



3. Survival is markedly improved when a tourniquet is placed **before** shock develops
4. Properly-applied tourniquets in conscious patients are painful – treat pain with analgesics, but do not loosen a tourniquet to relieve discomfort
5. Arterial pressure points may not be effective in controlling hemorrhage; however, may help slow bleeding while tourniquet is applied
6. Amputated body parts should be transported with patient for possible re-implantation
 - a. It should remain cool but dry
 - b. Place the amputated part in a plastic bag
 - c. Place the bag with the amputated part on ice in a second bag
 - d. Do not let the amputated part come into direct contact with the ice
7. Pediatric considerations:
 - a. External hemorrhage control to prevent shock is critical in infants and young children, due to their relatively small blood volume
 - b. Most commercial tourniquets can be used effectively on children over 2 years of age
 - c. Stretch-wrap-tuck elastic-type tourniquets can be used on any age patient
 - d. Direct pressure and wound packing may be more suitable for infants and young children
 - e. Consult with local online medical direction regarding use of traction splints for femur fractures in young children, to avoid risk of possible nerve damage

Quality Improvement

Associated NEMSIS Protocol(s) (eProtocol.01) (for additional information, go to www.nemsis.org)

- 9914083 – Injury - Bleeding/Hemorrhage Control
- 9914097 – Injury - Extremity

Key Documentation Elements

- Vital signs and vascular status of extremity after placement of tourniquet, pressure dressing, packing, and/or splint
- Time of tourniquet placement
- Documentation of signs/symptoms of possible compartment syndrome

Performance Measures

- Proper placement of tourniquet (location, cessation of bleeding)
- Proper marking and timing of tourniquet placement and notification of tourniquet placement to subsequent EMS clinicians and ED personnel
- Appropriate splinting and padding of fractures
- ***National EMS Quality Alliance (NEMSQA) Performance Measures*** (for additional information, see www.nemsqa.org)
 - *Pediatrics—03: Documentation of Estimated Weight in Kilograms*
 - *Trauma—01: Pain Assessment of Injured Patients*