





## **Anatomy & Histology**

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lecture/Practice-lab

The first Stage

The skin is the largest organ in the body, covering its entire external surface. The skin has 3 layers—the epidermis, dermis, and hypodermis.

#### THE LAYERS OF HUMAN SKIN

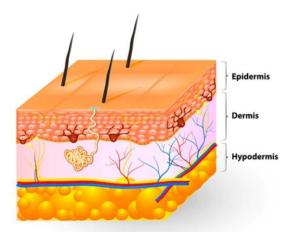


Figure 1: Skin layers.

#### The skin layers

- 1. The epidermis layer: is surface layer of skin and consist of (5layers).
- 2. The dermis layer: supports the epidermis and provides shape.
- 3. Hypodermis/ Subcutaneous layer: made of adipose tissue, muscles and blood vessels.

#### A. The Epidermis Layers

1. Stratum Basale:

Cells types in this layer

- a. Basal cell: producing new cell.
- b. Melanocytes: a cell that produce pigments melanin (gives hair and skin its color).
- c. Merkel cell: touch sense.

- 2. Stratum spinosum (Prickle cell layer): contains two types of cells:
  - a. Keratinocytes.
  - b. Langerhans cells.
- 3. Stratum granulosum (Granular layer).
- 4. Stratum lucidum (clear layer).
- 5. Stratum corneum.
- B. The Dermis Layer: Contains blood vessels, hair, nail, collagen and elastic fibers. Consists of two layers:
  - 1. Upper papillary layer.
  - 2. Deep reticular layer.
- C. Hypodermis: contains adipose tissue (Fat).

The skin appendages: Includes hair, nails and glands.

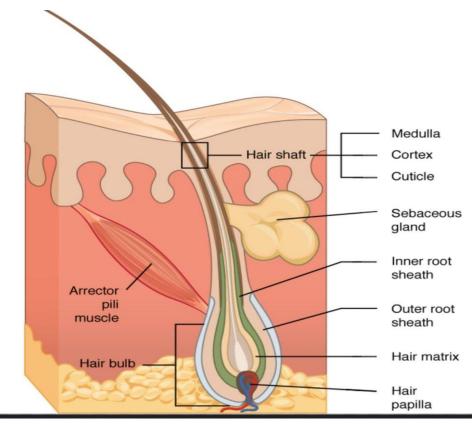
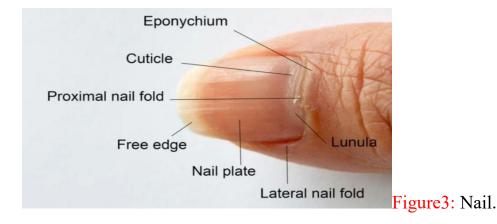
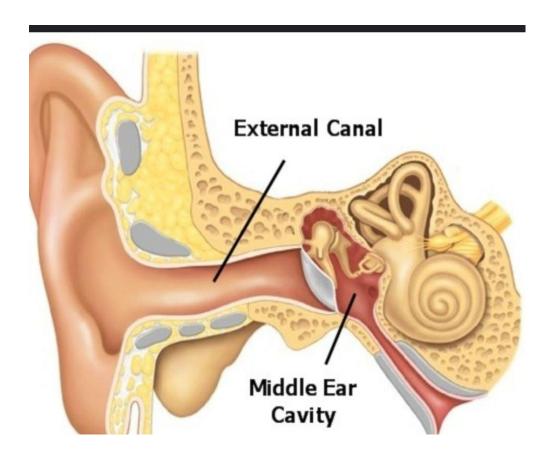


Figure 2: Hair follicle.



### Glands:

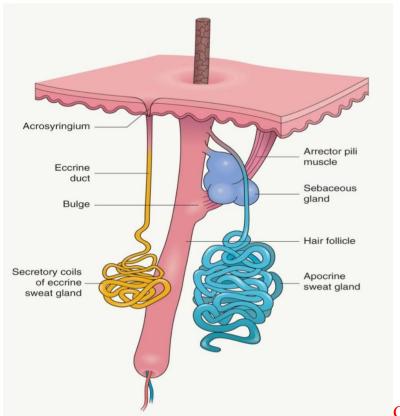
- 1. Sebaceous glands are glands within hair follicles that produce an oily substance called sebum.
- 2. The ceruminous (ear wax): found in lining of external ear canal.



### 3. Sweat glands are

Eccrine sweat gland: open in surface of skin.

Apocrine sweat gland: open into hair follicle.



Gands.

#### Functions of skin:

- 1. Protection.
- 2. Thermoregulation.
- 3. Sensation.