

★ APPENDIX C

PATIENT DECONTAMINATION

C-1. General

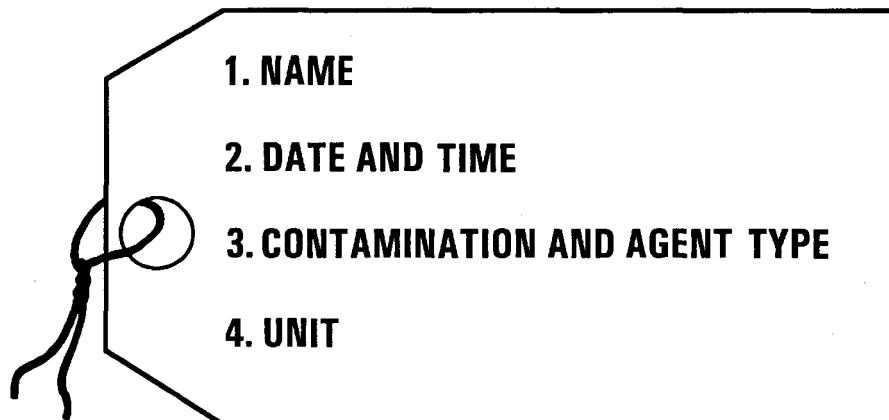
a. Casualty decontamination presents special problems for units and combat health support (CHS) personnel. Under NBC conditions, contaminated soldiers create increased hazards to rescuers and CHS personnel. Casualty decontamination procedures are performed by each individual, as buddy aid, or at a unit decontamination station prior to the arrival of medical personnel. See FM 3-5 for procedures on individual, buddy aid, and unit decontamination. Patient decontamination procedures are performed at an MTF, under medical supervision.

b. On the NBC battlefield, two classifications of patients will be encountered—contaminated and uncontaminated. Those contaminated may suffer from the effects of an NBC agent, of a conventional wound, or both. Some may suffer combat stress or heat injuries induced by the stress of NBC conditions and extended time spent in MOPP4. It is important to follow proper decontamination procedures to limit the spread of contamination to others and equipment. The most important decontamination is performed at the site of contamination. Decontamination at a later time may be too late to prevent injury to the individual; especially when exposed to vesicants. All agents should be promptly removed from the skin.

This appendix only describes patient decontamination procedures. For treatment procedures, refer to FM 8-9, FM 8-33, and FM 8-285.

C-2. Casualty Decontamination

Casualty decontamination must begin at the platoon and company level with the individual soldier, prior to the arrival of medical personnel. The soldier himself or members of his team must perform immediate decontamination and administer nerve agent antidotes and convulsant antidote for nerve agent (CANAs), if required. Enter the time and type of contamination on the field expedient card (Figure C-1) or the DD Form 1380 (Field Medical Card [FMC]). If available, use the CAM or chemical agent detector paper to determine the type of contamination. When the casualty's condition and the battle permits, they may go through a MOPP gear exchange (see Chapter 4, FM 3-5). The MOPP gear exchange must not cause further injury to the casualty. Casualty decontamination differs from patient decontamination in that medical personnel are not available to monitor the patient's medical status nor to provide medical treatment to the individual.



1. NAME

2. DATE AND TIME

3. CONTAMINATION AND AGENT TYPE

4. UNIT

Figure C-1. Field expedient NBC casualty card.

C-3. Patient Decontamination at the Battalion Aid Station

a. When battle conditions prevent casualty decontamination procedures forward or the patient is contaminated en route, the patient may have to be decontaminated at the battalion aid station (BAS). Contaminated patients arriving at the BAS must be decontaminated before admission into the clean treatment area.

b. Patient decontamination is the systematic removal of clothing and contaminants from patients who are unable to decontaminate themselves. Patient decontamination is performed by a patient decontamination team consisting of a minimum of eight (8) nonmedical personnel from the supported unit at the BAS. The patient decontamination team operates under the supervision of medical personnel to ensure that no further injury is caused to the patient by the decontamination process.

C-4. Patient Decontamination at the Medical Company Clearing Station

The medical company clearing station may receive patients from the BAS or directly from other areas who have not been decontaminated. The clearing station must also have a patient decontamination area. As with the BAS, the clearing station must have a minimum of eight nonmedical personnel from the supported units to perform patient decontamination. Procedures for patient decontamination at the clearing station are the same as for the BAS.

C-5. Patient Decontamination at a Hospital

a. To the maximum extent possible, hospitals are located away from tactical or logistical targets. Patients evacuated from forward areas should have been decontaminated; however, patients may arrive from forward MTFs and units located within the geographical area of the hospital that are contaminated and require decontamination. Patient decontamination is done by at least 20 nonmedical personnel from units located in the geographical area/base cluster of the hospital.

b. If the hospital does not have a collective protective shelter (CPS) system and becomes contaminated with a persistent agent, patients are rerouted to other hospitals. If possible, all inpatients are evacuated and the hospital decontaminated.

c. Upon completion of decontamination, the hospital will return to normal operations. Hospitals with CPS systems will decontaminate areas around the entry to these facilities, then continue receiving and caring for patients. Patient decontamination procedures used in forward medical facilities also apply to hospital operations. However, several patient decontamination stations can be operated at the hospital patient decontamination site. All patients arriving at the hospital from suspect contaminated areas or crossing contaminated areas will be considered as being contaminated. They must be decontaminated before being admitted into the clean areas of the hospital. Perform decontamination as required.

C-6. Prepare Chlorine Solutions for Patient Decontamination

The standard skin decontaminating kit is the M291. The M258A1 skin decontamination kit is being replaced by the M291; however, the M258A1 kit may be used until the M291 kits have been issued.

Upon receipt of the M291 kits, the M258A1 kit should only be used for decontamination of individual equipment. An alternative patient decontamination agent is a chlorine solution; however, the chlorine solution must be prepared. Two concentrations of the chlorine solution are required. A 5 percent chlorine solution to decontaminate gloves, aprons, litters, cutting device, the patient's mask hood, and other nonskin contact areas. A 0.5 (½) percent chlorine solution to decontaminate the patient's mask, skin, splints, and to irrigate wounds. To prepare the solutions, calcium hypochlorite (HTH) granules (supplied in 6-ounce jars in the chemical agent patient treatment and decontamination medical equipment sets), bulk HTH, or sodium hypochlorite (household bleach) may be used. Prepare the required concentrations as shown in Table C-1 below.

Table C-1. Preparation of Chlorine Solution for Patient Decontamination

HTH OUNCES	HTH MRE SPOONFULS	HOUSEHOLD BLEACH	PERCENT IN 5 GALLONS OF WATER
6	* 5	2 quarts	0.5
48	40	**	5.0

* These measurements are used when bulk HTH is used. To measure this preparation, use the plastic spoon supplied with your meal, ready-to-eat (MRE). The amount of chlorine to be used is a heaping spoonful (that is, all that the spoon will hold). Do not shake any granules off of the spoon before adding to the water.

** Do not dilute in water; household bleach is approximately 5 percent solution.

CAUTIONS

1. Do not use the 5 percent chlorine solution on the patient's skin.
2. Only wipe the skin when applying the 0.5 percent chlorine solution. Vigorous scrubbing may force the agent into the skin.

C-7. Decontaminate a Litter Chemical Agent Patient

Before contaminated patients receive medical treatment in the clean treatment area, they are decontaminated by the patient decontamination team. Place the cutting device in a container of 5 percent chlorine solution between each use. Each decontamination team member decontaminates his gloves and apron with the 5 percent chlorine solution frequently to prevent spreading any contamination to patient's skin.

NOTE

Litter patients requiring EMT or ATM treatment in the clean area of the MTF will be completely decontaminated. A patient not requiring clean EMT or ATM at the MTF, but requiring further evacuation (Example: A stable patient with a partial amputation of a lower extremity) should only have his wound area and MOPP spot decontaminated to remove any gross contamination. The patient should be evacuated in his MOPP.

Decontaminate the patient's skin, bandages, wounds, mask, identification tags with chain, and splints with a 0.5 percent chlorine solution. The litter patient is decontaminated and undressed as follows:

a. **Step 1. Decontaminate the patient's mask and hood.** Move the patient to the clothing removal station. After the patient has been triaged and stabilized (if necessary) by the senior medic in the patient decontamination area, move him to the litter stands at the clothing removal station.

(1) **Decontaminate the mask and hood.** Use the M291 kit, or sponge down the front, sides, and top of the mask hood with a 5 percent chlorine solution or household bleach.

(2) **Remove hood.** Remove the hood by cutting the hood (see Figure C-2) or by loosening the hood from the mask attachment points for the quick-doff hood or other similar hoods. Before cutting the hood, dip the cutting device in a 5 percent chlorine solution. Cut the neck cord and the small string under the voicemitter. Release or cut the hood shoulder straps and unzip the hood zipper. Cut the hood upward, close to the filter inlet cover and eye-lens outsert, upward to the top of the eye-lens outsert, and across the forehead to the outer edge of the other eye-lens outsert. Proceed downward toward the patient's shoulder, staying close to the eye-lens and filter inlet cover, then across the lower part of the voicemitter to the zipper. After dipping the cutting device in the 5 percent chlorine solution, cut the hood from the center of the forehead over the top of the head and fold the left and right sides of the hood to the side of the patient's head, laying the sides of the hood on the litter.

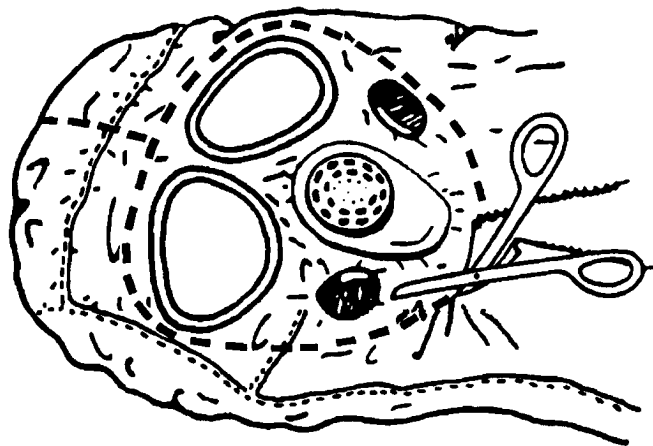


Figure C-2. Cutting the protective mask hood.

(3) **Decontaminate the protective mask and exposed skin.** Using the M291 kit, or a 0.5 percent chlorine solution, wipe the external parts of the mask. Cover the mask air inlets with gauze or your hand to keep the mask filter dry. Continue by wiping the exposed areas of the patients face, to include the neck and behind the ears.

(4) **Remove the Field Medical Card.** Cut the patient's FMC tie wire, allowing the FMC to fall into a plastic bag. Seal the plastic bag and rinse the outside of the bag with a 5 percent chlorine solution. Place the plastic bag with the FMC under the back of the protective mask head straps. The FMC will remain with the patient in the contaminated area and a clean copy will be made before the patient is moved to the clean area.

b. **Step 2. Remove gross contamination from the patient's overgarment.** Remove all visible gross contamination by scraping with a stick or other scraping device. Decontaminate spots with the M295 kit (preferred method), M291 kit, or the 5 percent chlorine solution.

c. **Step 3. Remove the patient's personal effects and protective overgarment.**

(1) **Remove patient's personal effects.** Remove the patient's personal effects from his protective overgarment and BDU pockets. Place the articles in a plastic bag, label with the patient's identification, and seal the bag. If the articles are not contaminated, they are returned to the patient. If the articles are contaminated, place them in the contaminated holding area until they can be decontaminated, then return them to the patient.

(2) **Cut the patient's overgarment.** The overgarment jacket and trousers may be cut simultaneously. Two persons may be cutting clothing at the same time. Cut around bandages, tourniquets, and splints, leaving them in place.

NOTE

A cut is a separation of material by use of a cutting device that separates material into two pieces. EXAMPLE: Cutting the sleeve from the cuff to the jacket collar is one cut.

CAUTION

Bandages may have been applied to control severe bleeding and are treated like tourniquets. Only medical personnel remove bandages, tourniquets, and splints.

(3) **Remove overgarment jacket.** Make two cuts, one up each sleeve from the wrist up to the shoulder, and then through the collar (Figure C-3). Do not allow the gloves to touch the patient along the cut line. Dip the cutting device in the 5 percent chlorine solution before making each cut to prevent contamination of the patient's uniform or underclothing. Keep the cuts close to the inside of the arms so that most of the sleeve material can be folded outward. Unzip the jacket; roll the chest sections to the respective sides, with the inner surface outward. Continue by tucking the clothing between the arm and chest. Roll the cut sleeves away from the arms, exposing the black liner.

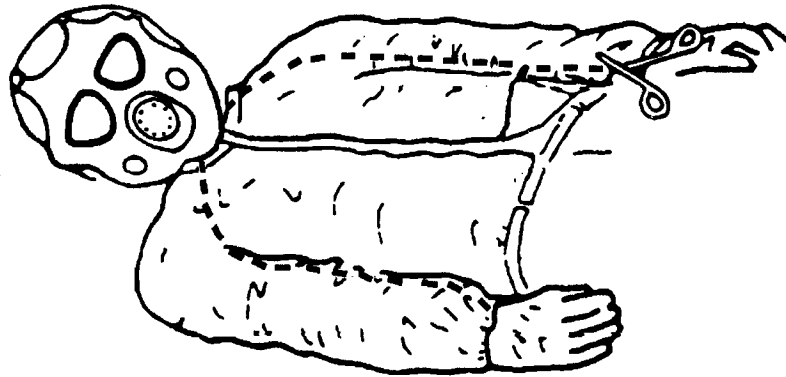


Figure C-3. Cutting the overgarment jacket.

(4) **Remove overgarment trousers.** Cut both trouser legs starting at the ankle as shown in Figure C-4. Keep the cuts near the inseams to the crotch. With the left leg, continue cutting to the waist, avoiding the pockets. With the right leg, cut across at the crotch to the left leg cut. Place the cutting device in the 5 percent chlorine solution. Fold the cut trouser halves away from the patient and allow the halves to drop to the litter with contaminated (green) side down. Roll the inner leg portion under and between the legs.

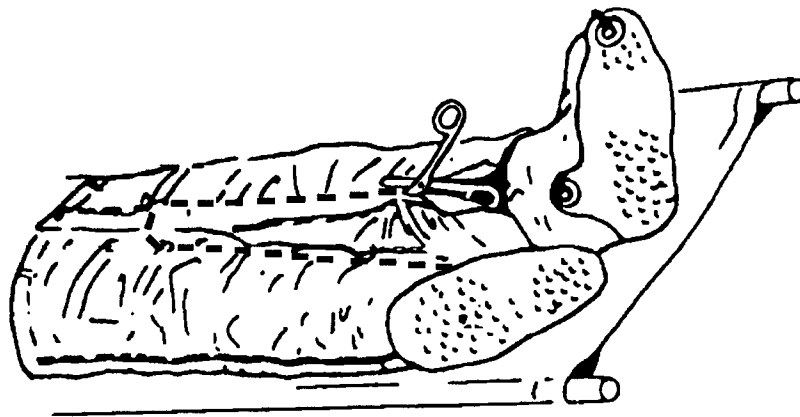


Figure C-4. Cutting the overgarment trousers.

(5) **Remove outer gloves.** This procedure can be done with one person on each side of the patient working simultaneously. The decontamination team will decontaminate their gloves in 5 percent chlorine solution. Next, lift the patient's arms up and out of the cutaway sleeves unless detrimental to the patient's condition. Grasp the fingers of the glove, roll the cuff over the fingers, turning the glove inside out. Do not remove the inner cotton glove liners at this time. Carefully lower the arms across the chest after the outer gloves have been removed (Figure C-5). Do not allow the patient's arms to come into contact with the exterior of his overgarment. Drop his gloves into the contaminated waste bag. Dip your gloves in the 5 percent chlorine solution.

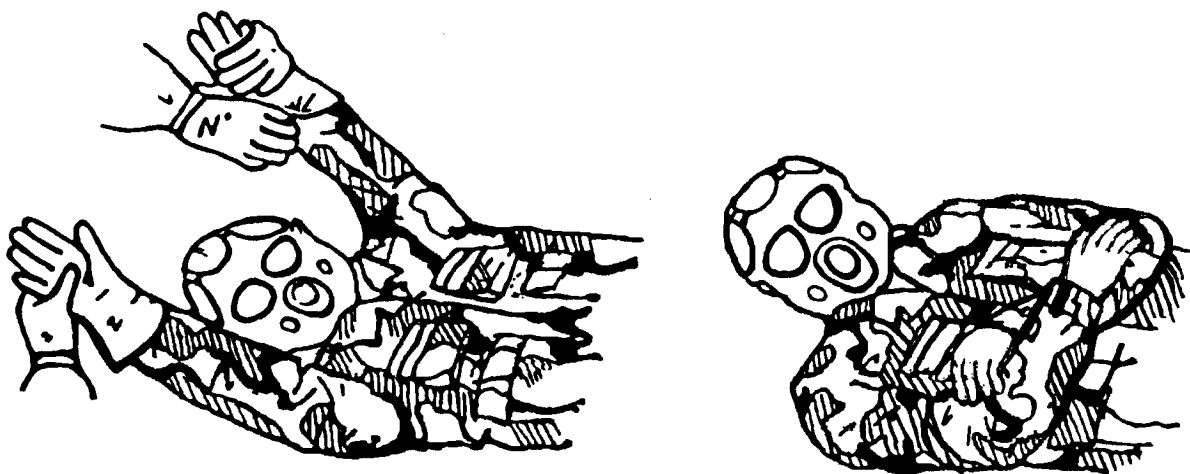


Figure C-5. Remove outer gloves and position arms after glove removal.

(6) **Remove overboots.** Cut the overboot laces and fold the lacing eyelets flat outwards. If the GVO is worn, first try to remove the overboot without cutting; if necessary, cut the boot along the front. While standing at the foot of the litter, hold the heel with one hand, pull the overboot downwards, then pull towards you to remove the overboot over the combat boot heel. Remove the two overboots simultaneously. This reduces the likelihood of contaminating one of the combat boots. While holding the heels off the litter, have a decontamination team member wipe the end of the litter with the 5 percent chlorine solution to neutralize any liquid contamination that was transferred to the litter from the overboots. Lower the patient's heels onto the decontaminated litter. Place the overboots in the contaminated waste bag. Decontamination personnel dip their gloves in the 5 percent chlorine solution.

d. Step 4. Remove patient's battledress uniform.

(1) **Remove battledress uniform.** Cut the BDU jacket and trousers as described above for the protective overgarment. Roll the jacket and trousers as described for the protective overgarment.

(2) **Remove combat boots.** Cut the boot laces along the tongue. Remove the boots by pulling them towards you. Place the boots in the contaminated waste bag. Do not touch the patient's skin with contaminated gloves when removing his boots.

(3) **Remove undergarments.** Follow the procedures for cutting away the protective overgarment and rolling it away from the patient. If the patient is wearing a brassiere, cut it between the cups. Cut both shoulder straps where they attach to the cups and lay them back off of the shoulders. Remove the socks and cotton glove liners. Do not remove the patient's identification tags.

e. Step 5. Transfer the patient to a decontamination litter. After the patient's clothing has been cut away, he is transferred to a decontamination litter or a canvas litter with a plastic sheeting cover. Three decontamination team members decontaminate their gloves and aprons with the

5 percent chlorine solution. One member places his hands under the patient's legs at the thighs and Achilles tendons, a second member places his arms under the patient's back and buttocks, and a third member places his arms under the patient's shoulders and supports the head and neck. They carefully lift the patient using their knees (not their backs) to minimize back strain. While the patient is elevated, another decontamination team member removes the litter from the litter stands and replaces it with a decontaminated (clean) litter. The patient is carefully lowered onto the clean litter. The contaminated clothing and overgarments are placed in bags and moved to the contaminated waste dump. The dirty litter is rinsed with the 5 percent chlorine solution and placed in the litter storage area.

f. **Step 6. Decontaminate skin.**

(1) **Spot decontamination.** With the patient in a supine position, spot decontaminate the skin using the M291 kit or a 0.5 percent chlorine solution. Decontaminate areas of potential contamination. Include areas around the neck, wrists, and lower parts of the face. Decontaminate the patient's identification tags and chain, if necessary.

NOTE

Complete body wash is not appropriate and may be injurious to the patient. During complete body wash the patient would have to be rolled over to reach all areas of the skin. This is not necessary for adequate decontamination.

(2) **Combat medic care.** During decontamination, the clothing around bandages, tourniquets, and splints was cut and left in place.

- The combat medic replaces the old tourniquet by placing a new tourniquet ½ to 1 inch above the old one. He then removes the old tourniquet and decontaminates the patient's skin using the M291 pads or a 0.5 percent chlorine solution.

- Usually, the combat medic will gently cut away bandages. The combat medic decontaminates the area around the wound; dusts the wound with the M291 kit, or irrigates soft tissue wounds with the 0.5 percent chlorine solution. If bleeding begins, the combat medic replaces the bandage with a clean one.

WARNINGS

- 1. DO NOT APPLY THE M291 KIT OR IRRIGATE WOUNDS IN THE ABDOMINAL AND THORACIC CAVITIES OR INTRACRANIAL HEAD INJURIES.**
- 2. DO NOT USE THE WIPES FROM THE M258A1 KIT AROUND ANY WOUNDS.**
- 3. DO NOT REMOVE SPLINTS.**

- The combat medic ensures splints are not removed, but are decontaminated in place by applying the 0.5 percent chlorine solution to them, to include the padding and cravats. Splints will only be removed by a physician or under the supervision of a physician.

(3) **Check patient for completeness of decontamination.** The patient is checked with the CAM or with M8 detector paper for completeness of decontamination.

NOTE

Other monitoring devices may be used when available.

(4) **Dispose of contaminated waste.** Dispose of contaminated bandages and coverings by placing them in a contaminated waste bag. Seal the bag and place it in the contaminated waste dump.

g. **Step 7. Transfer the patient across the shuffle pit.**

(1) The patient's clothing has been cut away and his skin, bandages, and splints have been decontaminated. Now the litter is transferred to the shuffle pit and placed upon the litter stands. The shuffle pit is wide enough to prevent the patient decontamination team members from straddling it while carrying the litter. Four decontamination team members transfer the patient to a clean treatment litter in the shuffle pit.

(2) Decontamination personnel rinse or wipe down their aprons and gloves with the 5 percent chlorine solution.

(3) Three decontamination team members lift the patient off the decontamination litter (see Step 5 for lifting procedures).

(4) While the patient is elevated, another decontamination team member removes the litter from the stands and returns it to the decontamination area. A medic from the clean side of the shuffle pit replaces the litter with a clean one. The patient is lowered onto the clean litter. Two medics from the clean side of the shuffle pit move the patient to the clean treatment area. The patient is treated in this area or awaits processing into the CPS. The litter removed by the decontamination team member is wiped down with the 5 percent chlorine solution in preparation for reuse. Once the patient is in the air lock of the CPS and the air lock has been purged, his protective mask is removed by a medic in the CPS. Place the mask in a plastic bag, close, and seal the bag.

NOTE

Before decontaminating another patient, each decontamination team member drinks approximately one-half quart of water. The exact amount of water consumed is increased or decreased according to the work level and temperature (see Table C-2 below).

Table C-2. Heat Injury Prevention and Water Consumption.

*CRITERIA		CONTROLS		
HEAT CONDITION/ CATEGORY	WBGT INDEX F°	WATER INTAKE QUART/HOUR	**ACCLIMATIZED WORK/REST	UNACCLIMATIZED SOLDIERS AND TRAINEES
White/1	78-81.9	At least ½	Continuous	
Green/2	82-84.9	At least ½	50/10 minutes	Use discretion in planning heavy exercise.
Yellow/3	85-87.9	At least 1	45/15 minutes	Suspend strenuous exercise during first three weeks of training. Training activities may be continued on a reduced scale after the second week of training. Avoid activity in direct sun.
Red/4	88-89.9	At least 1½	30/30 minutes	Curtail strenuous exercise for all personnel with less than 12 weeks of hot weather training.
Black/5	90 and up	More than 2	20/40 minutes	Physical training and strenuous exercise is suspended. Essential operational commitments not for training, where risk of heat casualties may be warranted, are excluded from suspension. Enforce water intake to minimize expected heat injuries.

* MOPP gear or body armor adds 10°F to the WBGT index. EXAMPLE: WBGT 88°F + 10°F = 98°F.

** An acclimatized soldier is one who has worked in the given heat condition for 10 to 14 days.

NOTE: "Rest" means minimal physical activity. Rest should be accomplished in the shade if possible. Any activity requiring only minimal physical activity can be performed during "rest" periods. EXAMPLES: Training by lecture or demonstration, minor maintenance procedures on vehicles or weapons, and personal hygiene activities such as skin and foot care.

C-8. Decontaminate an Ambulatory Chemical Agent Patient

All ambulatory patients requiring EMT or ATM in the clean area of the BAS will be decontaminated. Stable patients not requiring treatment at the BAS, but requiring evacuation to the medical company

clearing station or a corps hospital for treatment (Example: A patient with a broken arm) should be evacuated in their protective overgarments and masks by any available transportation. However, before evacuation, spot remove all thickened agents from protective clothing. A member of the decontamination team or other ambulatory patients will assist the patient in removing his clothing and decontaminating his skin.

NOTES

1. Remember, do not remove clothing from an ambulatory patient unless he requires treatment in the clean treatment area of the BAS or clearing station. Only spot decontaminate the patient's clothing and evacuate him to the next echelon of care.
2. Place cutting device used in this procedure in a container of 5 percent chlorine solution when not in use. Most ambulatory patients will be treated in the contaminated treatment area and returned to duty. Upon removal of an ambulatory patient's clothing, he becomes a litter patient. The BAS and clearing station do not have clothing to replace those cut off during the decontamination process. The patient must be placed in a patient protective wrap (PPW) for protection during evacuation (Figure C-6).

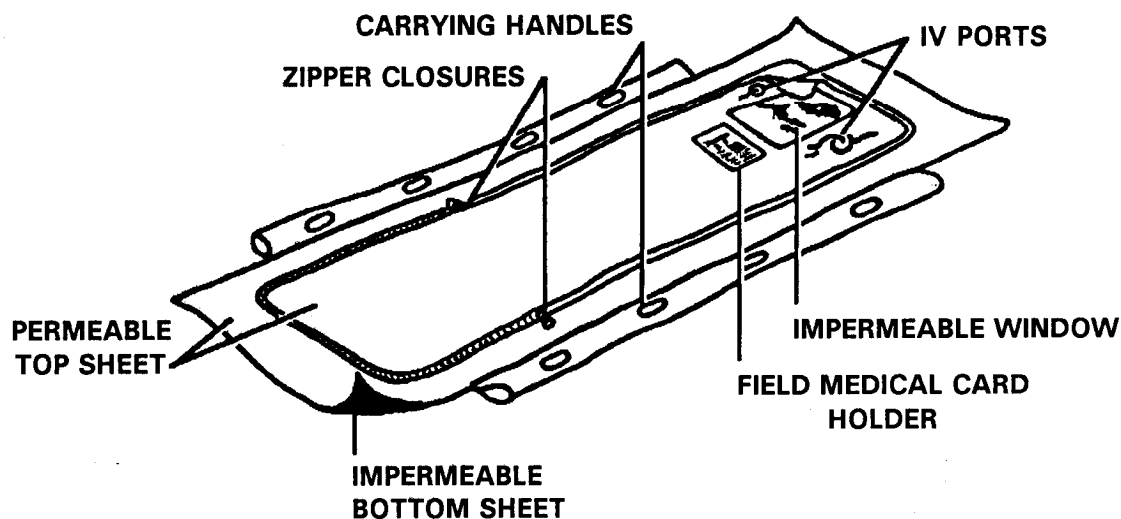


Figure C-6. Chemical warfare agent protective patient wrap.

a. **Step 1. Remove load-carrying equipment.** Remove load-carrying equipment (LCE) by unfastening/unbuttoning all connectors or tie straps; then place the equipment in a plastic bag. Place the plastic bag in the designated storage area for later decontamination.

b. **Step 2. Decontaminate the patient's mask and hood.** After the patient has been triaged and treated (if necessary) by the senior medic in the patient decontamination station, the patient (assisted by another ambulatory patient or a member of the patient decontamination team, if necessary) begins the clothing removal process.

(1) **Decontaminate and remove mask hood.** Sponge down the front, sides, and top of the hood with a 5 percent chlorine solution. Remove the hood by cutting (Figure C-2) or, with the quick-doff hood or other hoods, by loosening the hood from the mask attachment points. Before cutting the hood, dip the cutting device in the 5 percent chlorine solution. Begin by cutting the neck cord and the small string under the voicemitter. Next, release or cut the hood shoulder straps and unzip the hood zipper. Proceed by cutting the hood upward, close to the filter inlet cover and eye-lens outserts, to the top of the eye-lens outsert, across the forehead to the outer edge of the other eye-lens outsert. Proceed downward toward the patient's shoulder, staying close to the eye-lens and filter inlet. Cut across the lower part of the voicemitter to the zipper. After dipping the cutting device in the 5 percent chlorine solution again, cut the hood from the center of the forehead over the top of the head and fold the right and left sides of the hood away from the patient's head, removing the hood.

(2) **Decontaminate the mask and patient's face.** Decontaminate the mask and the patient's face by using the M291 kit or a 0.5 percent chlorine solution. Wipe the external parts of the mask; cover both mask air inlets with gauze or your hands to keep the mask filters dry. Continue by wiping the exposed areas of the patient's face, to include the neck and behind the ears.

c. **Step 3. Remove Field Medical Card.** Cut the FMC tie wire, allowing the card to fall into a plastic bag. Seal the plastic bag and rinse it with the 5 percent chlorine solution. Place the plastic bag under the back of the protective mask head straps.

d. **Step 4. Remove all gross contamination from the patient's overgarment.** Remove all visible contamination spots by using the M295 kit (preferred method), M291 kit, or a sponge dipped in a 5 percent chlorine solution.

e. **Step 5. Remove overgarments.**

(1) **Remove the patient's personal effects.** Place the patient's personal effects in a clean bag and label with the patient's identification. If they are not contaminated, give them to him. If his personal effects are contaminated, place the bagged items in the contaminated storage area until they can be decontaminated, then return them to the patient.

(2) **Remove overgarment jacket.** Have the patient stand with his feet spread apart at shoulder width. Unsnap the jacket front flap and unzip the jacket. If the patient can extend his arms, have him clench his fist and extend his arms backward at about a 30° angle. Move behind the patient, grasping his jacket collar at the sides of the neck, peel the jacket off the shoulders at a 30° angle down and away from the patient. Avoid any rapid or sharp jerks which spread contamination. Gently pull the inside sleeves over the patient's wrists and hands. If the patient cannot extend his arms, you must cut the jacket to aid in its removal. Dip the cutting device in the 5 percent chlorine solution between each cut. As with the litter patient, cut both sleeves from the inside, starting at the wrist, up to the armpit. Continue cutting across the shoulder to the collar. Cut around bandages or

splints, leaving them in place. Next, peel the jacket back and downward to avoid spreading contamination. Ensure that the outside of the jacket does not touch the patient or his inner clothing.

(3) **Remove overgarment trousers.** Unfasten or cut all ties, buttons, or zippers before grasping the trousers at the waist and peeling them down over the patient's combat boots. Again, the trousers are cut to aid in removal. If necessary, cut both trouser legs starting at the ankle, keeping the cuts near the inside of the legs, along the inseam, to the crotch. Cut around all bandages, tourniquets, or splints. Continue to cut up both sides of the zipper to the waist and allow the narrow strip with the zipper to drop between the legs. Place the cutting device in the 5 percent chlorine solution. Peel or allow the trouser halves to drop to the ground. Have the patient step out of the trouser legs, one at a time. Place the trousers in the contaminated disposal bag.

(4) **Remove overboots.** Remove the patient's overboots by cutting the laces with cutting device dipped in the 5 percent chlorine solution. Fold the lacing eyelets flat on the ground. Step on the toe and heel eyelets to hold the overboot on the ground and have the patient step out of it. Repeat this procedure for the other overboot. If the GVO is worn, first try to remove the overboots without cutting; if necessary, cut the overboot along the front. If the overboots are in good condition, they can be decontaminated and reissued.

(5) **Remove the patient's outer gloves.** Grasp the heel of the glove, peel the glove off with a smooth downward motion. Place the contaminated gloves in a plastic bag with the overgarment jacket. Do not allow the patient to touch his clothing or other contaminated objects with his exposed hands.

(6) **Remove the patient's cotton glove liners.** Have the patient remove his cotton glove liners to reduce the possibility of spreading contamination. Have the patient grasp the heel of one glove liner with the other gloved hand, peeling it off of his hand. Hold the removed glove by the inside and grasp the heel of the other glove, peeling it off of his hand. Place both glove inserts in the contaminated waste bag.

f. **Step 6. Check patient for contamination.** After the patient's overgarments have been removed, check his BDU by using M8 detector paper or the CAM. Carefully survey all areas of the patient's clothing, paying particular attention to discolored areas on the uniform, damp spots, tears, areas around the neck, wrist, ears, and dressings, splints, or tourniquets. Remove contaminated spots by using the 0.5 percent chlorine solution, using the M291 kit, or cutting away the contaminated area. Always dip the cutting device in the 5 percent chlorine solution after each cut. Recheck the area with the detection equipment. If significant contamination is found on the BDU, then the BDU must be removed and the skin spot decontaminated. Follow procedures for removal of the overgarment in removing the BDU. Do not remove the patient's identification tags.

g. **Step 7. Decontaminate skin.**

(1) **Spot decontamination.** Use the M291 kit or the 0.5 percent chlorine solution to spot decontaminate exposed neck and wrist areas, splints, other areas where the protective overgarment was damaged, and where dressings or bandages were removed. Decontaminate the patient's identification tags, if necessary. Have the patient hold his breath and close his eyes. Have him, or assist him, lift his mask at the chin. Wipe his face with the M291 pad or the 0.5 percent chlorine solution. Wipe quickly from below the top of one ear, being careful to wipe all folds of the skin, top of the upper lip, chin, dimples, ear lobes, and nose. Continue up the other side of the face to the top of the other ear. Wipe the inside of the mask where it touches the face. Have the patient reseal and check his mask.

CAUTION

Keep the decontamination solution out of the patient's eyes.

(2) **Combat medic care.** During clothing removal, the clothing around bandages, tourniquets, and splints was cut and left in place.

- The combat medic replaces the old tourniquet by placing a new one ½ to 1 inch above the old tourniquet. When the old tourniquet is removed, the skin is decontaminated with the M291 kit or the 0.5 percent chlorine solution.

- *Do not remove splints.* Decontaminate them by thoroughly rinsing the splint, padding, and cravats with the 0.5 percent chlorine solution.

- Usually, the combat medic will gently cut away bandages. The area around the wound is dusted with the M291 pad or rinsed with the 0.5 percent chlorine solution. and the combat medic applies the M291 pad or irrigates the soft tissue wound with the 0.5 percent chlorine solution. If bleeding begins, the combat medic replaces the bandage with a clean one.

h. **Step 8. Dispose of contaminated waste.** Dispose of contaminated bandages and coverings by placing them in a plastic bag and sealing the bag with tape. Place the plastic bags in the contaminated waste dump.

i. **Step 9. Proceed through the shuffle pit to the clean treatment area.** Have the decontaminated patient proceed through the shuffle pit to the clean treatment area. Make sure that the patient's boots are thoroughly decontaminated by stirring the contents of the shuffle pit with his boots as he crosses it. The patient will remove his combat boots and protective mask in the entrance of the CPS or clean treatment area.

C9. Biological Patient Decontamination Procedures

The decontamination station as established for chemical agent patients is also used for biologically contaminated patients. The 8-man patient decontamination team is required for biologically contaminated patient decontamination procedures.

C-10. Decontaminate a Litter Biological Agent Patient

a. **Remove the patient's personal effects.** Place the patient's personal effects in a clean bag and label with the patient's identification. If they are not contaminated, give them to him. If his personal effects are contaminated, place the bagged items in the contaminated storage area until they can be decontaminated, then return them to the patient.

b. **Remove the Field Medical Card.** Remove the FMC by cutting the tie wire and allowing the FMC to drop into a plastic bag. Keep the FMC with the patient.

c. **Remove the patient's clothing.** Patient decontamination team members first apply the 5 percent chlorine solution to the patient's clothing and the litter. Then, remove the patient's

clothing as in decontamination of chemical agent patients. Bandages, tourniquets, and splints are not removed. Move patient to a clean litter as described for a chemical agent patient. Place patient's clothing in a plastic bag and dispose in the contaminated waste dump.

d. Decontaminate the patient's skin. Bathe the patient with soap and warm water or apply the 0.5 percent chlorine solution. The combat medic places a new tourniquet $\frac{1}{2}$ to 1 inch above the old tourniquet, then he removes the old one. The combat medic removes bandages and decontaminates the skin and wound with the 0.5 percent chlorine solution; he replaces the bandage, if needed, to control hemorrhage. Splints are disinfected by soaking the splint, cravats, and straps with the 0.5 percent chlorine solution.

NOTE

Use a 0.5 percent chlorine solution to decontaminate ambulatory patients suspected of being contaminated with mycotoxins.

e. Transfer patient to hotline. Two decontamination team members move patient to the hotline. Request assistance from two other decontamination team members to transfer him to a clean litter as described for chemical agent patients. Place the patient's FMC in the plastic bag on the clean litter with him. Two medics from the clean side of the hotline move the patient from the hotline to the clean treatment/holding area.

C-11. Decontaminate an Ambulatory Biological Agent Patient

a. Remove the patient's personal effects. Place the patient's personal effects in a clean bag and label with the patient's identification. If they are not contaminated, give them to him. If his personal effects are contaminated, place the bagged items in the contaminated storage area until they can be decontaminated, then return them to the patient.

b. Remove the Field Medical Card. Remove the FMC by cutting the tie wire and allowing the FMC to drop into a plastic bag. Keep the FMC with the patient.

c. Remove the patient's clothing. Patient decontamination team members first apply the 5 percent chlorine solution to the patient's clothing. Then remove the patient's clothing as in decontamination of chemical agent patients. Bandages, tourniquets, and splints are not removed. Place patient's clothing in a plastic bag and dispose in the contaminated waste dump.

d. Decontaminate the patient's skin. Have the patient bathe with soap and warm water or apply the 0.5 percent chlorine solution. If the patient is unable to bathe himself, a member of the decontamination team must bathe him. The combat medic places a new tourniquet $\frac{1}{2}$ to 1 inch above the old tourniquet, then he removes the old one. The combat medic removes bandages and decontaminates the skin and wound with the 0.5 percent chlorine solution; he replaces the bandage, if needed, to control hemorrhage. Splints are disinfected by soaking the splint, cravats, and straps with the 0.5 percent chlorine solution.

NOTE

Use a 0.5 percent chlorine solution to decontaminate ambulatory patients suspected of being contaminated with mycotoxins.

e. **Direct patient across hotline.** Direct the patient to cross the hotline to the clean treatment area. His boots must be decontaminated at the hotline before he enters the clean treatment area.

NOTES

1. Remember, do not remove clothing from an ambulatory patient unless he requires treatment in the clean treatment area of the BAS or clearing station. Only spot decontaminate the patient's clothing and evacuate him to the next echelon of care.

2. Place cutting device used in this procedure in a container of 5 percent chlorine solution when not in use. Most ambulatory patients will be treated in the contaminated treatment area and returned to duty. Upon removal of an ambulatory patient's clothing, he becomes a litter patient. The BAS and clearing station do not have clothing to replace those cut off during the decontamination process. The patient must be placed in a patient protective wrap (PPW) for protection during evacuation (Figure C-6).

C-12. Decontaminate Nuclear-Contaminated Patients

The practical decontamination of nuclear-contaminated patients is easily accomplished without interfering with the required medical care.

NOTE

Patients must be monitored by using a radiac meter (AN/VDR2, AN/PDR27, or AN/PDR77) before, during, and after each step of the decontamination procedure.

C-13. Decontaminate a Litter Nuclear-Contaminated Patient

a. **Remove patient's personal effects.** Patient decontamination team members remove the patient's personal effects and place them in a plastic bag. Place plastic bag in a clean holding area.

b. **Remove patient's clothing.** Patient decontamination team members remove the patient's outer clothing as described for chemical agent patients. Do not remove bandages, tourniquets,

or splints. Move the patient to a clean litter. Place the patient's contaminated clothing in a plastic bag and move the bagged clothing to the contaminated waste dump.

NOTE

Patients arriving at the MTF in MOPP will only have their MOPP removed. They can remain in their BDU unless contamination is found on it.

c. **Spot decontaminate patient's skin.** Wash exposed skin surfaces with soap and warm water. Wash the hair with soap and warm water, or clip the hair and wash the scalp with soap and warm water.

d. **Transfer patient to hotline.** Move the patient to the hotline. Two medics from the clean side of the hotline move the patient into the clean treatment area.

C-14. Decontaminate an Ambulatory Nuclear-Contaminated Patient

a. **Remove patient's personal effects.** Have the patient remove his personal effects and place them in a plastic bag.

b. **Remove patient's outer clothing.** Have the patient remove his outer clothing (or have a decontamination team member assist him). Place his contaminated clothing in a plastic bag and move the bagged clothing to the contaminated waste dump.

NOTE

Patients arriving at the MTF in MOPP will only have their MOPP removed. They can remain ambulatory in their BDU unless contamination is found on it.

c. **Spot decontaminate patient's skin.** Have the patient wash his exposed skin surfaces with soap and warm water. Wash his hair with soap and water, or clip the hair and wash the scalp with soap and water.

d. **Transfer patient to hotline.** Direct the patient to move to the hotline. Decontaminate his boots by stirring the shuffle pit contents with his feet before he crosses into the clean treatment area.

NOTE

If a new protective overgarment is not available, he must be placed in a PPW. Thus, he becomes a litter patient for evacuation.