First Aid

المركز الوطني للإسعاف الاولي و الحد من المخاطر

The National Centre for First Aid and Risk Reduction

This project is funded by the European Union, Ministry of Regional Cooperation and Ministry of Foreign Affairs

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Bleeding

- Bleeding is the loss of blood from the circulatory system.
- Uncontrolled bleeding initially causes weakness. If bleeding is not controlled, the victim will go into shock within a short period of time and finally will die.
- An adult has about 5 liters of blood. Losing 1 liter can result in death.
- Bleeding must be controlled as quickly as possible so as not to endanger the victim's life from blood loss.

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Bleeding Control

- There are three main methods for controlling bleeding:
  - Direct pressure
  - Elevation
  - Pressure points

* Direct pressure and elevation will control bleeding in 95% of cases

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Direct Pressure

- Place direct pressure over the wound by putting a clean dressing over the wound and pressing firmly.
- Maintain pressure on the dressing over the wound by wrapping the wound firmly with a pressure bandage and tying with a bow.
- A pressure bandage should be tied with a bow, so that it can be loosened — rather than cut — to examine the wound, and then retied

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Elevation

- Elevate the wound above the level of the heart.
- Elevation can be used in combination with direct pressure. Elevate the wound above the level of the heart.
- The body has great difficulty pumping blood against gravity; therefore, elevating a wound above the heart will decrease blood flow and loss of blood through the wound.

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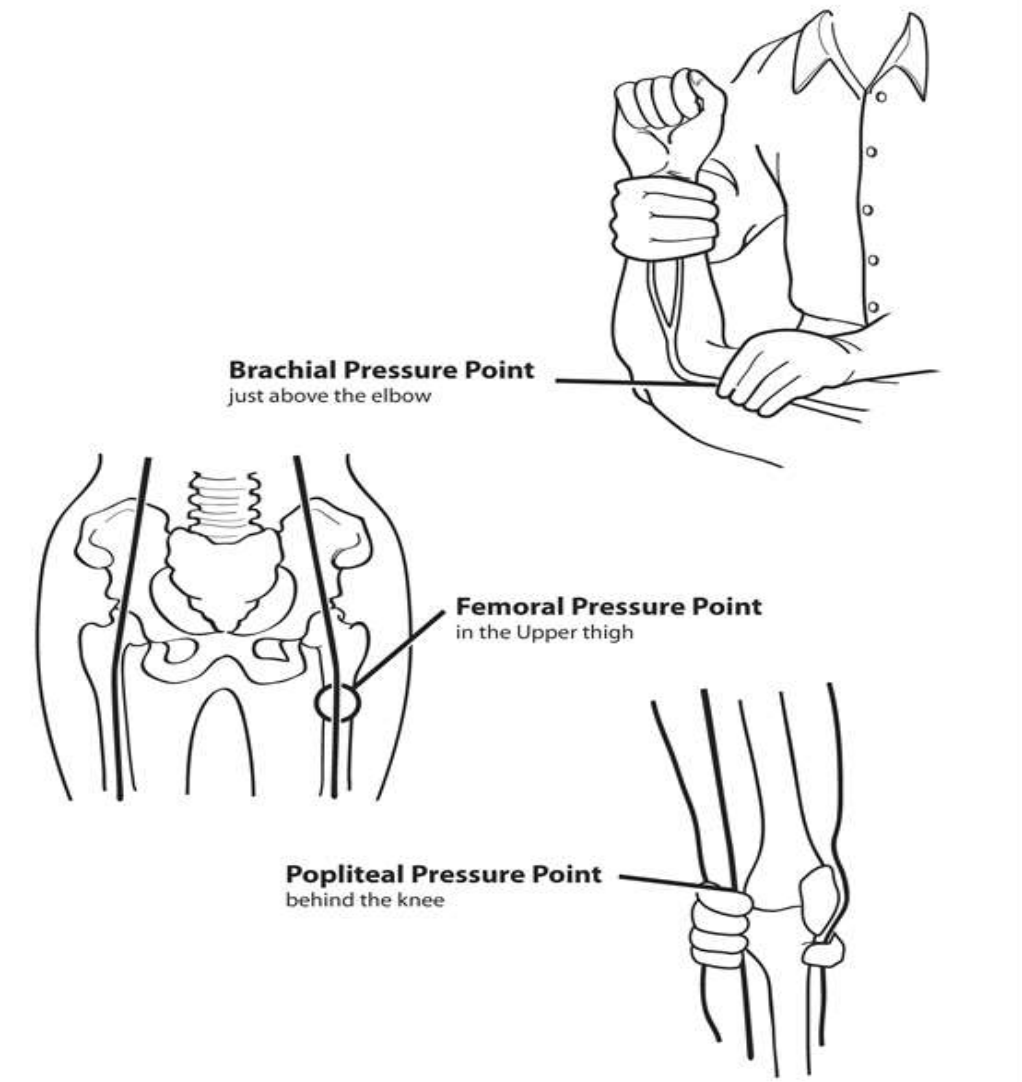
Pressure Points

Put pressure on the nearest pressure point to slow the flow of blood to the wound:

- Brachial point for bleeding in the arm.
- Femoral point for bleeding in the leg.
- Popliteal point for bleeding in the lower leg.

The pressure point to use depends on the location of the wound. The correct pressure point is between the wound and the heart.



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Tourniquet

- A tourniquet may be a viable option to save a person from bleeding to death. However, a tourniquet is absolutely a last resort (life or limb) when other preferred means have failed to control bleeding in an arm or a leg.
- A tourniquet is a tight bandage which, when placed around a limb and tightened, cuts off the blood supply to the part of the limb beyond it.
- Use any long, flat, soft material (bandage, neck tie, belt, or stocking). Do not use materials like rope, wire, or string that can cut into the patient's flesh.

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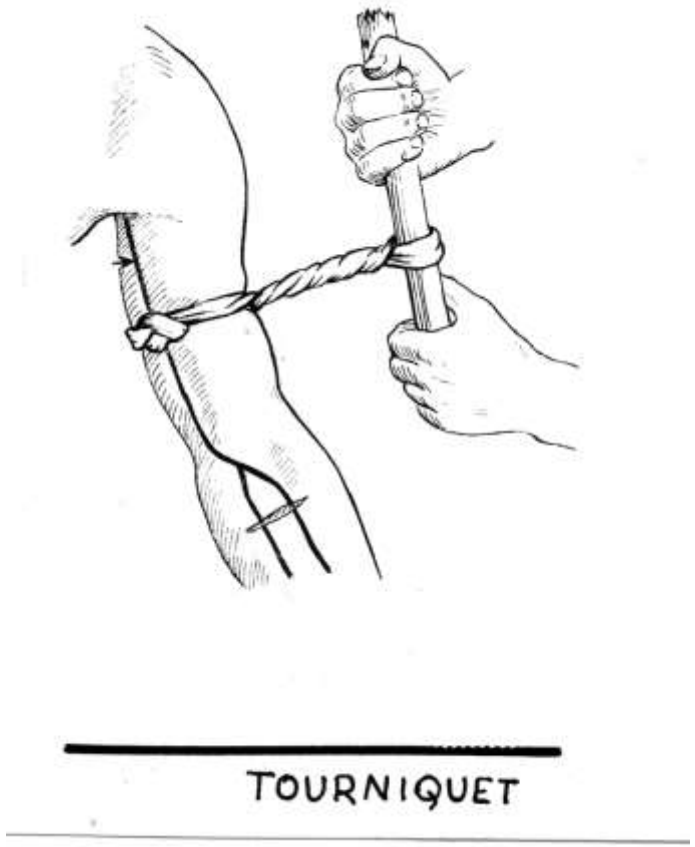
Tourniquet

1. Place the tourniquet between the wound and the heart.
2. Tie the piece of material around the limb.
3. Place a stick, pen, ruler, or other sturdy item against the material and tie a knot around the item.
4. Do not loosen a tourniquet once it has been applied.
5. Only proper medical authorities should remove a tourniquet.



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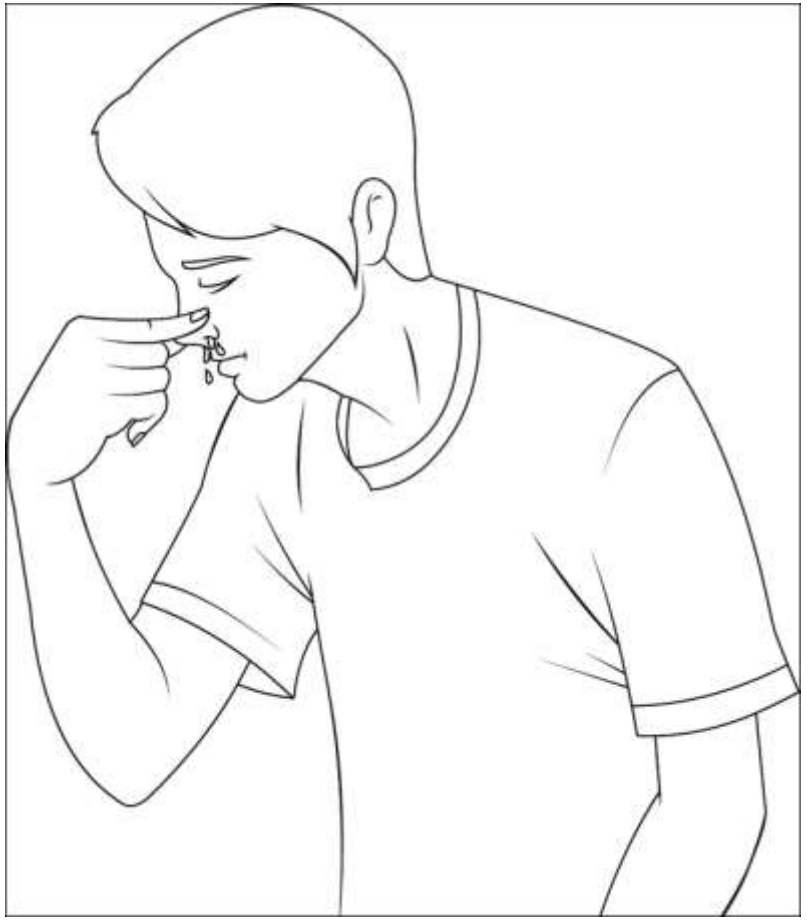
Nose Bleeding



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Burns

- The 4th cause of death due to trauma!
- Burns may be caused by heat, chemicals, electrical current, or radiation.
- The severity of a burn depends on the:
  - Temperature of the burning agent.
  - Period of time that the victim was exposed.
  - Area of the body that was affected.
  - Size of the area burned.
  - Depth of the burn.

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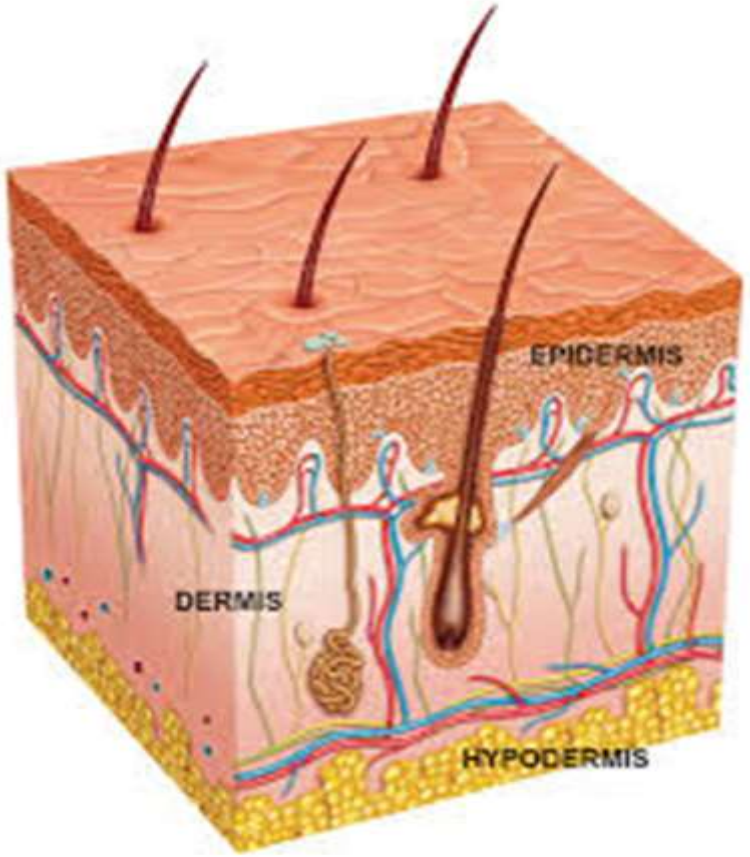
Skin Layers

The skin is composed of three primary layers:

1. Epidermis– outer layer of skin, contains nerve endings and is penetrated by hairs. Provides waterproofing and serves as a barrier to infection.
2. Dermis–middle layer of skin, contains blood vessels, oil glands, hair follicles, and sweat glands.
3. Subcutaneous– innermost layer, contains blood vessels and overlies the muscles.



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Skin functions

The skin performs the following functions:

- Protection against external infections
- Severe infections.
- Heat regulation
- Hypothermia.
- Fluid, protein and electrolyte regulation.
- Hypovolemic shock.

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Evaluating the burn

- Extent.
- Depth.
- Special situations (localization, age, etc.)

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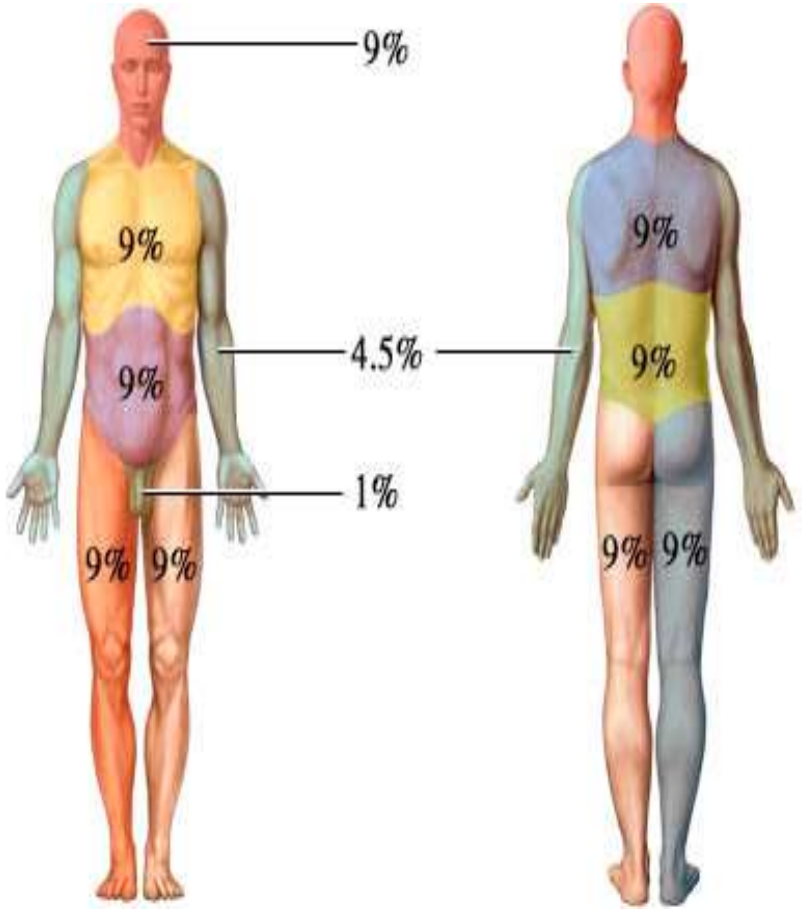
Estimating the extent

In adults, calculated using the "rule of nines" % out of the entire body surface.

– Head –9%
– Each leg –18%
– Torso + abdomen –18%
– Back + buttocks –18%
– Each arm –9%
– Genitals –1%

Alternative method

* Each palm -1%



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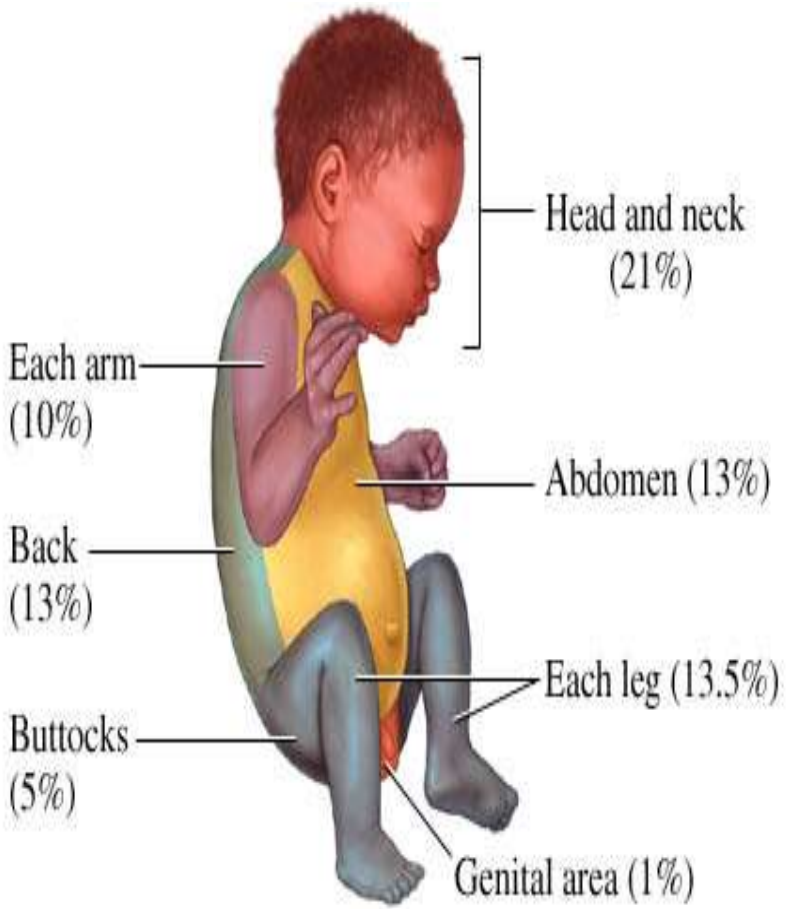
Estimating the extent in a baby

The difference is due to
changes in body proportions
(the head is relatively large)



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Classification by degree

Classification	Skin Layers Affected	Signs
Superficial	▪ Epidermis	▪ Reddened, dry skin ▪ Pain ▪ Swelling (possible)
Partial thickness	▪ Epidermis ▪ Partial destruction of dermis	▪ Reddened, blistered skin ▪ Wet appearance ▪ Pain ▪ Swelling (possible)
Full thickness	▪ Complete destruction of epidermis and dermis ▪ Possible subcutaneous damage (destroys all layers of skin and some or all underlying structures)	▪ Whitened, leathery, or charred (brown or black) ▪ Painful or relatively painless

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Classification by degree

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Management

- SSS
  - Do not remove / rip clothing!
  - It is important to remove watches & jewelry!
  - Cover the patient! (why?)
  - Keep the area clean!
  - Run cool water over the area.
  - Dressing –cover using a sterile and dry gauze pad or bandage! –
  - Consider using a Metaline bandage.
  - Do not open any blisters!
  - Do not apply butter, grease, powder or any other remedies to the burn!

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Chemical burns

- Immediately remove all clothing! (usually absorb the chemicals)
- Irrigate with running tap water

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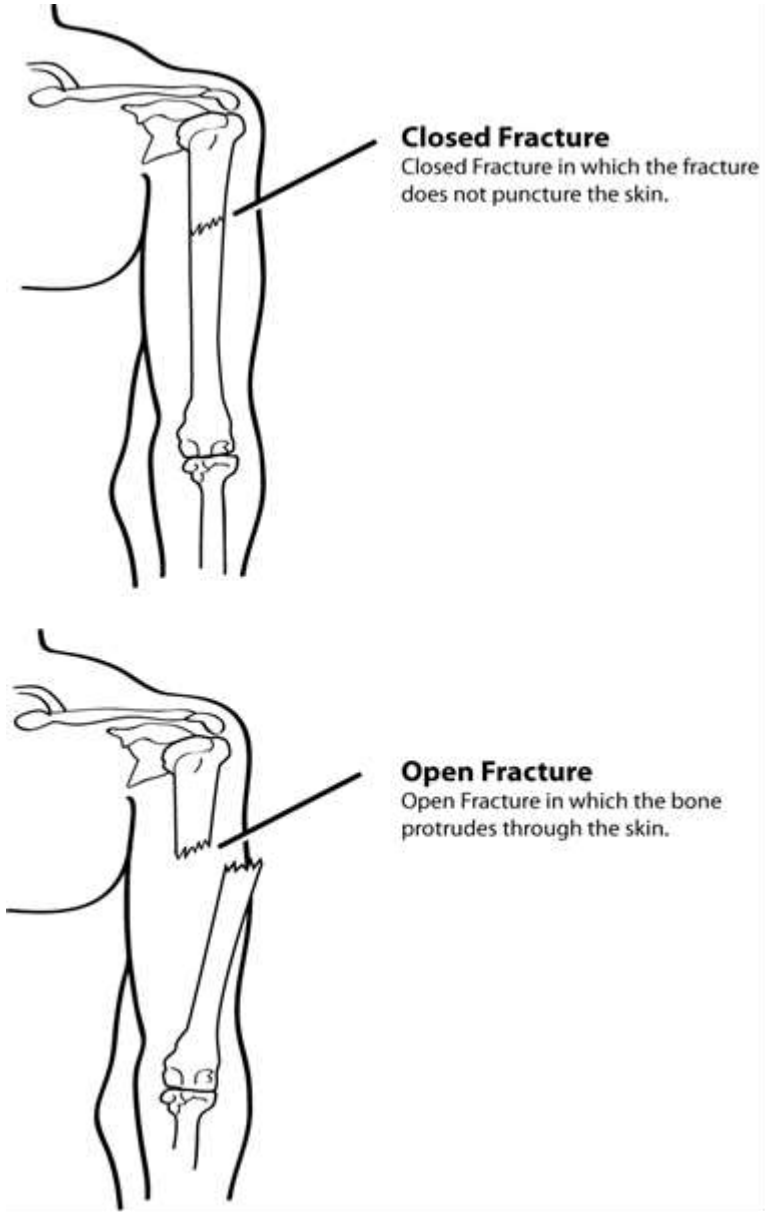
Fractures

- Fracture is a complete break, a chip, or a crack in a bone.
- There are several types of fractures:
  - closed fracture is a broken bone with no associated wound.
  - open fracture is a broken bone with some kind of wound.



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Open fracture

- Open fractures are more dangerous than closed fractures because they pose a significant risk of severe bleeding and infection.

When treating an open fracture:

- Do not draw the exposed bone ends back into the tissue.
- Do not irrigate the wound.
- Cover the wound with a sterile dressing.
- Splint the fracture without disturbing the wound.
- Place a moist 4 by 4-inch dressing over the bone end to keep it from drying out.

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Slings




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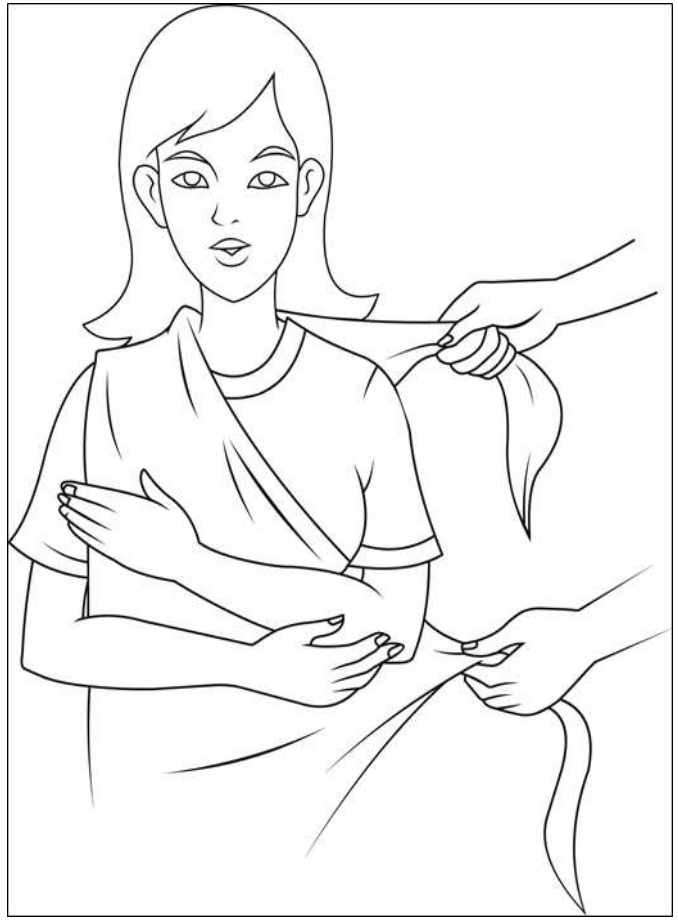
Slings



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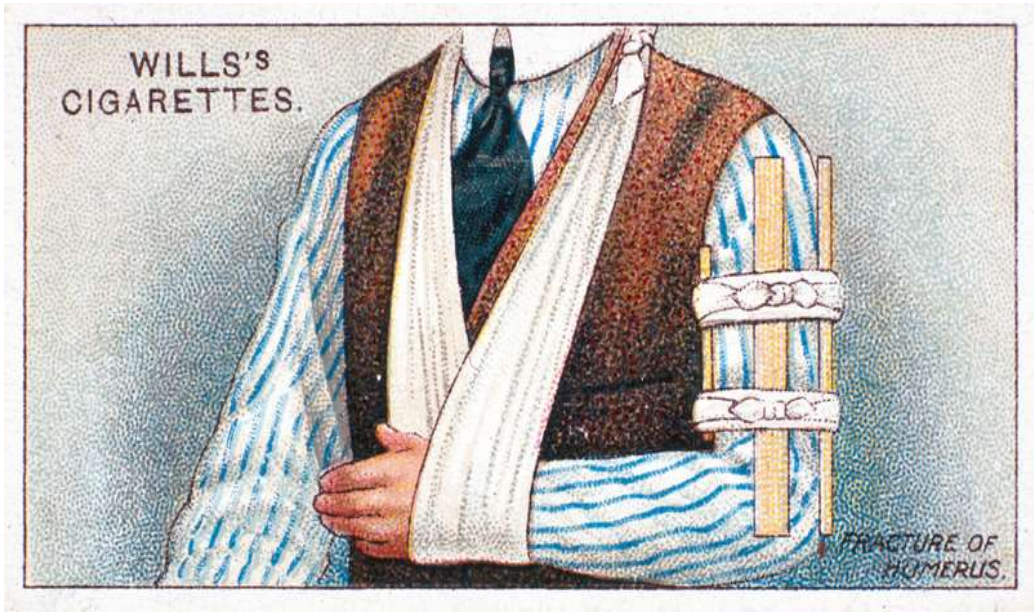

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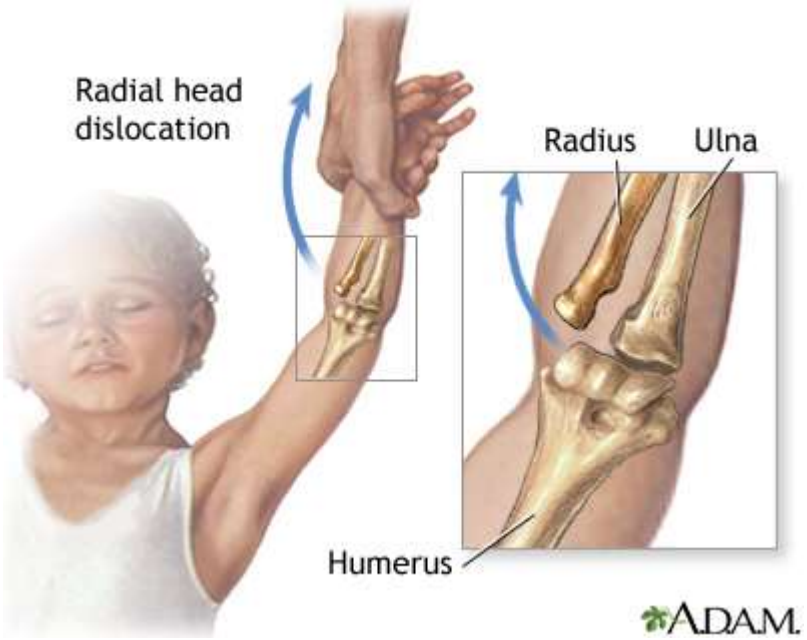
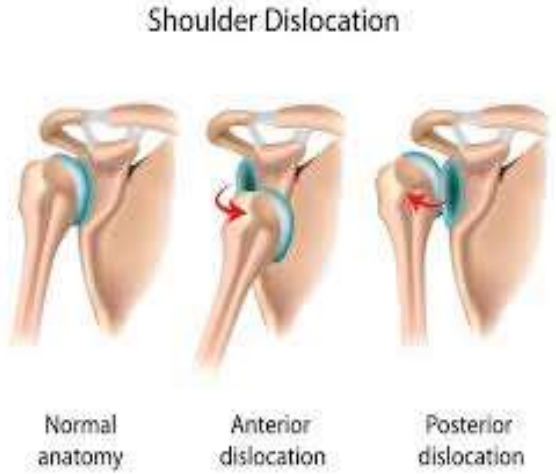
Dislocation

- Dislocation is an injury to the ligaments around a joint that is so severe that it permits a separation of the bone from its normal position in a joint.
- The signs of a dislocation are similar to those of a fracture.
- If dislocation is suspected, be sure to assess (Pulse, Movement, Sensation) in the affected limb before and after splinting/immobilization





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