

Protocol 700-T4

Hemorrhage Control

Rev: 2/18

BLS Treatment

- ❖ Treat life threats. (See Procedure 701 *Life Threats*)
- ❖ Apply substantial direct pressure using 4x4 gauze pads, abdominal, or trauma dressings.
 - If bleeding saturates the dressing, leave in place the dressing material that is in contact with the wound, and replace outer layers with fresh dressing. Secure with pressure dressing.
- ❖ Hemorrhage to a limb:
 - In cases where substantial bleeding to a limb cannot be controlled with direct pressure and plain gauze, apply a tourniquet 2 – 3 inches above the wound and tighten until bleeding stops.
 - Assess distal circulation for absence of a pulse and bleeding control.
 - Apply a visible tag (using two inch tape, a triage tag, etc.) and mark it with a large “T” and the time that the tourniquet was applied.
 - Inform all subsequent care providers of the location of the tourniquet, its effectiveness and its time of application.
 - If the initial tourniquet does not control bleeding, a second tourniquet may be applied 2 – 3 inches above the first, and marked accordingly.
 - If substantial bleeding persists despite the use of direct pressure, tourniquets, and pressure dressings, consider the patient in extremis and transport to the closest, most appropriate facility.
 - Prepare for transport/transfer of care.
- ❖ Hemorrhage to the head, neck, or trunk
 - Large, gaping wounds to the patient’s head, neck, or trunk should have pooled blood cleared out and then packed with gauze and secured as needed.
 - Avoid bulky dressings that do not allow isolation of the actual location of the bleeding, and merely act as a blood sponge.
 - It is possible for a patient to exsanguinate into bulky dressings applied without regard to hemostasis.
 - If substantial bleeding persists despite the use of direct pressure and gauze, consider the patient in extremis and transport to the closest, most appropriate facility.

ALS Treatment

- ❖ Treat life threats. (See Procedure 701 *Life Threats*)
- ❖ Continue all BLS interventions listed above.
- ❖ If substantial bleeding persists despite the use of direct pressure, place hemostatic gauze directly on the source of the bleeding and apply direct pressure for at least three minutes. Secure with a pressure dressing.
- ❖ P.A.M. the patient and expedite transport to the appropriate facility.
- ❖ Treat other injuries and complaints as needed.
- ❖ Transport.
- ❖ Contact Base Station as needed.



David Ghilarducci MD
EMS Medical Director

Special Considerations

- ❖ Elevating bleeding extremities or applying pressure to arteries (“pressure points”) has not been found to reduce substantial bleeding. These actions are not recommended in the treatment of significant external bleeding.
- ❖ Life threatening hemorrhage to a limb is better managed if it is splinted to reduce movement.
- ❖ Patients with major arterial bleeding can bleed to death in as little as two or three minutes. It is important to control external bleeding before the patient experiences shock.
- ❖ When a tourniquet is applied to an isolated wound on a patient that does not meet P.A.M. criteria, consult with the base station hospital for direction regarding patient destination.
- ❖ Any patient with a tourniquet applied should be considered to have a time dependent injury, and should be transported C/3 to the appropriate hospital.
- ❖ Hemostatic gauze can be used prior to, or after, the use of tourniquets in managing severe limb hemorrhage.
- ❖ Tourniquets can be safely applied for at least 2 hours without causing irreversible, limb-threatening ischemia. In some cases, tourniquets have been applied for as long as four hours without causing irreversible limb ischemia.
- ❖ Most patients who require a tourniquet to manage bleeding should be transported to a trauma center.
- ❖ Tourniquets need to be accounted for on all patient hand-offs, and in all pre-hospital documentation. It is critical that the time of tourniquet application be accurately communicated to all care providers.
- ❖ Pressure dressings, tourniquets and hemostatic gauze should be reevaluated every time there is a change in the patient’s status, or the patient is moved.

David Ghilarducci MD

David Ghilarducci MD
EMS Medical Director