



## EDUCATIONAL MATERIAL

### Life Threatening Hemorrhage

#### **Objectives:**

Following completion of this training, providers will be able to:

- Recognize the indications and contraindications for prehospital tourniquet application
- Demonstrate proper application of a tourniquet to the following sites:
  - Upper extremity
  - Lower extremity
- Recognize the indications and contraindications for prehospital wound packing
- Demonstrate proper wound packing techniques

#### **Resources:**

- Tourniquet – CAT or SOF-T
- Hemostatic gauze (Kerlex is acceptable for training applications)
- Commercial wound packing trainer (or other acceptable material)

#### **Didactic Topics:**

##### **Section #1: Indications:**

1. Life threatening hemorrhage is indicated by arterial hemorrhage or massive venous hemorrhage as a result of blunt or penetrating trauma.

##### **Section #2: Contraindications:**

###### Tourniquets:

1. Should not be used on limbs with a dialysis fistula, except in cases of traumatic penetration, amputation, or crush injury without response to a pressure dressing.
2. Should never be applied over a joint.

###### Wound packing:

1. Penetrating trauma to the chest, abdomen and pelvis.

##### **Section #3: Instructions for tourniquet application:**

1. Commercial CAT or SOF-T tourniquets are recommended
2. Locate the injury:
  - a. In cases where the life threatening hemorrhage(s) can NOT be easily visualized, or if there is any doubt in where the injury is located, apply the tourniquet as proximal as possible on the injured



- extremity.
- b. In cases where the life threatening hemorrhage(s) can be easily visualized, apply the tourniquet 2 inches above wound.
  3. Apply the tourniquet, pulling as tightly as possible before attempting to tighten the windlass. No more than a single finger should be able to be inserted between the tourniquet and the patient.  
**NOTE:** Pay attention to any manufacturer's requirements for application instructions particular to the device you are utilizing. (Example: CAT tourniquets require using both sides of the buckle for application on lower extremities.)
  4. Tighten the windlass until bleeding has stopped.
  5. Ensure the windlass is secured.
  6. Record on the patient the time that tourniquet was applied.
  7. Tourniquet shall remain on until hospital arrival.
  8. Inform all subsequent care providers of the location of the tourniquet, its effectiveness, and time of application.
  9. Reevaluate the tourniquet placement and ensure the hemorrhage remains controlled each time the patient is moved.

#### **Section #4: Instructions for wound packing:**

1. Identify the wound and source of bleeding  
**NOTE:** Wound packing is most useful when a tourniquet is unable to be applied, such as with hemorrhages from axilla, groin, neck, or large scalp wounds
2. Begin feeding the roll gauze, or hemostatic gauze, into the wound.
3. To ensure that you pack the entire wound, implement either a N-E-S-W compass direction or 12-3-6-9 clock method of packing.
4. Once the entire wound has been filled with gauze, hold direct pressure for at least 3 minutes.
5. If bleeding continues after 3 minutes of manual pressure, apply additional material - do not lift or remove any of the dressing.
6. Once bleeding is controlled, apply a pressure dressing over the gauze for transport.
7. Reevaluate the site to ensure the hemorrhage remains controlled each time the patient is moved.

#### **Recommended Skills Demonstration:**

- Verbalize indications and contraindications for prehospital placement of tourniquets
- Demonstrate the correct application of a tourniquet  
**NOTE:** If the manufacturer has different recommendations based on the location of the tourniquet, providers should demonstrate ALL the different possible applications for the device.
- Verbalize indications and contraindications for prehospital wound packing
- Demonstrate the correct method of wound packing

# SOFTT-W<sup>®</sup> Tourniquet Application

## Instructions for Use: Two-handed Application



1. Apply direct pressure to the artery to control bleeding



2. Remove SOFTT-W<sup>®</sup> from carrying pouch



3. Release the quick disconnect buckle and then route constricting band around casualty's extremity and then reconnect the buckle (not applied for effect)



4. Position SOFTT-W<sup>®</sup> as high on the appendage as possible



5. Remove slack by pulling on the loose end of the constricting band in order to increase effectiveness when the windlass is twisted



6. Twist the windlass rod until the bleeding stops (check distal pulse)



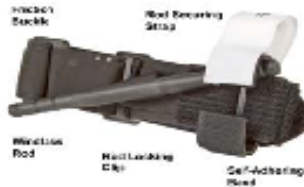
7. Lock rod in place by placing end of the handle in the tri-ring

8. If tourniquet is not working, student should attempt to tighten it or apply a second one proximal to the first
9. Record date and time SOFTT-W<sup>®</sup> was applied on the patient
10. Ensure that windlass is properly stowed in tri-ring once bleeding is controlled





RAW-23110 REV 00



**Tactical Black**

NSN 6515-01-521-7976

U.S. Patent No. 7,842,067; 7,892,253;  
Patents pending in other foreign countries  
Licensed and Manufactured by:  
Composite Resources, Inc. 803.366.9700

**WARNING: THIS IS A SINGLE USE PRODUCT**

This product is intended for qualified trained professionals in the application of a tourniquet. It is not intended for the general public. Use only as directed by your EMS authority or under the supervision of a physician. Read entire Instructions For Use prior to using this product. Inappropriate application can result in serious injury or loss of limb. The use of any tourniquet is **ALAST RESORT** and should only be employed when bleeding cannot be stopped and the situation is life threatening.

**LIMITATION OF LIABILITY:**

Composite Resources, Inc., its employees, agents, contractors, suppliers, and distributors shall assume no liability for injury or damages arising from the application and use of the Combat Application Tourniquet® (C-A-T®). The user assumes all risk of liability.

Composite Resources, Inc.  
485 Lakeshore Parkway  
Rock Hill, SC 29730

EC

REP



Mdl Europa GmbH  
Langenhagener Straße 71  
D-30855 Langenhagener

## Combat Application Tourniquet®

### Instructions for Use: Two-handed Application

To prepare for use, store the C-A-T® in its one-handed configuration



1 Apply tourniquet proximal to the bleeding site. Route the band around the limb and pass the tip through the inside slit of the buckle. Pull the band tight.



2 Pass the tip through the outside slit of the buckle. The friction buckle will lock the band in place.



3 Pull the band **very tight** and securely fasten the band back on itself.



4 Twist the rod **until bright red bleeding has stopped and the distal pulse is eliminated.**



5 Place the rod inside the clip; locking it in place. **Check for bleeding and distal pulse.** If bleeding is not controlled, consider additional tightening or applying a second tourniquet proximal side by side to the first and reassess.



6 Secure the rod inside the clip with the strap. **Prepare the patient for transport and reassess.** Record the time of application.