



EMS System for Metropolitan Oklahoma City and Tulsa 2017 Medical Control Board Treatment Protocols



Approved 11/9/16, Effective 2/1/17, replaces all prior versions

10H – TOURNIQUET ADULT & PEDIATRIC

EMERGENCY MEDICAL RESPONDER
EMT
EMT-INTERMEDIATE 85
ADVANCED EMT
PARAMEDIC

Indication: Life-threatening extremity hemorrhage unable to be controlled by direct pressure or immediately obvious that direct pressure alone will not provide control.

Contraindication: None

Technique (Combat-Application-Tourniquet® - C-A-T®):

The C-A-T® (Figure 1) windlass uses a free moving internal band to provide circumferential pressure to an injured and uncontrollably bleeding extremity. Once placed, keep the tourniquet secure, but uncovered so that the bleeding site can be clearly monitored as well as the tourniquet itself. The time of tourniquet application (Figure 7, e.g. TK 0145) is to be written on a piece of adhesive tape and secured to the tourniquet. Conscious patients may experience pain related to tourniquet use. In such instances, follow the pain management protocol if the patient is hemodynamically stable.



Step 1 (Figure 2):

The C-A-T® is applied over the extremity proximal to the bleeding site routing the self – adhering band around the extremity. Lower extremity wounds require feeding the strap through the inner slit and outer slit of the buckle. Upper extremity wounds typically require less pressure to control and do not require feeding the strap through both inner and outer slits of the buckle, though doing so is usually the optimal strategy. If a single slit is used for arm wounds, the inner slit (closest to windlass) is to be used.





EMS System for Metropolitan Oklahoma City and Tulsa 2017 Medical Control Board Treatment Protocols



Approved 11/9/16, Effective 2/1/17, replaces all prior versions

PROTOCOL 10H: Tourniquet, Adult & Pediatric, cont.

Step 2 (Figure 3):

For all lower extremity wounds (and any upper extremity wounds desired), additionally pass the band through the outside slit of the buckle utilizing the friction adaptor buckle which will lock the band in place.



Figure 3

Step 3 (Figure 4):

Pull the self-adhering band tight and secure the band back on itself with the velcro adhesive strap.



Figure 4

Step 4 (Figure 5):

Twist the windlass until the bleeding has stopped. This will typically be at or less than 3 complete rotations of the windlass. More could be required, but be careful not to exert too much torque on the windlass to avoid breakage.



Figure 5

Step 5 (Figure 6):

Lock the rod in place with the windlass clip.



Figure 6

Step 6 (Figure 7):

Secure the rod with the strap by pulling it tight and adhering it to the opposite hook on the windlass hook. Indicate the time of tourniquet application on tape.



Figure 7



EMS System for Metropolitan Oklahoma City and Tulsa 2017 Medical Control Board Treatment Protocols



 **EMS SECTION**

Approved 11/9/16, Effective 2/1/17, replaces all prior versions

PROTOCOL 10H: Tourniquet, Adult & Pediatric, cont.

If using Generation 7 C-A-T[®] tourniquets, all applications are made passing the self-adhering band through the single slit of the buckle.

If one tourniquet correctly applied does not completely control hemorrhage, in addition to direct pressure, an additional tourniquet may be applied just proximal to the first tourniquet.

Once bleeding has been controlled by a tourniquet, the usual and customary practice is to leave the tourniquet in place throughout the remainder of scene care and transport to an emergency department. In infrequent circumstances, if pain control becomes an issue, the tourniquet may be loosened to see if bleeding will stay controlled. If bleeding resumes, promptly re-tighten the tourniquet to its effective tightness.