A tourniquet is a commercial device used to control a life threatening hemorrhage on an injured extremity to prevent exsanguination.

**INDICATIONS:**
- Life threatening extremity hemorrhage that cannot be controlled by other means.
- Serious or life threatening extremity hemorrhage in the face of operational considerations that prevent the use of less aggressive hemorrhage control techniques.

**PROCEDURE:**
1. If hemorrhage is not severe, attempt to control the hemorrhage with direct pressure, bandaging and elevation.
2. If a tourniquet is indicated:
   - Place tourniquet 2 – 3 inches proximal to wound on the affected extremity.
   - Tighten per manufacturer instructions until hemorrhage stops and distal pulses are extinguished.
   - If initial tourniquet fails to stop bleeding, ensure proper deployment of first tourniquet, and consider placement of a second tourniquet just proximal to first.
   - Document time of tourniquet application and communicate this clearly with receiving facility.
   - Do not cover tourniquet.
   - Dress wounds per standard wound care and consider use of hemostatic bandage.
   - Reassess for rebleeding frequently, especially after any patient movement.
   - Proper tourniquet placement often causes significant pain. Consider pain management, see Pain Protocol 2.15.
   - Do not remove or loosen tourniquet once hemostasis is achieved, unless in the extended care setting.

**X**
- Extended Care Section: See the following page

In the absence of a commercial tourniquet (preferred), an improvised device e.g., cravat with windlass, blood pressure cuff could be used. The device must be a minimum of 2 inches wide, otherwise it can cut through the skin.

**PEARLS:**
- Do not apply tourniquets over clothing or joints. If wound is just distal to joint, the tourniquet should be placed just proximal to joint.
- Delay in placement of a tourniquet for life threatening hemorrhage significantly increases mortality. Do not wait for hemodynamic compromise to apply a tourniquet.
- If feasible, transport patients directly to a Level 1 or Level 2 trauma center and provide earliest possible notification / trauma alert.
- Damage to the limb from tourniquet application is unlikely if removed in several hours.

Protocol Continues
Tourniquet Application

EMT/ADVANCED EMT/PARAMEDIC STANDING ORDERS

- Consult Medical Control, if feasible.
- If tourniquet has been in place for greater than 6 hours, do not remove.
- If less than 6 hours consider Tourniquet Reassessment and Tourniquet Removal Algorithms

**Tourniquet Reassessment Algorithm**

1. Patient in circulatory shock?
   - NO
   - YES

2. Unstable clinical situation?
   - NO
   - YES

3. Limited personnel/resources?
   - NO
   - YES

   Proceed to removal algorithm

**Tourniquet Removal Algorithm**

1. Amputated Extremity?
   - NO
   - YES

   Leave tourniquet on and transport patient to the nearest trauma center, if feasible.

2. Is there significant bleeding?
   - NO
   - YES

   Apply pressure dressing, loosen tourniquet (leave it in place)

3. Further significant bleeding
   - NO
   - YES

   Tighten tourniquet and begin transporting patient to nearest trauma center

   Leave tourniquet on and transport patient to the nearest trauma center, if feasible

   Continue to assess for bleeding and transport to nearest trauma center.