Burns:

Two types of heat:

1- Dry heat: (free from water vapor).
2- Moist heat has moisture content in the form of liquid or vapor.

Dry heat causes desiccation and carbonization. Moist heat causes coagulation (boiling). Heat may affect the body internally via inhalation of steam, smoke, and chemicals. The lowest temperature that tissue can burn is 111°F (44°C).

Burn Classifications:

Burns are classified by the

1- cause or mechanism of the **injury** (thermal, radiation, electrical, and chemical)
2- severity of the body tissue involved.(first-degree, second-degree, third-degree, and fourth-degree injuries)

. **A first-degree burn is superficial and is localized in the external layer of the epidermis**. The skin will be erythemic, dry, and painful to the touch.

A second-degree burn is a **partial-thickness injury that involves the epidermis and partial segments of the dermis**. With only a superficial portion of the dermis involved, thrombosis of the blood vessels and leakage of plasma can occur. The hair follicles are usually not affected. Hair follicles can be destroyed in deeper partial-thickness wounds. The skin will appear yellow-white or brown, and sensation is usually minimal except with applied deep pressure.

A third-degree burn wound is a full-thickness injury that obliterates the epidermis and the dermal layers. The skin lacks sensation and appears leathery and charred.

A fourth-degree burn wound has similar characteristics to a third-degree burn, however it also involves deeper tissues such as muscle, tendon, and bone.

Wounds:

Wound is discontinuation of normal tissue and loss of tissue integration.

An open wound is an injury involving an external or internal break in body tissue, usually involving the skin.

Sharp force trauma consists of lesions caused by sharp objects, such as knives, scissors, screwdrivers، needles, or machetes. Sharp trauma lesions can be divided into four categories: (1) stab wounds, (2) incised wounds, (3) chop wounds, and (4) therapeutic/diagnostic wounds

1- stab wound: occur by Knives, scissors, screwdrivers، barbecue forks, broken glass, arrows. Depth of the wound exceeds its length and results from the movement of the long axis of the blade in the plane approximately perpendicular to the surface of the body.
2- Incised wounds: occur by the same that cause stab wounds. Slashes and cuts where the length exceeds the depth.
3- Chop wounds: occur by Axes, cleavers, and machetes. Produced by heavy instruments, with an incised wound on the skin and bony fractures and/or a deep groove in the bone.

4- Therapeutic/diagnostic wounds: occur by Needles, scalpels. Result from veterinary intervention.

5- Abrasion: An abrasion occurs when your skin rubs or scrapes against a rough or hard surface. Road rash is an example of an abrasion. There's usually not a lot of bleeding, but the wound needs to be scrubbed and cleaned to avoid infection.

6- Laceration: A laceration is a deep cut or tearing of your skin. Accidents with knives, tools, and machinery are frequent causes of lacerations. In the case of deep lacerations, bleeding can be rapid and extensive.

7- Puncture: A puncture is a small hole caused by a long, pointy object, such as a nail or needle. Sometimes, a bullet can cause a puncture wound. Punctures may not bleed much, but these wounds can be deep enough to damage internal organs.

8- Avulsion: An avulsion is a partial or complete tearing away of skin and the tissue beneath. Avulsions usually occur during violent accidents, such as body-crushing accidents, explosions, and gunshots. They bleed heavily and rapidly.