Perform First Aid for a Bleeding and/or Severed Extremity

Conditions: You have a casualty who has a bleeding wound of the arm or leg. The casualty is breathing. You will need the casualty's emergency bandage, chitosan dressing, or field dressing, materials to improvise a pressure dressing (wadding and cravat or strip of cloth), materials to elevate the extremity (blanket, shelter half, poncho, log, or any available material), and combat application tourniquet (C-A-T) or materials to improvise a tourniquet--rigid object (stick, tent peg, or similar object) and a strip of cloth.

Standards: Control bleeding from the wound following the correct sequence. Place a dressing over the wound with the sides of the dressing sealed so it does not slip. Ensure that the dressings do not have a tourniquet-like effect. Apply a tourniquet to stop profuse bleeding not stopped by the dressings, for severed arms and legs, or to control life-threatening bleeding when under fire.

Performance Steps

Note: If the wound is a partial or complete amputation of the arm or leg, you will need to apply a tourniquet on the injured extremity. Also, if you are under fire and need to control bleeding quickly, apply a tourniquet first. When the tactical situation allows, you can loosen the tourniquet after applying other measures to control the bleeding such as a pressure dressing or chitosan dressing. Go to step 5.

1. Uncover the wound unless clotting is stuck to the wound or you are in a chemical environment. CAUTION: Clothing or anything stuck to the wound should be left alone to avoid injury. Do NOT attempt to clean the wound.

CAUTION: Do NOT remove protective clothing in a chemical environment. Apply dressings over the protective clothing.

2. Apply the casualty's dressing.
   a. Emergency bandage.  
      Note: The emergency bandage is a new item that can be used on any bleeding wound. It can be used both as a field dressing and as a pressure dressing.
         (1) Place the pad on the wound, white side down, and wrap the elastic bandage around the limb.
      CAUTION: Do NOT touch the white (sterile) side of the dressing. Do NOT allow it to come into contact with any surface other than the wound.
         (2) Insert the elastic bandage into the pressure bar.
         (3) Tighten the elastic bandage.
         (4) Pull back, forcing the pressure bar down onto the pad.
         (5) Wrap the elastic bandage tightly over the pressure bar and wrap it over all edges of the pad.
         (6) Secure the hooking ends of the closure bar into the elastic bandage.
      WARNING: Emergency bandages, field dressings, and pressure dressings should NOT have a tourniquet-like effect. The dressing must be loosened if the skin beyond the injury becomes cool, blue, or numb.
   b. Chitosan dressing.  
      Note: The chitosan dressing is used to control serious arterial bleeding. It 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.
         (1) Hold the foil over-pouch so that the instructions can be read and the unsealed edges are at the top.
         (2) Grasp the unsealed edges.
         (3) Peel open the over-pouch by pulling the unsealed edges apart.
         (4) Use your hand and thumb to trap the dressing between the bottom foil and the green/black polyester backing.
         (5) Hold the dressing by the nonabsorbent green/black backing and discard the foil over-pouch.
Performance Steps

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.

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

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

(7) Apply manual pressure and maintain the pressure until the dressing adheres and the bleeding stops (usually 2 to 4 minutes). Do not try to reposition the bandage once it is applied.

Note: If the bleeding does not stop within 4 minutes, remove the chitosan dressing, apply another chitosan dressing, 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.

(8) 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 (entrance and exit wound, for example).

c. Field dressing.

(1) Apply the dressing, white side down, directly over the wound.

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

(2) Wrap each tail, one at a time, in opposite directions around the wound so the dressing is covered and both sides are sealed.

(3) Tie the tails into a nonslip knot over the outer edge of the dressing--NOT over the wound.

(4) Check the dressing to make sure that it is tied firmly enough to prevent slipping without causing a tourniquet-like effect.

3. Apply manual pressure and elevate the arm or leg to reduce bleeding, if necessary.
   a. Apply firm manual pressure over the dressing for 5 to 10 minutes, when practical.
   b. Elevate the injured part above the level of the heart, unless a fracture is suspected and has not been splinted.

4. If a field dressing was applied and bleeding continues, apply a pressure dressing.
   a. Keep the arm or leg elevated.
   b. Place a wad of padding directly over the wound.
   c. Place an improvised dressing over the wad of padding and wrap it tightly around the limb.
   d. Tie the ends in a nonslip knot directly over the wound.
   e. Check the dressing to make sure that it does not have a tourniquet-like effect.

Note: If the bleeding stops, watch the casualty closely, and check for other injuries.

Note: If the bleeding continues despite proper application of a field dressing and a pressure dressing, an emergency bandage, or a chitosan dressing; or if the wound is a partial or complete amputation of the arm or leg, apply a tourniquet on the injured extremity. If only part of a hand or foot has been severed, the bleeding should be stopped using a pressure dressing.

5. Apply a tourniquet.
      (1) Remove the C-A-T from the pouch.
      (2) Slide the wounded extremity through the loop of the self-adhering band.

Note: The C-A-T is packaged in its one-handed configuration.

(3) Position the C-A-T.
   (a) If the wound is above the knee or elbow, position the C-A-T 2 inches above a bleeding site.

CAUTION: Never place a tourniquet directly over a wound, fracture, or joint.
   (b) If the wound is below the knee or elbow, initially position the tourniquet band 2 inches above the wound. If a tourniquet applied below the knee or elbow is not successful at
Performance Steps

stopping the bleeding, apply a second tourniquet 2 inches above the joint (knee or elbow). Do not remove the first tourniquet until the second tourniquet has been applied.

(4) Pull the free running end of the self-adhering band tight and securely fasten it back on itself. Do NOT adhere the band past the windlass clip.

*Note:* The friction adaptor buckle is not necessary for proper C-A-T application to an arm. However, use it as added protection when using two hands to apply the C-A-T to a leg. To use it, route the self-adhering band through the friction adaptor buckle. This also prevents the strap from loosening during transport.

(5) Twist the windlass rod until the bleeding has stopped.

(6) Lock the windlass rod in place with the windlass clip.

*Note:* For added security (and always before moving a casualty), secure the windlass rod with the windlass strap. For small extremities, also secure the self-adhering band under the windlass strap.

(7) For small extremities, wind the self-adhering band around the extremity and over the windlass rod.

(8) Grasp the windlass strap, pull it tight, and adhere it to the opposite hook on the windlass clip.

b. Improvised tourniquet.

(1) Make a tourniquet at least 2 inches wide.

(2) Position the tourniquet.

(a) Place the tourniquet over the smoothed sleeve or trouser leg if possible.

(b) If the wound is above the knee or elbow, place the tourniquet around the limb 2 to 4 inches above the wound between the wound and the heart but not on a joint or directly over a wound or a fracture.

(c) If the wound is below the knee or elbow, initially position the tourniquet band 2 inches above the wound. If a tourniquet applied below the knee or elbow is not successful at stopping the bleeding, apply a second tourniquet 2 to 4 inches above the joint (knee or elbow). Do not remove the first tourniquet until the second tourniquet has been applied.

(3) Put on the tourniquet.

(a) Tie a half knot.

(b) Place a stick (or similar object) on top of the half knot.

(c) Tie a full knot over the stick.

(d) Twist the stick until the tourniquet is tight around the limb and bright red bleeding has stopped.

*Note:* In the case of an amputation, dark oozing blood may continue for a short time.

(4) Secure the tourniquet. The tourniquet can be secured using the ends of the tourniquet band or with another piece of cloth, as long as the stick does not unwind.

*Note:* If a limb is completely amputated, the stump should be padded and bandaged (do not cover the tourniquet). If the casualty has suffered an incomplete amputation, splint the limb.

*Note:* If a tourniquet was applied to quickly control bleeding under fire, once the tactical situation allows, you can loosen the tourniquet after other measures have been applied to control the bleeding if it has been in place for less than 6 hours. However, do NOT remove it. Use direct pressure, a pressure dressing, or a chitosan dressing to control the bleeding prior to loosening the tourniquet. If unable to control bleeding by these methods, retighten the tourniquet until the bleeding stops.

6. If a tourniquet was applied, mark the casualty's forehead with a letter T and the time--using a pen, mud, the casualty's blood, or whatever is available.

7. If applicable and the situation allows, save severed limbs or body parts and transport them with, but out of sight of, the casualty.

*Note:* Body parts should be wrapped in dry, sterile dressing and placed in a dry, plastic bag and, in turn, placed in a cool container (do not soak in water or saline or allow to freeze). If your location in the field/combat does not allow for the correct preserving of parts; do what you can.

8. Watch the casualty closely for life-threatening conditions, check for other injuries (if necessary), and
**Performance Steps**

treat for shock. Seek medical aid.

**Evaluation Preparation:**
Setup: Use the same dressing repeatedly. If a chitosan dressing is being tested, you will need to use a simulated dressing and have a field dressing or cravat available to secure it. If a field dressing is being used, have materials available for a pressure dressing (wadding and cravat or a strip of cloth). Have one Soldier play the part of the casualty and another apply the dressing(s). Use a moulage or mark a place on the casualty's arm or leg to simulate a wound. For applying a tourniquet, use a mannequin or simulated arm or leg (padded length of 2-inch by 4-inch wood with a glove or boot on one end) with a dressing appropriately placed on the arm or leg. Under no circumstances will a live simulated casualty be used to evaluate the application of a tourniquet. Place the tourniquet materials nearby.

Brief Soldier: Tell the Soldier to do, in order, the first aid steps required to apply a dressing and, if necessary, a pressure dressing on the casualty's wound. When testing step 1, you can vary the test by telling the Soldier that clothing is stuck to the wound or that a chemical environment exists. After steps 2 and 3, tell the Soldier that the bleeding has not stopped. After step 4, tell the Soldier the bleeding is continuing and ask the Soldier to describe and perform the first aid on the simulated arm or leg provided. After step 5, ask the Soldier what should be done to indicate that a tourniquet has been applied and what should be done with a severed limb, if applicable. Do not evaluate step 9 in the simulated mode.

**Performance Measures**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>GO</th>
<th>NO-GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Uncovered the wound, unless clothing was stuck to the wound or in a chemical environment.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 2.   | Applied the casualty's dressing.  
   a. Applied the dressing/pad directly over the wound.  
   b. Covered the edges of dressing/pad.  
   c. Properly secured the bandage.  
   d. Did not create a tourniquet-like effect with the dressing. |    |       |
| 3.   | Applied manual pressure and elevated the arm or leg, if necessary. |    |       |
| 4.   | If a field dressing was applied and bleeding continued, applied a pressure dressing.  
   a. Placed the wad of padding directly over the wound.  
   b. Tightly wrapped the cloth around the limb.  
   c. Tied a nonslip knot directly over the wound.  
   d. Did not create a tourniquet-like effect with the dressing. |    |       |
| 5.   | Applied a tourniquet, if necessary.  
   a. Improvised tourniquet, if used, was at least 2 inches wide.  
   b. Tourniquet was placed at least 2 inches above the wound between the wound and the heart but not on a joint or directly over a wound or a fracture.  
   c. Tourniquet was properly applied and secured. |    |       |
| 6.   | Performed steps 1 through 5, as necessary, in sequence. |    |       |
| 7.   | If a tourniquet was applied, marked the casualty's forehead with a letter T and the time. |    |       |
| 8.   | If applicable and the situation allowed, saved severed limbs or body parts and transported them with the casualty. |    |       |
| 9.   | Watched the casualty closely for life-threatening conditions, checked for other injuries (if necessary), and treated for shock. Sought medical aid. |    |       |
**Evaluation Guidance:** Score the Soldier GO if all performance measures are passed. Score the Soldier NO GO if any performance measure is failed. If the Soldier scores NO GO on any performance measure, show or tell the Soldier what was done wrong and how to do it correctly.

**References**

<table>
<thead>
<tr>
<th>Required</th>
<th>Related</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>FM 4-25.11</td>
</tr>
<tr>
<td></td>
<td>GTA 08-05-063</td>
</tr>
</tbody>
</table>