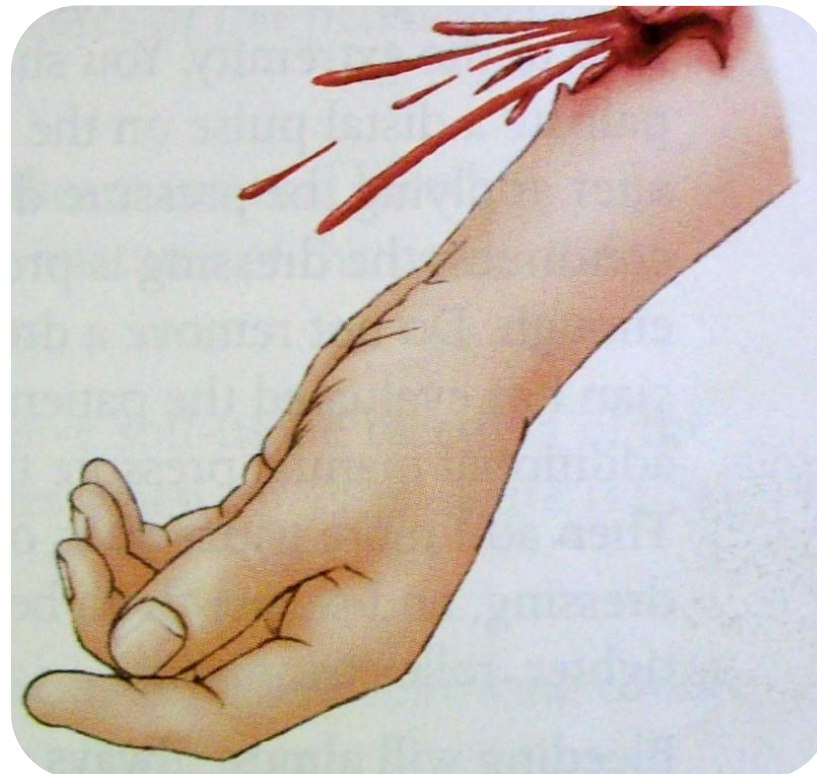


# Bleeding Control



Dr.Samer Sara

- Injuries damage blood vessels can cause **external** or **internal** bleeding.
- Bleeding may be **minor** or **life threatening**.
- Most **external bleeding** can be controlled with first aid techniques.
- The major role of blood is to **transport oxygen**.

# Effects of blood loss

## loss off up to 15% of blood volume.

- Body can compensate by constricting blood vessels to maintain blood pressure.
- Victim is alert.
- BP and pulse are close to normal.

## Loss of 15% to 30% of blood volume.

- constricting blood vessels maintain blood flow to vital organs (brain & heart) while reducing flow to other areas.
- Skin is pale or ashen cool and dry.
- Heart and respiratory rates increase
- Victim feels restless and confused.

# Effects of blood loss

## loss of 30% to 40% of blood volume

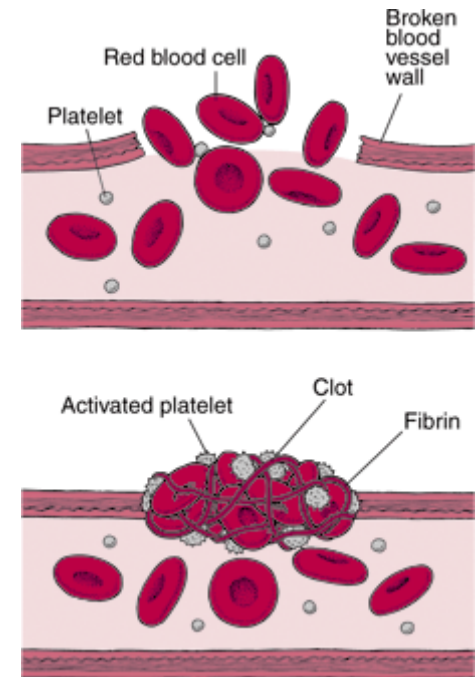
- Body can no longer compensate.
- Blood pressure falls (shock).
- victim is confused or anxious.

## loss of more than 40% of blood volume

- BP falls.
- Vital organs begin to fail
- Victim becomes unresponsive.
- death occurs if not immediately corrected .

# Body Control of Bleeding

- When blood vessel is damaged and blood escapes, the body attempts to control bleeding through 3 processes:
  - ❑ **Vascular spasm:** the vessel constricts to slow bleeding and allow clotting to occur which is enough in small vessels.
  - ❑ **Platelets:** stick to each other and to the wall of the vessel and form platelet plug.
  - ❑ **Clotting** (coagulation) blood proteins produce fibrin which clumps with platelets and other cells in a fibrin web.



# External Bleeding

- Typically occurs when skin and other underlying tissues are damaged by trauma.
- Bleeding flows out through the wound.
- Bleeding depends on the **size and type** of the injured vessel.
- Wounds where some large vessels are **close to the skin (wrist or neck)** may result in very heavy bleeding.

# Types of external bleeding

- **Bleeding from injured arteries:**
  - In general serious and difficult to control.
  - Comes out in a discontinuous jet.
  - Bright red.
  - Rapid and abundant, so it needs immediate control.
- **Bleeding from injured veins:**
  - Slow and flows steadily.
  - Dark red.
  - Easy to control.
- **Bleeding from capillaries:**
  - from shallow cuts or scrapes.
  - often stops soon by itself.

# External bleeding control

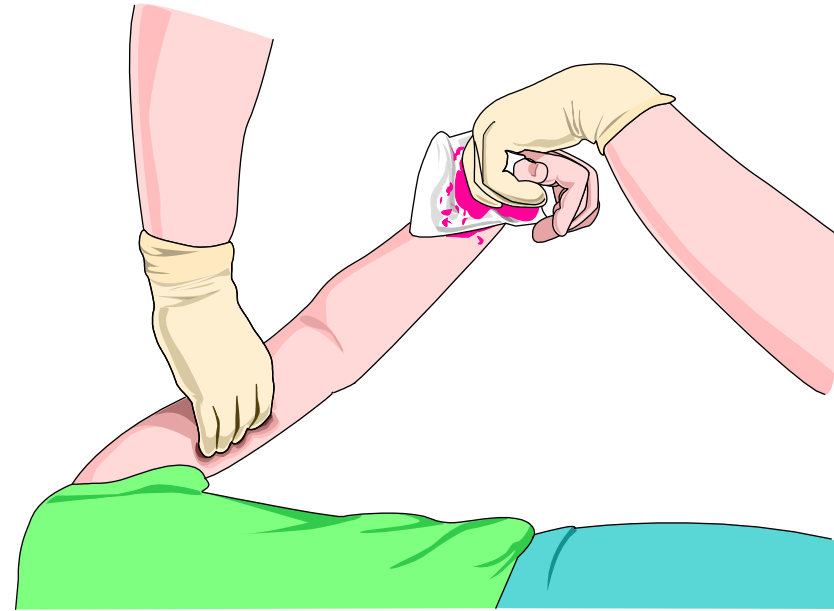
- Minor bleeding :
  - Stops by itself or with light pressure.
  - clean and dress.





- Serious bleeding:

- Elevate the injured limb to reduce blood flow.
- apply **direct** pressure by your gloved hand on the wound with sterile dressing.
- ❑ Pressure for short time induces clotting event.
- ❑ direct pressure should not be applied on certain wounds such as **skull, fracture or implanted object** which may cause additional damage.



Apply direct pressure on external wounds with sterile cloth or your hand, maintaining pressure until bleeding stops

➤ When fracture or implanted object is suspected: Apply **indirect pressure** by compressing the artery irrigating the bleeding area to slow down the blood flow.

- Brachial (Top of elbow)
- Femoral (Inside upper thigh)



# Pressure bandages

- A pressure bandage can be used over the wound in an extremity.
- Be sure that it is not so tight (not to cut off circulation of the limb).
- Signs of poor circulation :
  - skin color: pale
  - warmth : cool
  - sensation : tingling or numbness
  - volume : swelling
- In such cases loosen the bandage

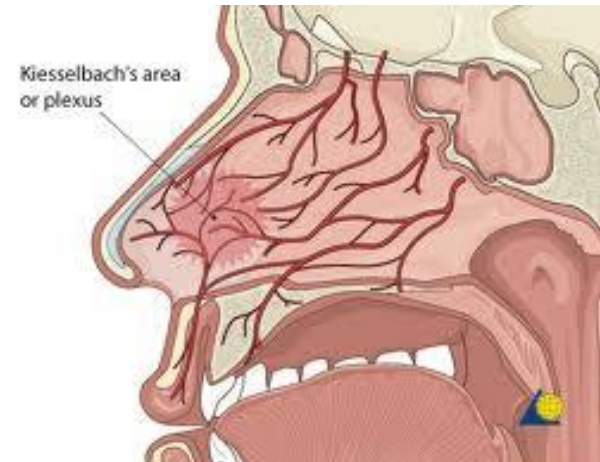


# Preventing blood borne infection

- Wear Gloves or plastic bags or any barrier.
- If nothing available, use the victim own hand.
- Clean without contact.
- Wash your hands when finished.
- Disinfect all contaminated objects.

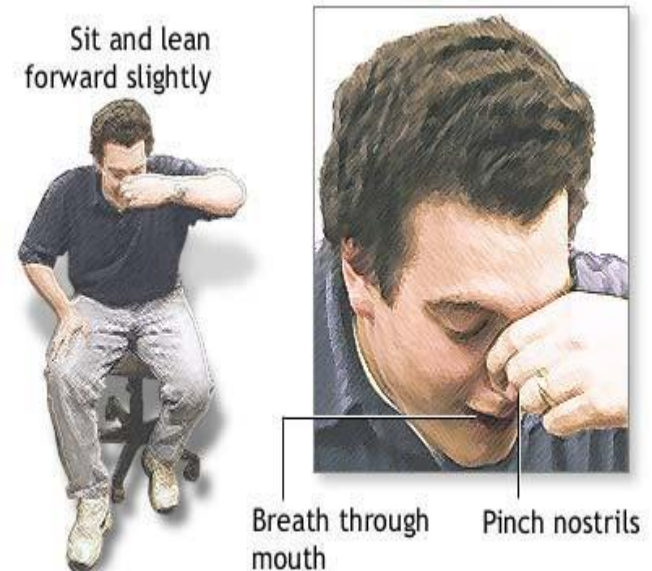
# EPISTAXIS (Nose Bleeding)

- Tilt head down to prevent bleeding to the throat.
- Close victim's nostrils with the tips of 2 fingers.
- Ask victim to breath through his mouth.



## If that doesn't succeed:

- Apply a gauze packing into the bleeding nose.
- Use a cold towel on the nose or if possible bag of ice.
- If bleeding doesn't stop within 20 minutes, seek Medical Care Provider.



# Internal bleeding

- Bleeding within the body in which blood does not escape from an open wound.
- Caused By:
  - **blunt injury**: ex car accidents.
  - can occur without trauma: (bleeding **ulcer**).
- Could be:
  - ❑ Serious and **life threatening** .
  - ❑ Minor bleeding in the skin appearing as **bruise**.

# Signs of internal bleeding

- Bruises or contusions of the skin.
- Painful, tender, rigid, bruised abdomen.
- Vomiting or coughing blood.
- Stools that are black or contain bright red blood.





## Management:

Prevent and help the shock.

- Monitor ABC's (Airway Breathing Circulation)
- Keep the victim lying on his/her left side.
- Treat for shock by raising the victim's legs 8" – 12".
- Seek immediate medical attention.
- Don't give the victim anything to drink.

