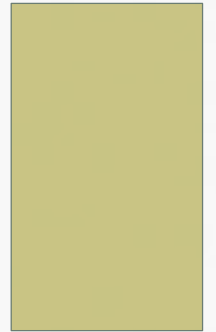


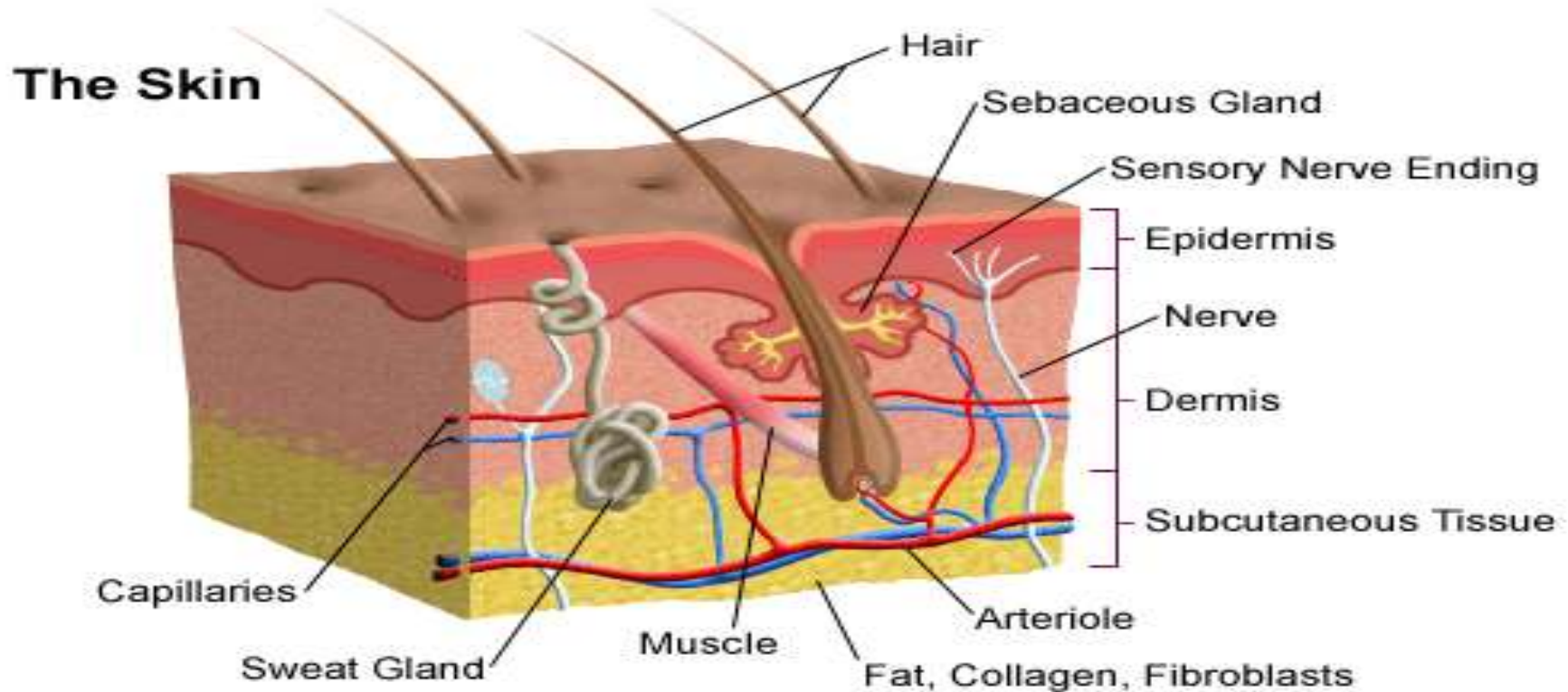




BURN



ANATOMY & PHYSIOLOGY OF SKIN



FUNCTIONS OF SKIN

- Protection from infection
- Sensory organ (Temperature, Touch, Pain)
- Control loss & movements of fluids
- Flexible to accommodate free body movement
- Temperature regulation

BURN

- **Definition**
- “ Burn is a type of injury to skin caused by
 - ❖ Heat
 - ❖ Electricity
 - ❖ Chemical
 - ❖ Friction &
 - ❖ Radiation.”

RISK FACTORS FOR BURN

- Very Young & very old age people
- Industrial workers
- Fire fighters
- Metal Workers
- Chemical Workers

CAUSES & TYPES OF BURNS

- Thermal
- Electrical
- Chemical
- Radiation
- Inhalation

THERMAL BURN

- Thermal burns are **skin injuries caused by excessive heat, typically from contact with hot surfaces, hot liquids, steam, or flame.**
- Extent depend on
 - Temp.of agent
 - Concentration of heat
 - Duration of contact



CHEMICAL AGENT

- Chemical agents destroys the tissue
- Acid
- Alkalis



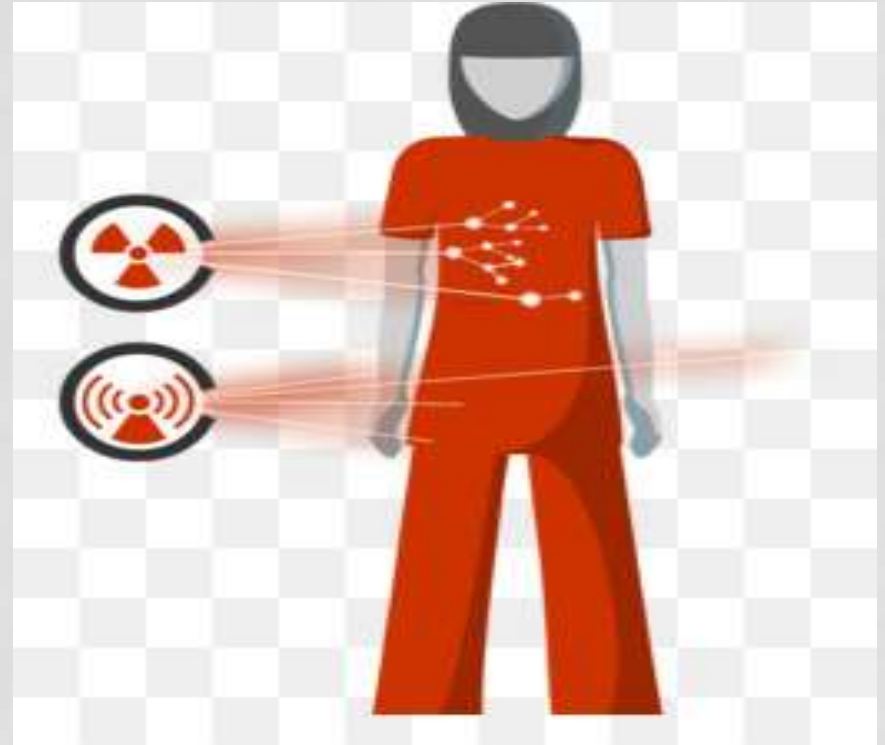
ELECTRICAL BURN



RADIATION BURN

RADIATION

- Transmission of energy
 - Nuclear energy
 - UV rays
 - Heat
 - X-rays



THERMAL BURN



CHEMICAL BURN



ELECTRICAL BURN



RADIATION BURN



INHALATION BURN

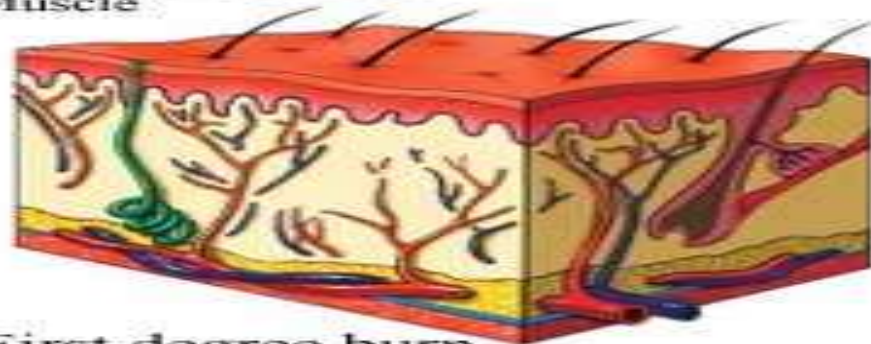
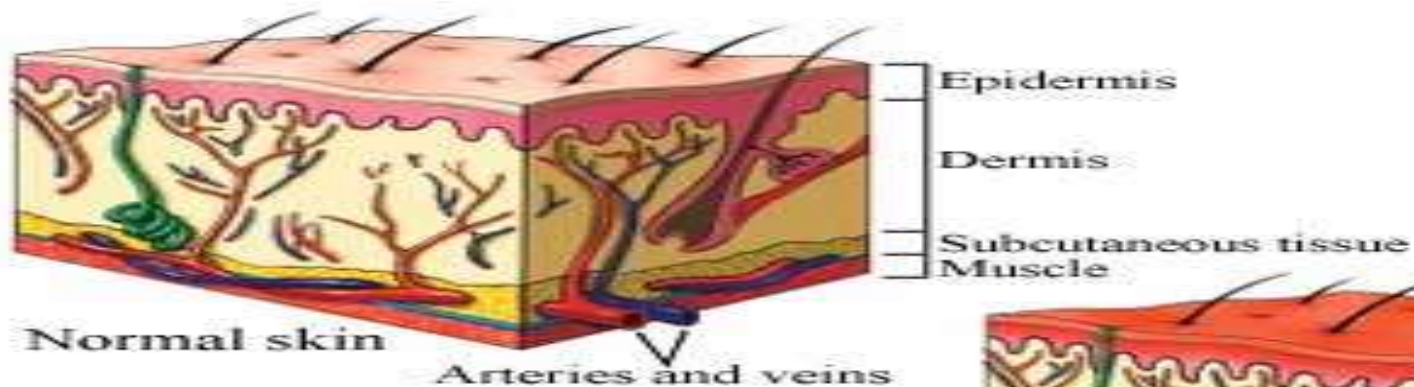


- Toxic Inhalation

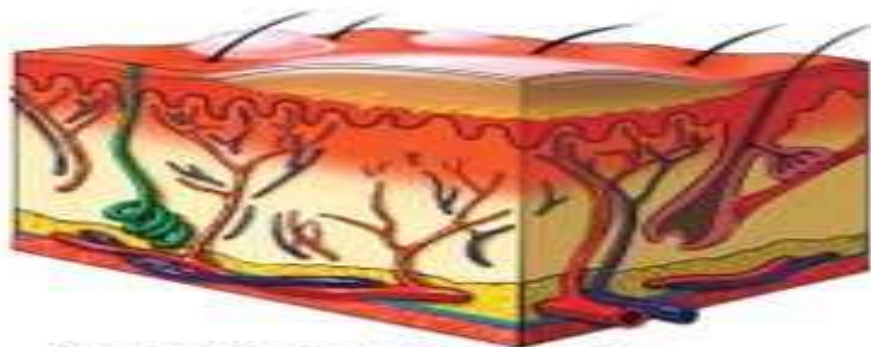
- Carbon Monoxide Poisoning
- Risk Factor
- Standing in the burn environment
- Trapped in closed burn environment

DEPTH & CLASSIFICATION OF BURN

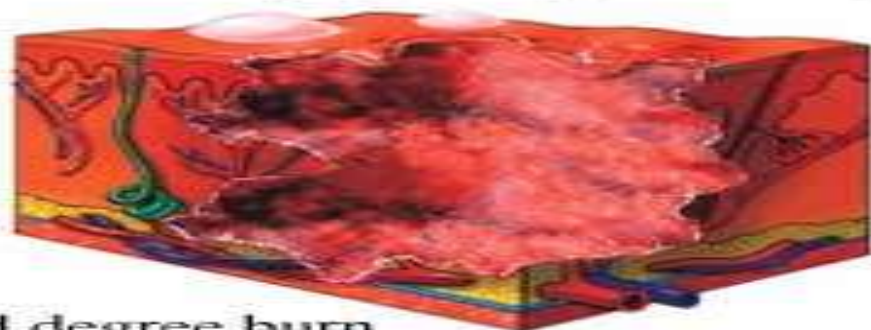
- 1. Superficial Burn (1st Degree Burn)
- 2. Partial Thickness Burn (2nd Degree Burn)
- 3. Full Thickness Burn (3rd Degree Burn)



- Involves top layer of epidermis only



- Skin blister
- Involves all of epidermis and some of dermis
- May involve all of the dermis



- May extend into deeper tissues

SUPERFICIAL BURN (1ST DEGREE BURN)

Epidermis
Dermis
Subcutaneous
Muscle



Superficial
(first degree)
burn



Partial thickness
(second degree)
burn



Full thickness
(third degree)
burn



- **Causes:**

- Sun burn
- Low intensity flash

- : **Skin Involvement:** Epidermis & Dermis

- **Signs & Symptoms:**

- Redness Skin
- Pain at Burn Site
- Blisters

- **Wound Appearance**

- Reddened Skin
- Minimal no oedema
- Possible blisters

- **Recovery Phase**

- Complete recovery within week
- No Scarring
- Skin Peeling

PARTIAL THICKNESS BURN (2ND DEGREE BURN)



- **Causes:**

- Scalds

- Flame

- : **Skin Involvement:** Epidermis, Upper Dermis & Lower Dermis

- **Signs & Symptoms:**

- Intense Pain

- White to red Skin

- Blisters

- **Wound Appearance**

- Blisters

- **Broken Epidermis**

- oedema

-

- **Recovery Phase**

- Recovery in 2 to 4 weeks
- Some scarring & depigmentation
- Contracture
- Infection

FULL THICKNESS BURN (3RD DEGREE BURN)



- **Causes:**

- Flame

- Prolonged exposure to hot liquids

- Electric current

- Chemicals

- : **Skin Involvement:** Epidermis, Dermis, Subcutaneous tissue, Connective tissue, Muscles & Bones

- **Signs & Symptoms:**

- Dry leathery Skin (White, Dark brown)
- Loss of Sensation
- Shock
- Haematuria

- **Wound Appearance:**

- Dry, pale white
- Broken skin with fat exposed
- Oedema

- **Recovery Phase:**

- Eschar sloughs
- Grafting necessary
- Contracture
- Loss of digit or extremity is possible

FIRST AID MANAGEMENT

- Do's
- Stop burning process by removing the clothing & irrigating Burn
- Use cool running water to reduce temperature of burn
- Extinguish flames by allowing the person to roll on the ground or by applying blanket or by using water or other fire extinguishing liquids

- In chemical burn remove or dilute the chemical agent by irrigating with large volume of good water
- In Electrical burn first cut off or switch off the electrical supply with non conducting material such as dry wood, hard rubber/ plastic material then care the victim
- Wrap the victim in clean cloth or sheet & transport to the nearest appropriate medical care.

DON'TS

- Do not start first aid before ensuring your own safety
- Switch off the electrical current
- Wear gloves for chemicals
- Do not apply paste, oil, turmeric powder or raw cotton to the burn
- Do not apply ice because it deepens the injury
- Avoid prolonged cooling with water because it may lead hypothermia.

- Do not open the blisters until topical anti-microbials can be applied.
- Do not apply any unsterile materials directly to the wound because it may cause infection.
- Avoid application of topical medication or any material until the victim has been placed under appropriate medical care

EMERGENCY MANAGEMENT

- Remove the source of burning agent from person
- Fire
- Electric supply by using non-conducting material
- Support ABC

- Monitor vital signs
- Cool burned surface by cleaned cotton cloth & cooled environment
- Prevent Hypothermia
- Asses the degree of Burn
- Remove the ornaments from affected area if not complicated.
- Asses consciousness level
- Start ventilation if client is unconscious & airway problem

CALCULATION OF BURNED TOTAL BODY SURFACE AREA

- **Rule of Nine**

- Head: 9%
- Right Hand : 9%
- Left Hand : 9%
- Anterior trunk: 18%
- Posterior trunk: 18%
- Left Leg : 18%
- Right Leg : 18%
- Genitalia : 1%