

T2**EXTERNAL and INTERNAL BLEEDING**

Early recognition of blood loss, be it internal or external, is critical in managing a hemorrhaging patient. Early recognition allows hemorrhagic shock to be managed early and aggressively.

Control of external bleeding is an important element in preventing the onset of and development of shock.

GENERAL

- personal protective equipment should be utilized as appropriate
- body substance isolation techniques and equipment should be utilized as appropriate
- primary survey
 - during the primary survey, control any identified major bleeding by
 - immediately applying direct pressure using a gloved hand or sterile dressing
 - having the patient rest the injured area and elevating the limb, when appropriate
 - using pressure points proximal to the wound, if bleeding is not controlled by direct pressure
 - using a tourniquet when no other methods are successful (last resort)
 - if bleeding persists
 - apply additional dressings and pressure dressings as needed in layers
 - never remove a dressing or pressure dressing once applied
- consider load and go
- administer high concentration oxygen by non-rebreathe mask
 - assist ventilation as required
- treat for shock, if indicated (see Shock Guideline)
- secondary survey
 - assess distal color, warmth, circulation and movement prior to application of dressings and bandages, and reassess after applying dressings and bandages
 - complete en route if the patient's condition requires load and go
- treat all wounds found in the secondary survey
 - examine all wounds for penetrating or impaled objects prior to applying direct pressure and dressings
 - prior to applying dressings, clear the wound site of loose surface material
 - control bleeding from wounds found in the secondary survey
 - if a dressing becomes blood soaked, apply additional dressings over the original dressing
 - secure all dressings appropriately so they do not slip and maintain pressure on the wound site as appropriate
 - reassess distal color, warmth, circulation and movement after application or adjustment of dressings and bandages

- initiate transport
 - on scene times should be kept to a minimum
- if bleeding cannot be controlled, initiate load and go
 - treat other life threatening conditions en route
- transport the patient to the nearest appropriate health care facility
- do not allow the patient to exert him/herself - e.g. walking, standing unassisted to transfer to the stretcher, etc
- monitor the patient closely for the development of shock
- maintain the patient's body heat
- notify the receiving facility of the patient's status
- monitor and treat the patient en route
- transport patient in a position of comfort, injuries permitting
- report all findings to the receiving facility staff, and document on the patient care report
 - estimate the total blood loss
 - at the scene and in the ambulance
 - in dressings or sanitary napkins (for vaginal bleeding)

SPECIAL CONSIDERATIONS

General Wounds

- see Soft Tissue Injuries and Wounds Guideline

Control of Bleeding from Incised Wounds or Lacerations

- draw the edges of the wound together prior to dressing the wound(s)

Internal Bleeding

- minimize patient movement
- suspect underlying fractures and internal injuries
- load and go should be immediately initiated

Bleeding from Body Orifices

- apply loose dressings externally to absorb blood and prevent infection
- do not pack the orifice with dressings
- load and go should be immediately initiated

Application of a Tourniquet

- application of a tourniquet should be considered as a last alternative to control bleeding
- load and go should be immediately initiated
- the tourniquet should be made from wide material such as a 7 to 10 centimeter (3-4 inch) wide cravat or a blood pressure cuff
- prior to application distal circulatory and neurological status must be assessed
- the tourniquet should be applied
 - as proximal to the injury as possible
 - if the injury is anywhere below the knee, the tourniquet should be applied above the knee
 - just tight enough to stop bleeding
 - if a blood pressure cuff is used it should be inflated to 30 mm Hg above the systolic pressure
- bleeding, distal circulatory, and neurological status must be re-evaluated after application of the tourniquet

- a tourniquet may be released
 - if transport time from the point when the tourniquet was applied will be greater than two hours
 - for three to five minutes every thirty minutes to allow distal circulation
 - the first release of the tourniquet may be done after the tourniquet has been in place for two hours and then every thirty minutes thereafter
 - direct pressure, elevation, and pressure points should be used to control bleeding during the tourniquet release time
- time of tourniquet application, any release, and re-application must be documented
- health care staff at the receiving facility must be aware the patient has a tourniquet in place
 - document notification of tourniquet's presence to health care staff on patient care report

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