



Emergency Medical Responder

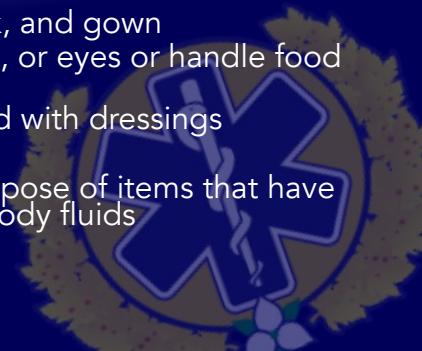
# BLEEDING AND SHOCK



## Protecting Against Infection

Protecting Against Infection

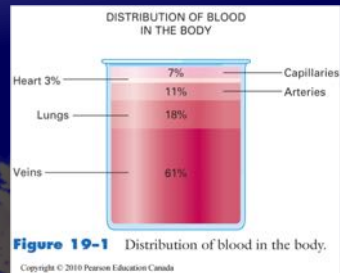
- BSI precautions include
  - 1) Keep a barrier between you and the patient's blood and body fluids
  - 2) Wear approved goggles, mask, and gown
  - 3) Never touch your mouth, nose, or eyes or handle food while giving care
  - 4) Keep patient's wounds covered with dressings
  - 5) Wash hands properly
  - 6) Decontaminate or properly dispose of items that have contacted patient's blood or body fluids






### Distribution of Blood in the Body

Heart	3 %
Capillaries	7 %
Arteries	11 %
Pulmonary	18 %
Veins	61 %




How many litres of blood does the human body contain?





## The circulatory system


**Arteries**  
Strong muscular, elastic walls enable arteries to expand with each surge of blood away from the heart and towards tissues



**Veins**  
Action of muscles around these thin walled vessels squeezes blood through them, and one-way valves keep it flowing back towards the heart

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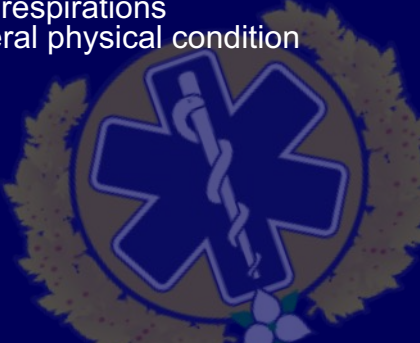
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## Hemorrhage

**Severe bleeding depends on**


- Size of blood vessel and how fast it is bleeding
- Whether blood is flowing from an artery or vein
- Whether bleeding is external or internal
- Whether bleeding is a threat to respirations
- Patient's weight, age, and general physical condition






# Types of wounds


Contusion




Laceration



Incision



Puncture



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# Managing Bleeding



**Figure 19-5a** Apply direct pressure.



**Figure 19-5b** Elevate the extremity.



**Figure 19-5c** Assess bleeding, and apply additional pressure if needed.



**Figure 19-5d** If bleeding persists, compress a pulse point.



## Interventions for abdominal eviscerations

- ACAB's
- Activate EMS
- Cover the protruding organs with a moist dressing and secure in place lightly
- Keep the casualties knees bent to keep the organs in position
- Treat for shock
- Nothing by mouth



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## Amputations

- Interventions for Complete Amputations:
  - Start ESM
  - Control Bleeding
  - Take the amputated part and wrap in a moist dressing
  - Place the dressing in a plastic bag
  - Place the plastic bag on ice
    - Label the package with the date and time as well as the casualty's name
- Interventions for Partial Amputations:
  - Reposition the part into neutral position
  - Bandage with a thick moist dressing over the area



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## Impaled Objects

- This is when a foreign object enters and remains in the body
- First Aid:
  - ESM
  - EMS Activation
  - Secure the object by padding around the object and secure in place with a bandage.
  - Monitor distal circulation



## Other Bleeding Control Methods

- Splints
- Tourniquets





## Internal Bleeding

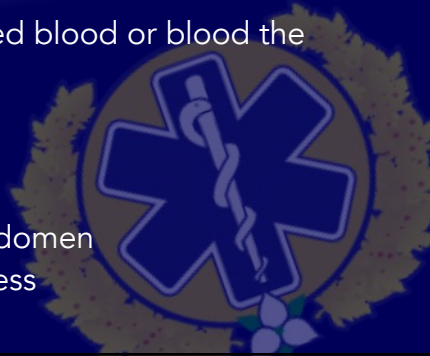
Internal bleeding can result from

- 1) Blunt trauma
- 2) Abnormal clotting
- 3) Blood vessel rupture
- 4) Fracture, etc.



## Signs and Symptoms of Internal Bleeding

- 1) Discoloured, tender, swollen, or hard tissue
- 2) Increased respiratory and pulse rates
- 3) Pale, cool, clammy skin
- 4) Nausea and vomiting bright red blood or blood the colour of dark ground coffee
- 5) Thirst
- 6) Changes in mental status
- 7) Dark, tarry stools
- 8) Tender, rigid, or distended abdomen
- 9) Weakness, faintness, or dizziness





## Emergency Care

- Take BSI precautions and then
  - 1) Maintain open airway and adequate breathing
  - 2) Control any external bleeding
  - 3) Keep patient warm
  - 4) Treat for shock



## Shock

### Causes of Shock

- 1) Failure of the heart
- 2) Abnormal dilation of the blood vessels
- 3) Blood volume loss







## Shock

- Hypoperfusion
- Hypovolemia
- Anaphylactic
- Cardiogenic



## Stages of Shock

- 1) Compensated
- 2) Decompensated
- 3) Irreversible





## Emergency Medical Care

- After taking BSI precautions
  - 1) Maintain open airway
  - 2) Prevent further blood loss
  - 3) Elevate lower extremities 20-30 cm
  - 4) Keep patient warm
  - 5) Provide care for specific injuries while waiting for paramedics

