

# SKIN

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## Integumentary system consist of

- Skin and appendages
- Hair
- Nails
- Gland

# Introduction

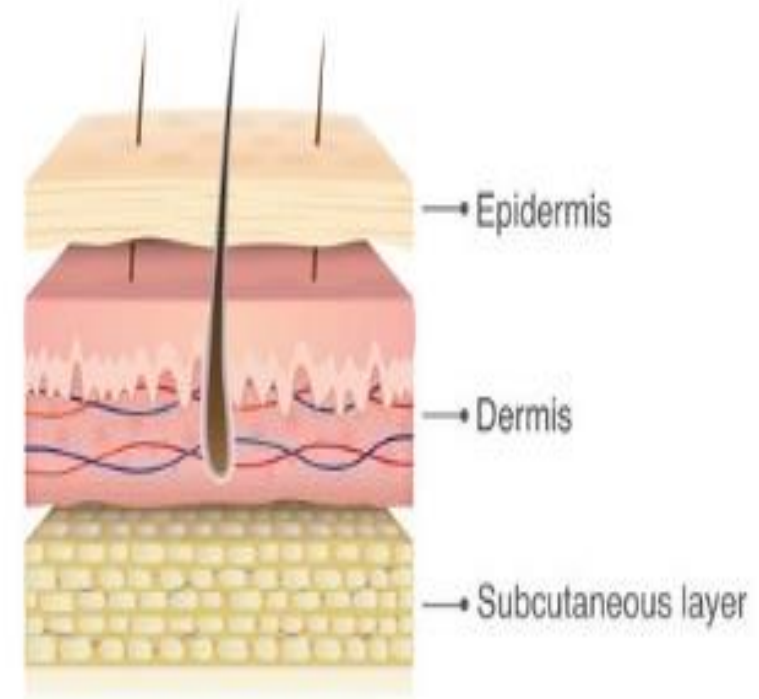
- Skin is known as cutis and integument that serves as main covering of body
- It is the largest organ of the body
- It consist of 16 % of total body weight
- Surface area- 1.5 to 2 sq.ft
- Thickness- 0.5 to 3 mm
- Consists of – Epidermis, Dermis and Hypodermis

- Skin is the general covering of the entire external surface of the body, including the external auditory meatus and the outer surface of tympanic membrane
- The body basic defense covering, which protect against heat and light, injury and infections

# Layers

- Epidermis
- Dermis
- Hypodermis(Subcutaneous layer)

Three Main Layers of The Skin



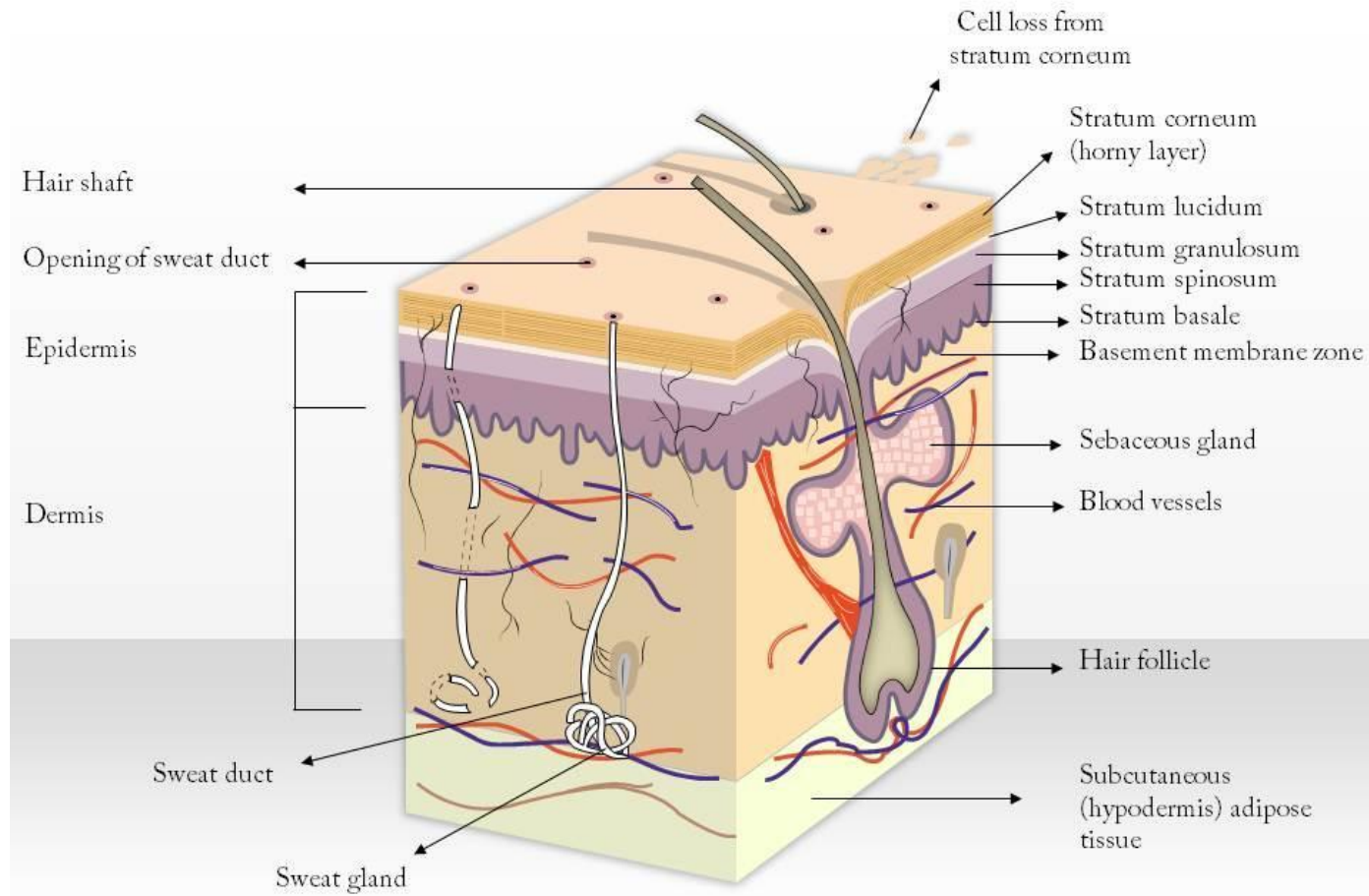
# Epidermis

- The outermost layer of the skin
- It composed of the keratinized squamous epithelium and doesn't have its blood supply of its own.
- It consist of five layers

# Layer of Epidermis

- Stratum corneum-the outer layer of skin, this is made up of scale like cells that are continuously shed.(Horny layer)
- Stratum lucidum- this are made up of small transparent cells through which light can pass. This layers are present in palm of the hand and sole of the feet .(Clear layer)
- Stratum granulosum- this layer is 1-3 layer of thick . This cells have distinct granules and keratin produce in this layers .(Granular layer)
- Stratum spinosum- this layers are 3-6 layer thick and the cells are constantly dividing(Prickle cell layer)- provide a continuous net like layer of protection for underlying tissue
- Stratum germinativm(basale)- single basal layer of cells which contains melanocytes that produce the pigment melanin(Germinating layer)

## Cross Section of Human Skin

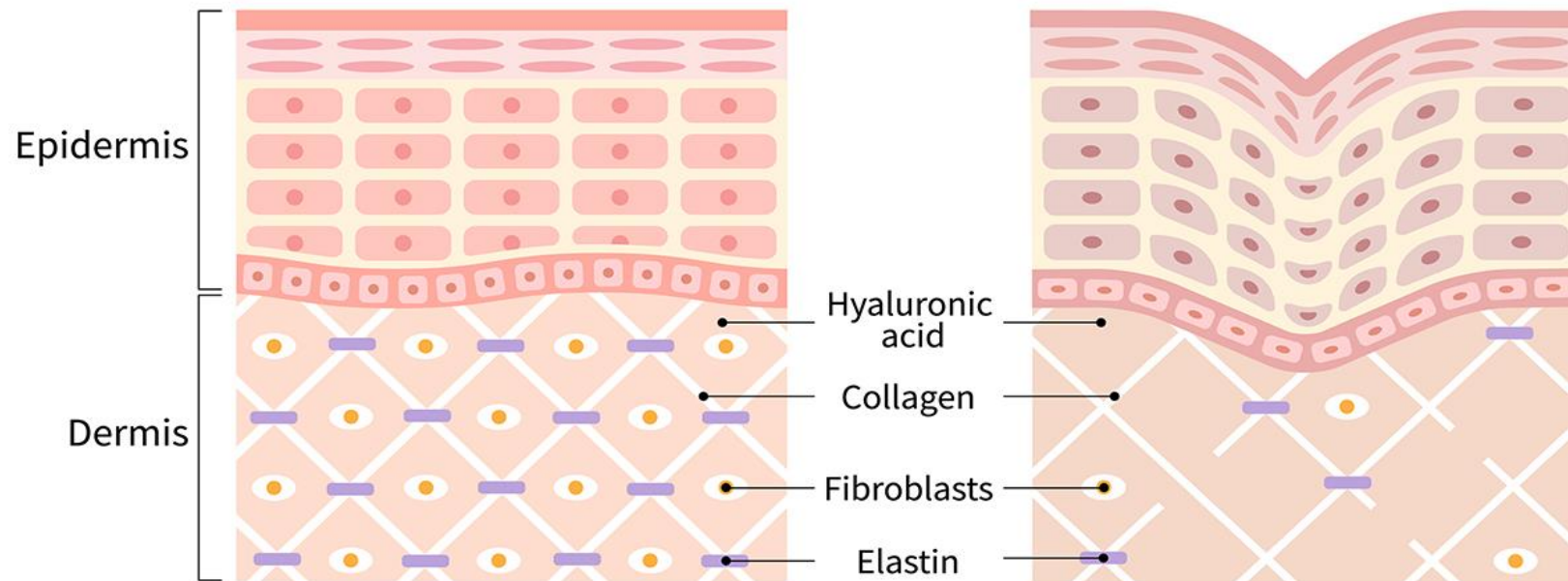




# Dermis

- Dermis or corium is the deep papillary layer
- Vascular layer of the skin, derived from mesoderm.
- It is made up of connective tissue (with variable elastic fibres) mixed with blood vessels, lymphatics and nerves.
- The connective tissue is arranged into a superficial papillary layer and a deep reticular layer

# Dermis Anatomy



- **Papillary layer**- lies directly under the epidermis, it is quite thin and has a cone like projections called papillae. It provides nutrients and oxygen to the germinating layer of epidermis
- **Reticular layer**- lies below the papillary layer and it's the main section of dermis. It is a thick layer. Within the reticular layer there are collagen and elastin fibers. Collagen give as skin plump and youthful appearance. Elastin gives skin a elastic properties . **It contains blood vessels, glands, hair follicles, lymphatics, nerves and fat cells**

# Difference between Epidermis and Dermis

- Epidermis is the top layer, and dermis is the middle layer. Dermis exists between your epidermis and hypodermis.
- Epidermis is the thinnest layer of skin. It helps hydrate your body, produces new skin cells, protects your body from damage and makes melanin, which provides skin color.
- Dermis is the thickest layer of skin. Dermis contains collagen and elastin, which help make dermis thick and supportive of your skin's overall structure.
- All of your connective tissues, nerve endings, sweat glands, oil glands and hair follicles exist in your dermis.

# Subcutaneous layer

This is located under the dermis and mainly made up of fat cells (adipose tissue)

This fatty layer provides the plump contours of the body , protection, support and food supply if needed.

# Pigments of Skin

- 1. Melanin, brown in colour, present in the germinative zone of the epidermis.
- 2. Melanoid, resembles melanin, present diffusely throughout the epidermis.
- 3. Carotene, yellow to orange in colour, present in stratum corneum and the fat cells of dermis and superficial fascia.
- 4. Haemoglobin (purple).
- 5. Oxyhaemoglobin (red), present in the cutaneous vessels.

# Appendages

- Hair- Except palm and sole , lips, nipple, external genitalia and distal segments of finger and toe.
- Gland- Sebaceous gland, sweat gland, mammary gland , ceruminous
- Nail

Thank You