



**DEPARTMENT OF ANESTHESIA TECHNIQUES
AL-MUSTAQBAL UNIVERSITY COLLEGE**

**First year
Human Anatomy practice
(Lecture 2)**

Basic structures in the body

By

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The objectives of this lecture:-

At the end of the lecture, you should be able to:-

- 1- Identify and describe the layers of skin**
- 2-Identify what are the appendages of the skin?**



The skin:-

The skin, **the body's largest organ,**

***The skin provides:

- *Protection of the body from environmental effects
- *Containment for the body's structures
- *Thermal regulation
- *Sensation (e.g., pain)
- *Synthesis and storage of vitamin D

The skin is divided into two parts: a superficial part called the epidermis and deep part called the dermis.

- The **epidermis**, is a stratified squamous epithelium.
- The **dermis**, composed of dense connective tissue .
- The dermis is connected to the underlying deep fascia or bones by the **superficial fascia which is also known as subcutaneous tissue (hypodermis)**

***The skin over joints always folds in the same place forming the **Skin creases.**

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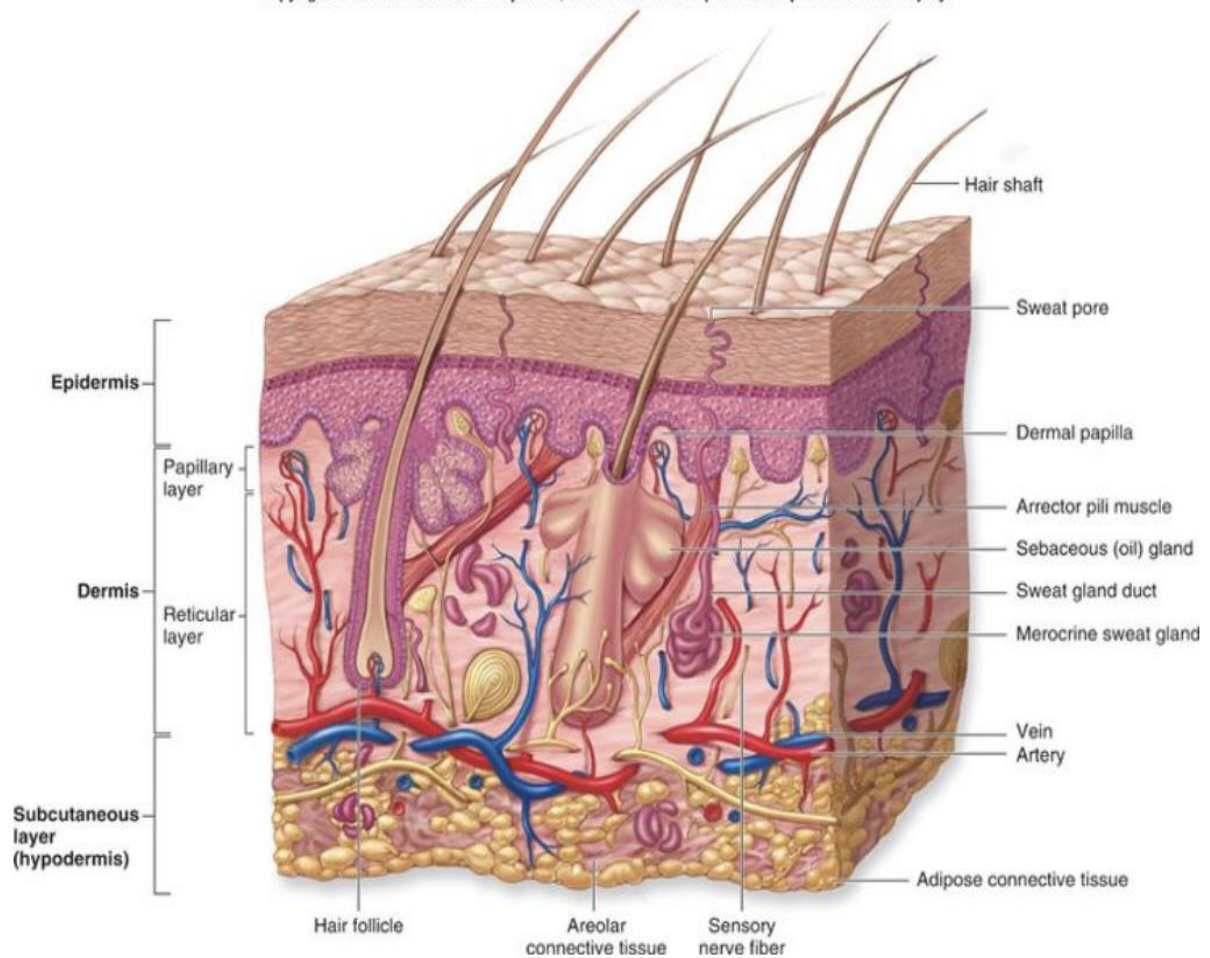
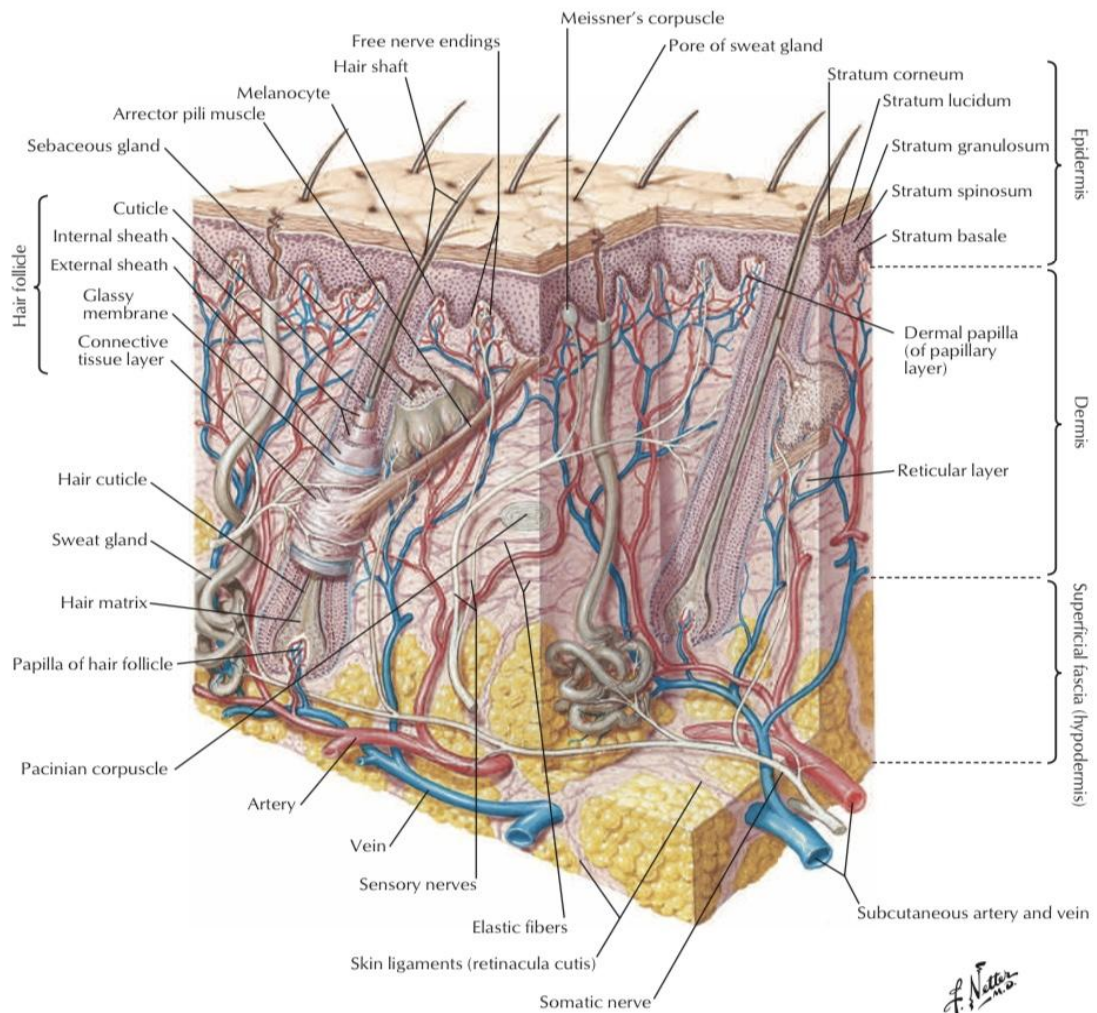
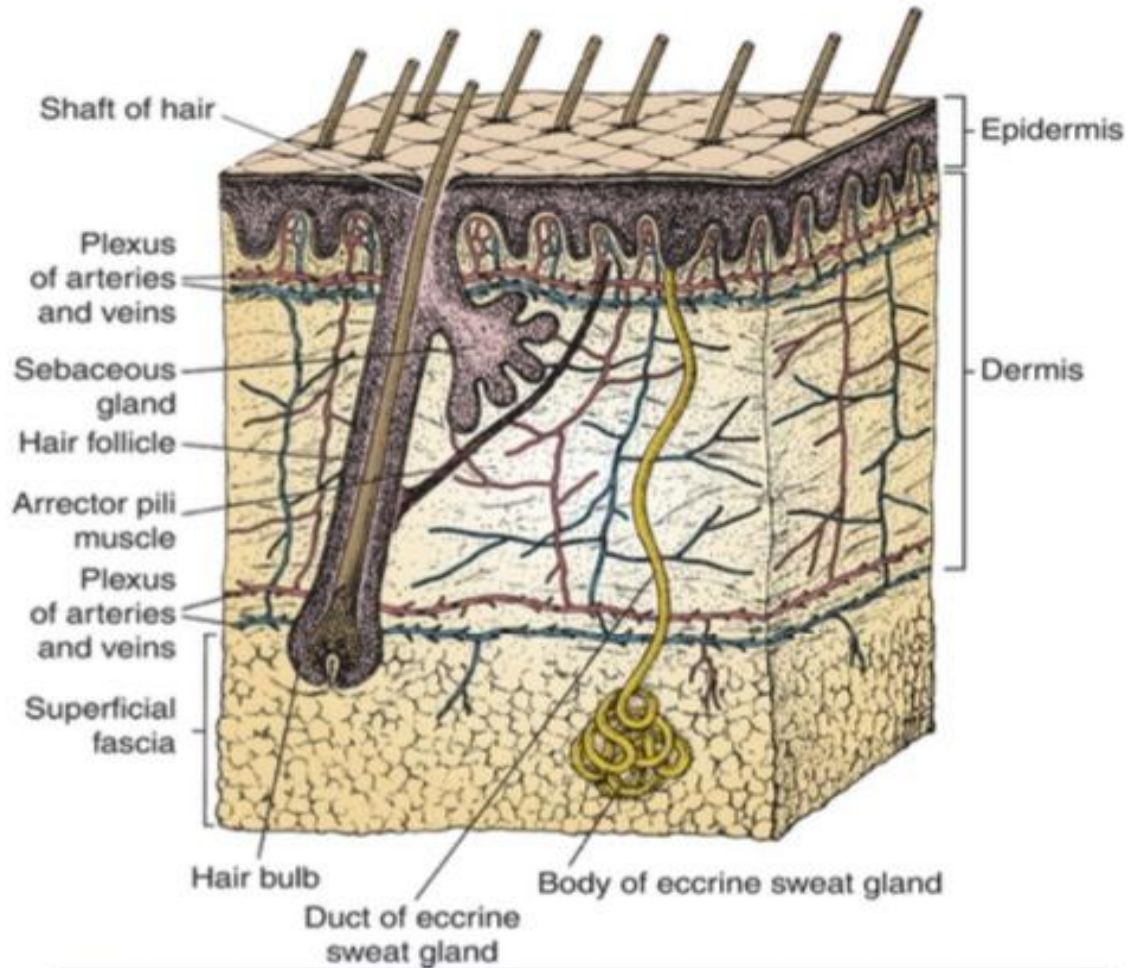


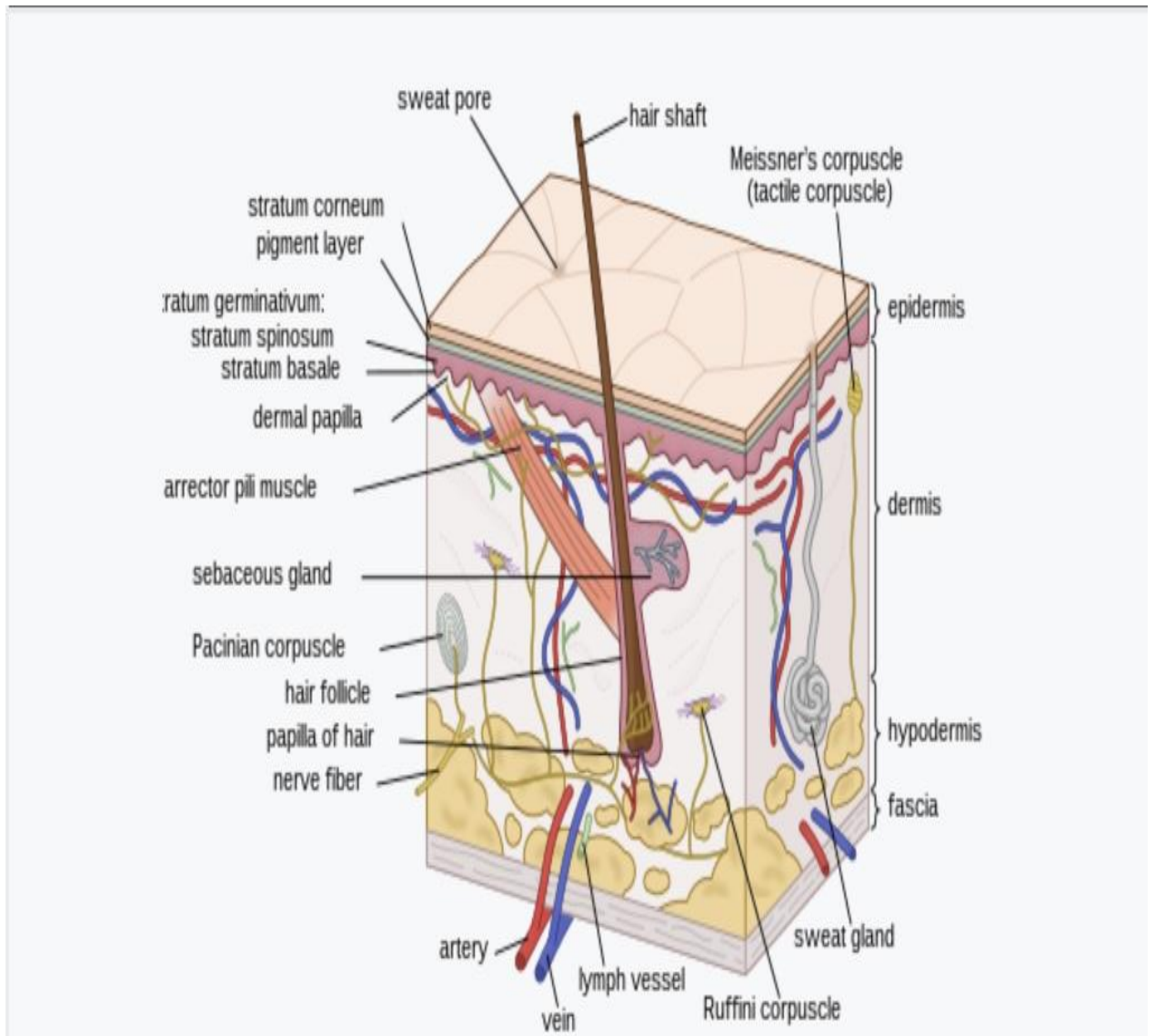
Figure (2.1) Skin ,
 Layers of the skin (Epidermis,dermis and subcutaneous layer)



**Figure(2.2) Skin ,
Layers of the skin (Epidermis,dermis and subcutaneous
layer (hypodermis)**

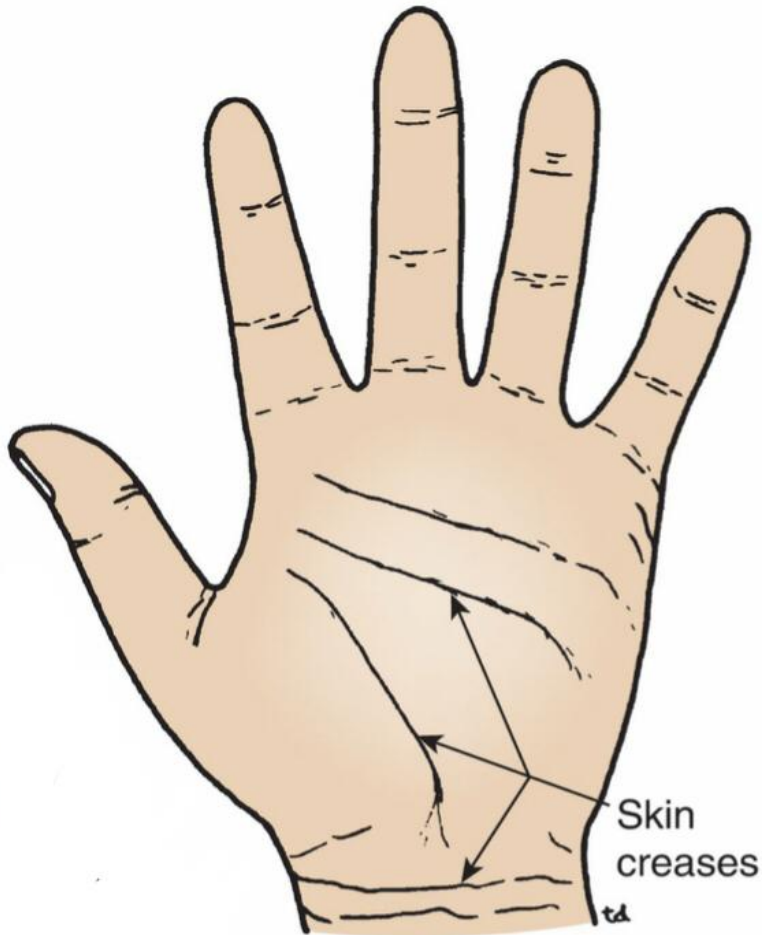


Figure(2.3) Skin ,
 Layers of the skin (Epidermis,dermis and Superficial
 fascia)



Figure(2.4) , Skin

Layers of the skin ((Epidermis,dermis and hypodermis)



Figure(2.5), The various skin creases on the palmar surface of the hand and the anterior surface of the wrist joint.



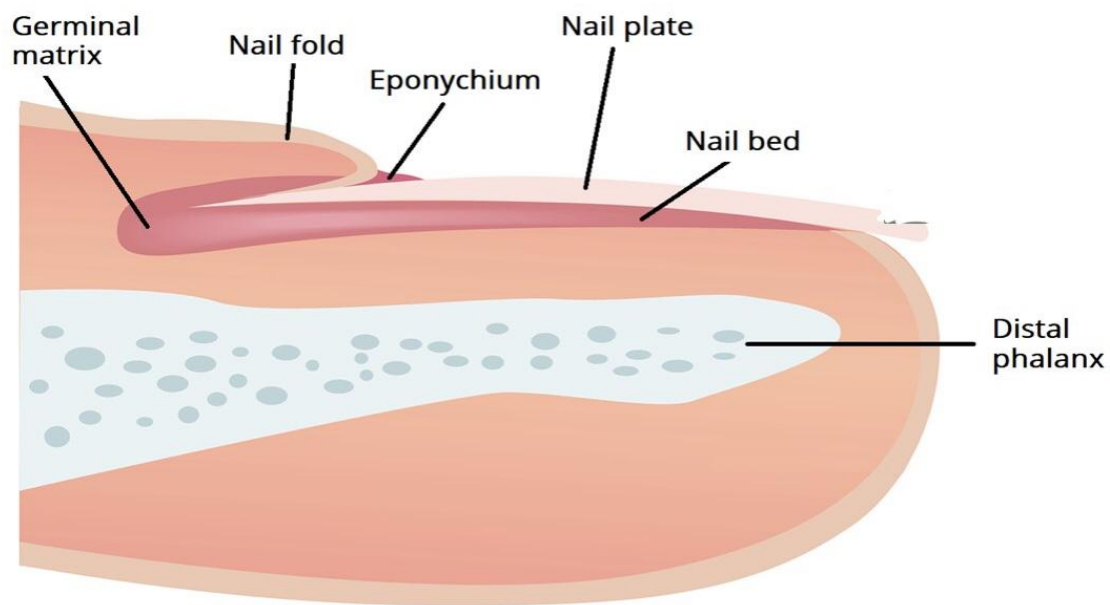
Figure (2.6) Skin creases(Folds of skin)



The appendages of the skin:-

These are structures attached to the skin and include, the **nails, hair follicles, sebaceous glands, and sweat glands** .

***The nails :-



Figure(2.7) The relationship of the nail to other structures of the finger .



Figure(2.8) The nail

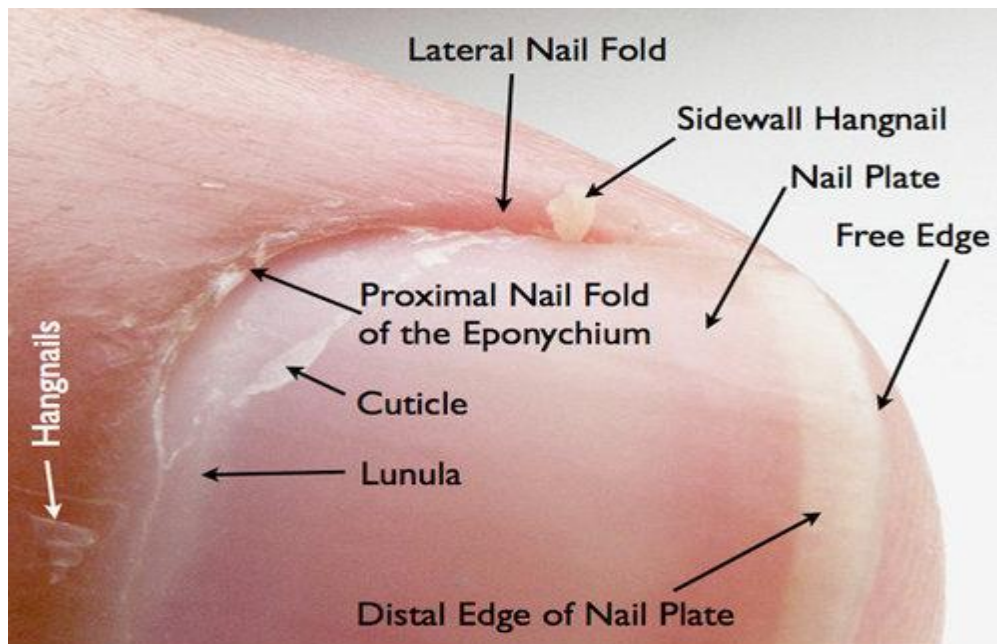
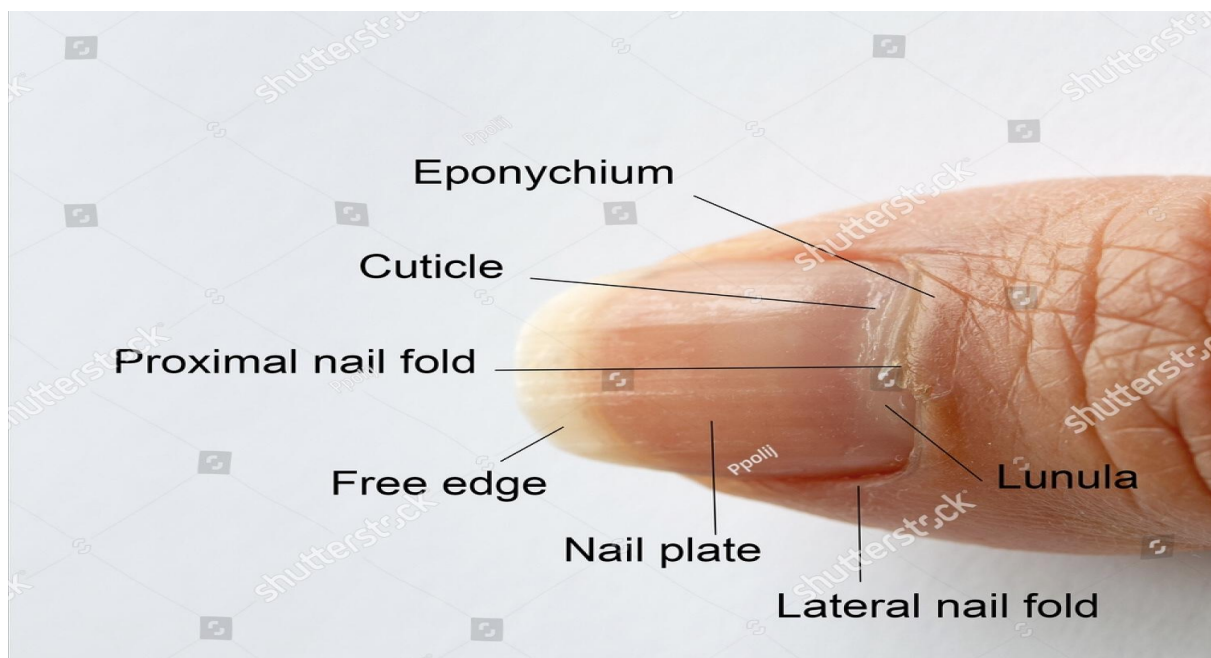


Figure (2.9) The nail



Figure(2.10) The nail



Figure (2.11) The nail

***The hair:-

Hairs grow out of **hair follicles**, and their expanded extremities, called **hair bulbs**, penetrate to the deeper part of the dermis. Each hair bulb is concave at its end, and the concavity is occupied by vascular connective tissue called the **hair papilla**.

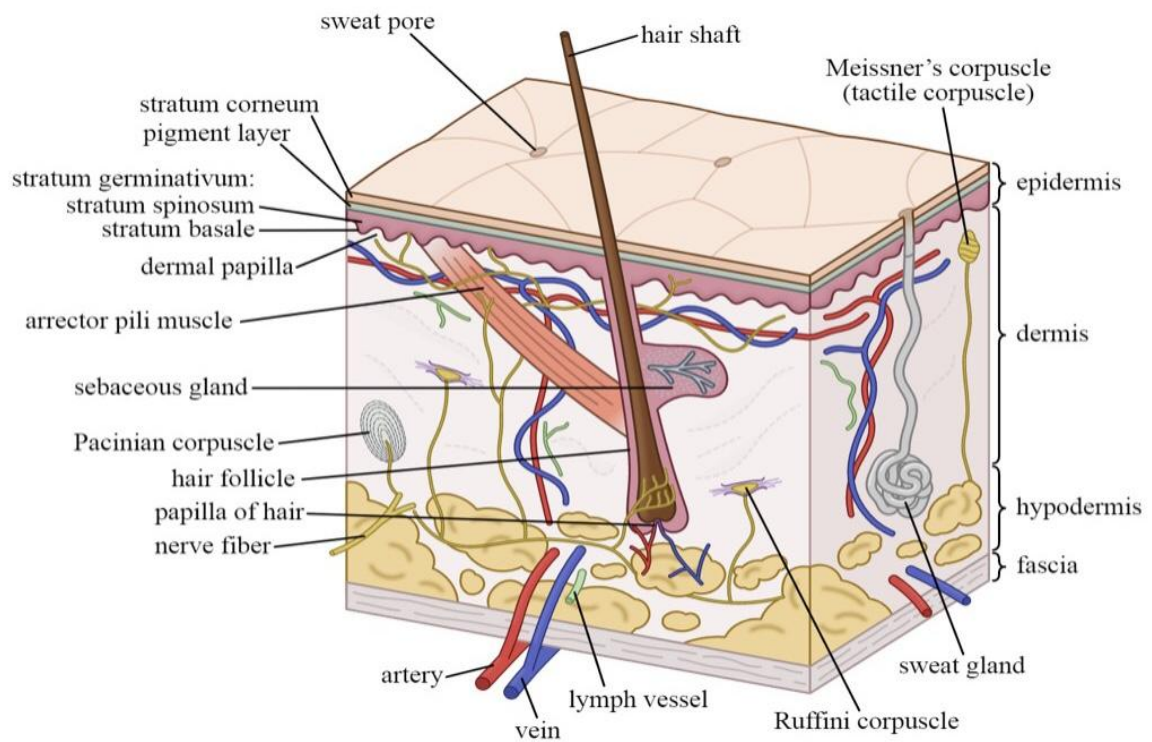
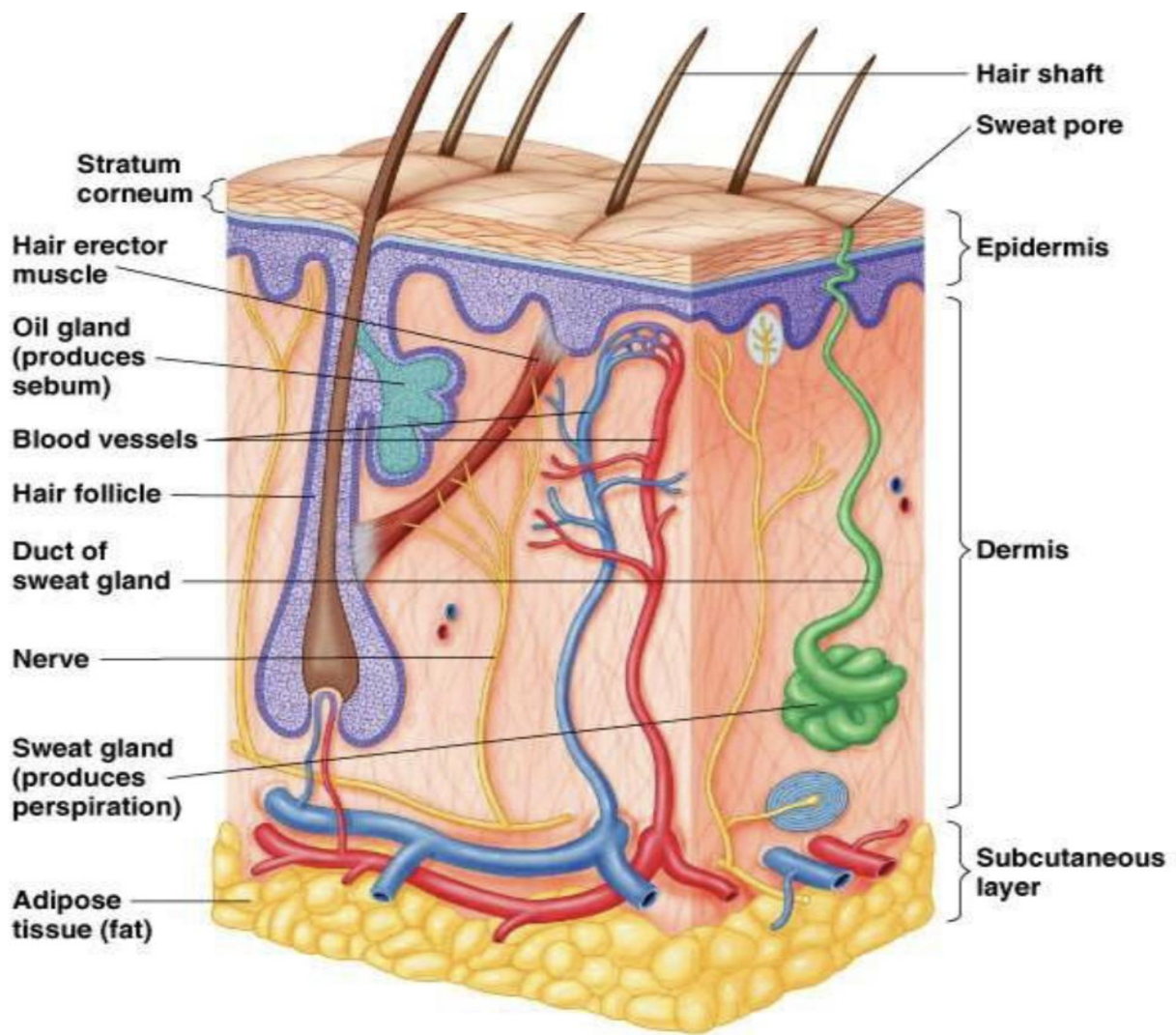


Figure (2.13) ,Note the(hair follicle, papilla of hair, hair shaft, and arrector pili muscle)

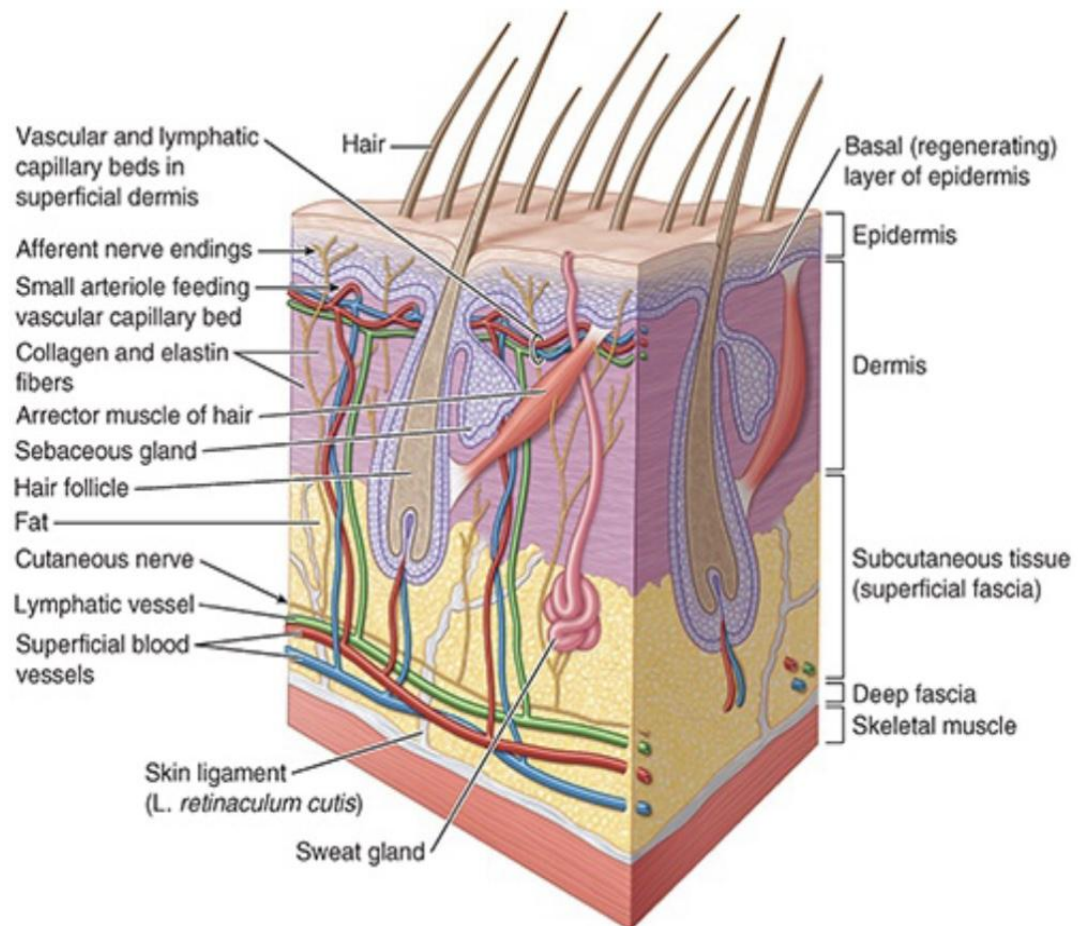


Figure(2.14), Note the (hair follicle, papilla of hair, hair shaft, and arrector pili muscle).



***Sebaceous glands(Oil gland):-

They are situated on the sloping undersurface of the follicles and lie within the dermis.



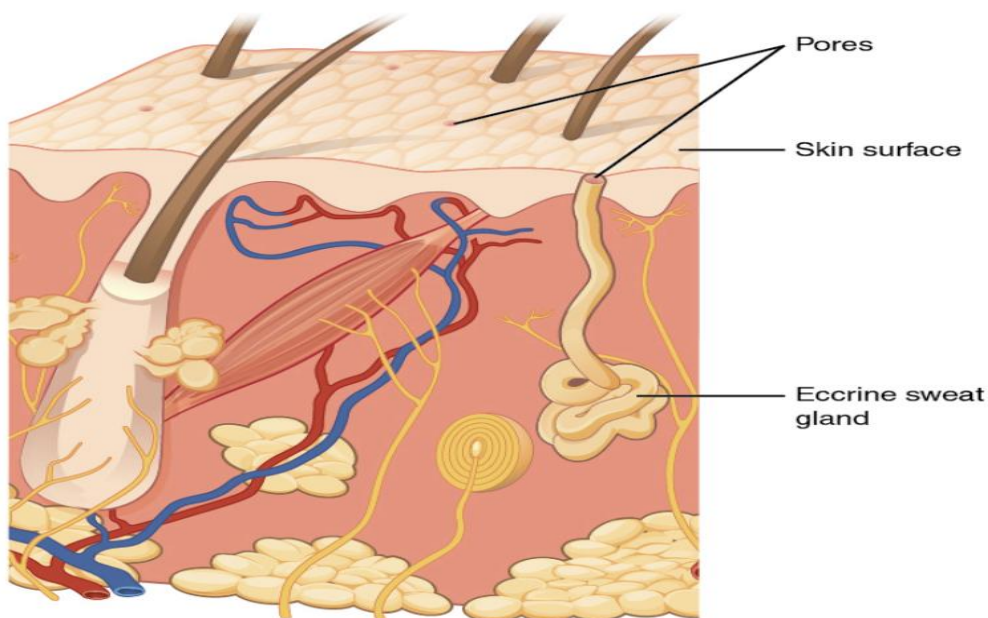
Figure(2.15) Sebaceous gland,

Note the **Sebaceous gland** lie in dermis.



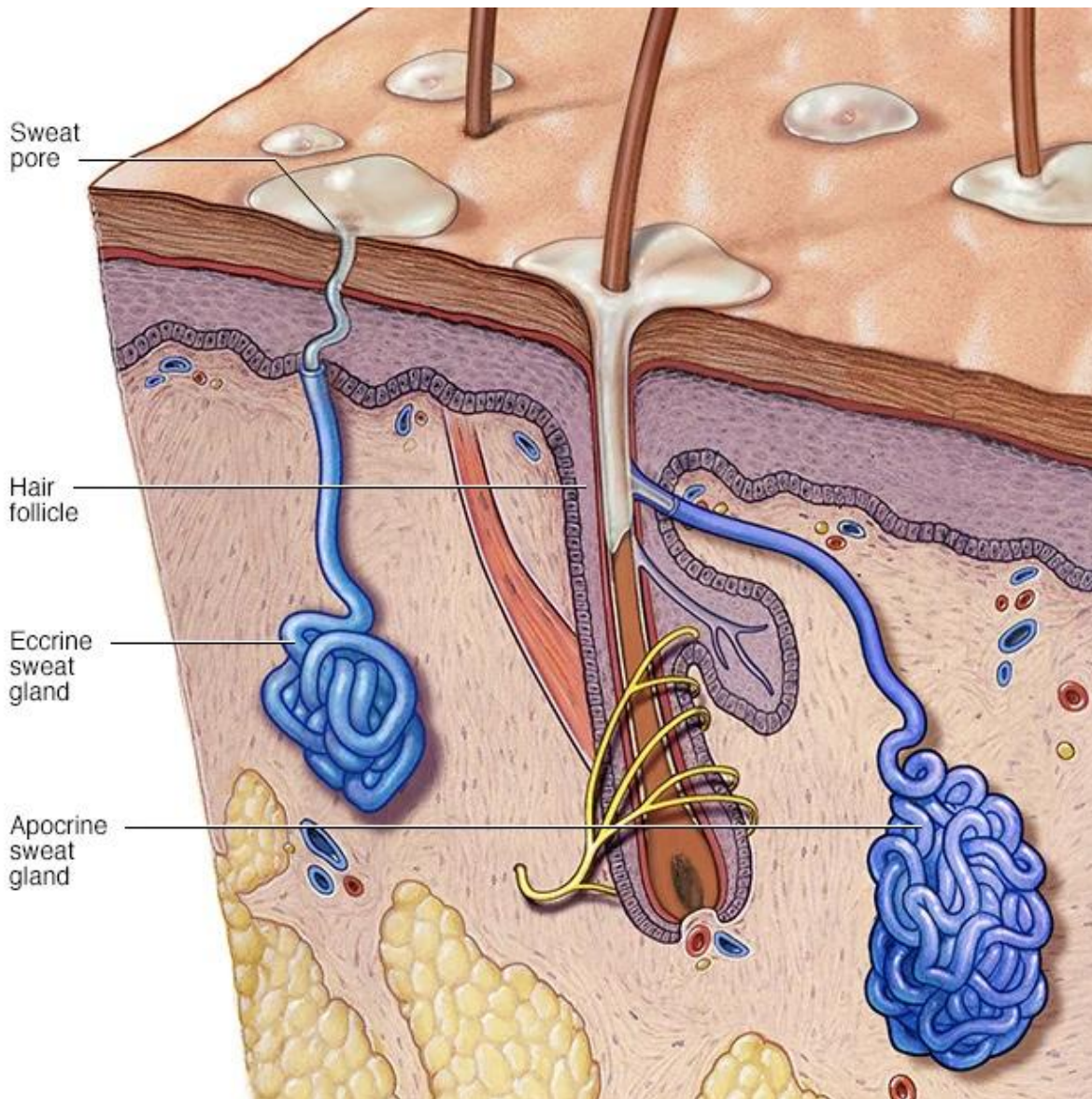
***Sweat glands:-

long spiral, tubular glands distributed over the surface of the body, except on the red margins of the lips, the nail beds, and the glans penis and clitoris.

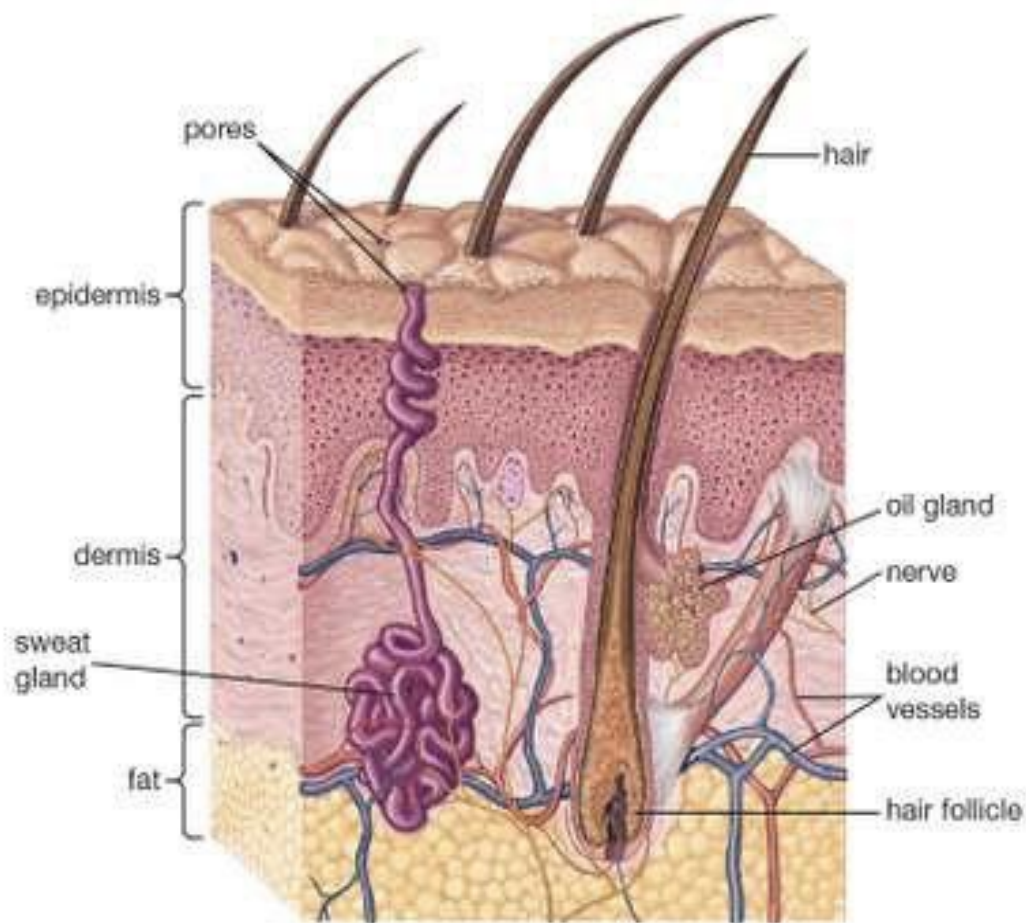


Figure(2.16), Sweat gland distributed over the skin surface.

Note the Eccrine sweat gland and pores over Skin surface.



Figure(2.17), (Eccrine and Apocrine) Sweat gland, Note the sweat pore.



Figures(2.18), General structure of the skin and appendages of the skin

Layers of skin (Epidermis,dermis, fat) ,

Note the hair follicle and hair shaft ,

Note the Sweat glands and sweat pores.