. Four-hand seat carry (Illustrated A and B).*

<b>B-10. Improvised Litters (Figures B-15 through B-17)</b> <b>(081-831-1041)</b>
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Two men can support or carry a casualty without equipment for only short distances. By using available materials to improvise equipment, the casualty can be transported greater distances by two or more rescuers.

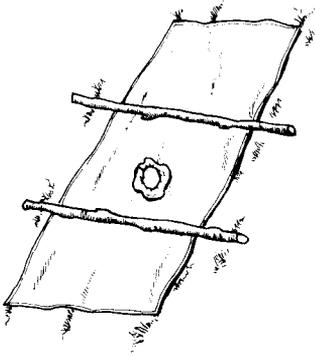
a. There are times when a casualty may have to be moved and a standard litter is not available. The distance may be too great for manual carries or the casualty may have an injury, such as a fractured neck, back, hip, or thigh that would be aggravated by manual transportation. In these situations, litters can be improvised from certain materials at hand. *Improvised litters are emergency measures* and must be replaced by standard litters at the first opportunity to ensure the comfort and safety of the casualty.

b. Many different types of litters can be improvised, depending upon the materials available. Satisfactory litters can be made by securing poles inside such items as blankets, ponchos, shelter halves, tarpaulins, jackets, shirts, sacks, bags, and bed tickings (fabric covers of mattresses). Poles can be improvised from strong branches, tent supports, skis, and other like items. Most flat-surface objects of suitable size can also be used as litters. Such objects include boards, doors, window shutters, benches, ladders, cots, and poles tied together. If possible, these objects should be padded.

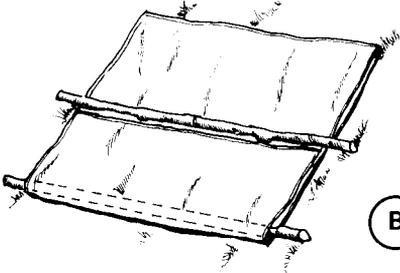
c. If no poles can be obtained, a large item such as a blanket can be rolled from both sides toward the center. The rolls then can be used to obtain a firm grip when carrying the casualty. If a poncho is used, make sure the hood is up and under the casualty and is not dragging on the ground.

d. The important thing to remember is that an improvised litter must be well constructed to avoid the risk of dropping or further injuring the casualty.

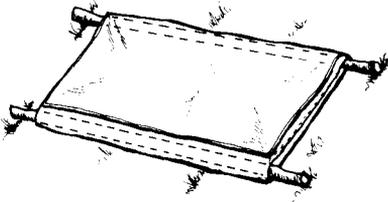
e. Improvised litters may be used when the distance may be too long (far) for manual carries or the casualty has an injury which may be aggravated by manual transportation.



- A** OPEN THE PONCHO AND LAY THE TWO POLES (OR LIMBS) LENGTHWISE ACROSS THE CENTER. REACH IN AND PULL THE HOOD TOWARD YOU AND LAY IT FLAT ON THE PONCHO.

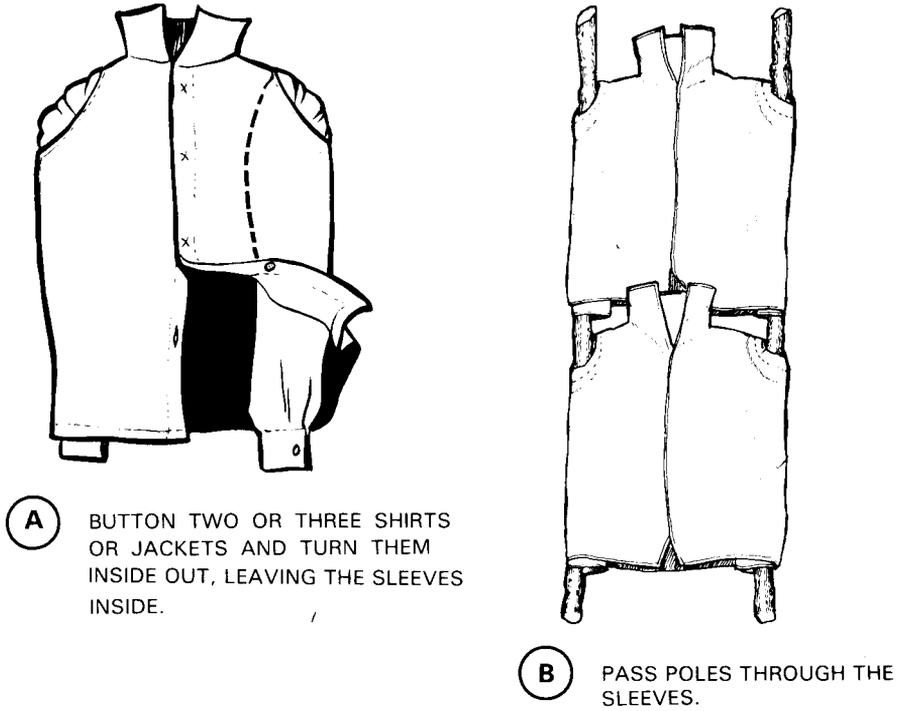


- B** FOLD THE PONCHO OVER THE FIRST POLE.

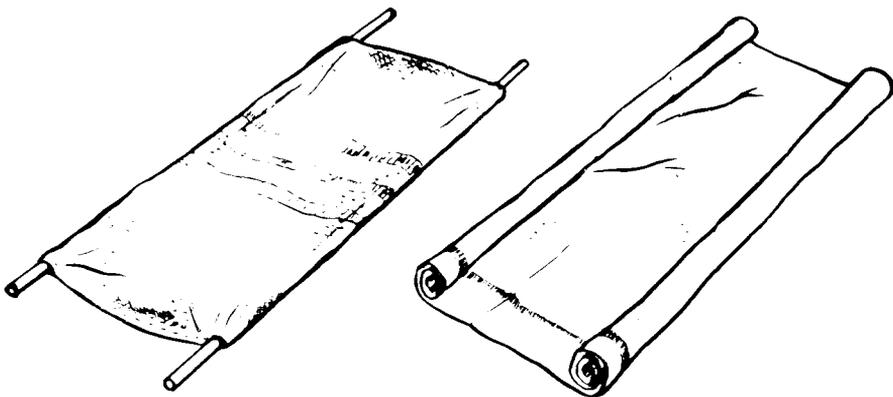


- C** FOLD THE REMAINING FREE EDGES OF THE PONCHO OVER THE SECOND POLE.

*Figure B-15. Improvised litter with poncho and poles  
(Illustrated A thru C).*



*Figure B-16. Improvised litter made with poles and jackets (Illustrated A and B).*



*Figure B-17. Improvised litters made by inserting poles through sacks or by rolling blanket.*

*f.* Any of the appropriate carries may be used to place a casualty on a litter. These carries are:

- The one-man arms carry (Figure B-3).
- The two-man arms carry (Figure B-11).
- The two-man fore-and-aft carry (Figure B-12).
- The two-hand seat carry (Figure B-13).
- The four-hand seat carry (Figure B-14).

### **WARNING**

Unless there is an immediate life-threatening situation (such as fire, explosion), **DO NOT** move the casualty with a suspected back or neck injury. Seek medical personnel for guidance on how to transport.

*g.* Either two or four soldiers (head/foot) may be used to lift a litter. To lift the litter, follow the procedure below.

(1) Raise the litter at the same time as the other carriers/bearers.

(2) Keep the casualty as level as possible.

### **NOTE**

Use caution when transporting on a sloping incline/hill.