



Skin and Fascia

Anatomy Department
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Intended learning objectives (ILOs)

By the end of this lecture the student will be able to:

1. describe the layers of the skin.
2. Explain the basis for different skin colors.
3. Contrast the structure, distribution and function of hair, skin glands and nails.
4. Describe the structure and functions of superficial and deep fascia.

what is the skin?

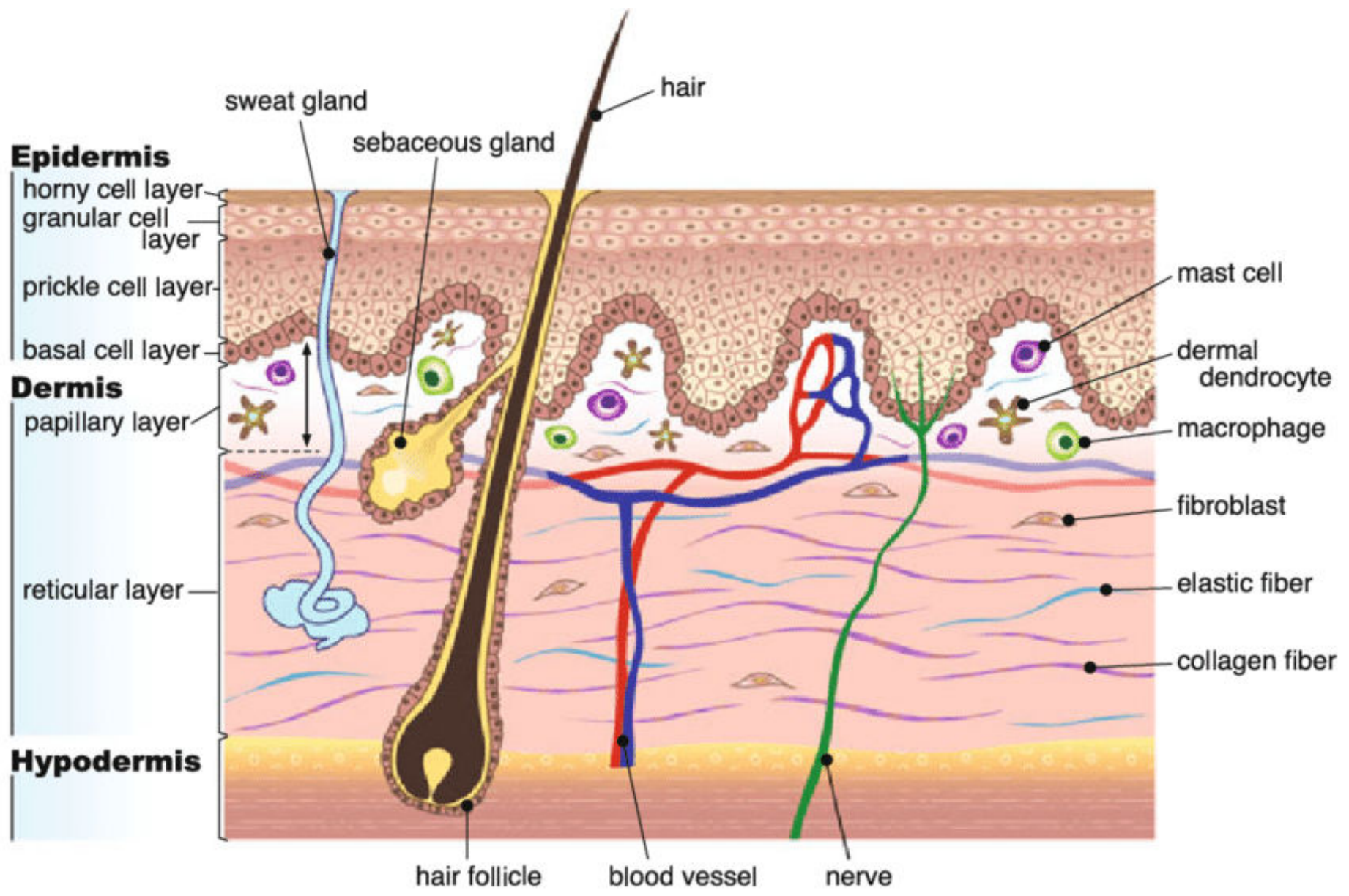
The skin covers the external surface of the body. It is the largest organ of the body in surface area and weight. In adults, the skin covers an area of about 2 square meters and weighs 4.5–5 kg about 16% of total body weight.

Functions of the skin

- 1. Thermoregulation**
- 2. Blood Reservoir**
- 3. Protection**
- 4. Cutaneous Sensations**
- 5. Excretion and Absorption**
- 6. Synthesis of Vitamin D**

Structure of the skin

- 1. Epidermis***
- 2. Dermis***
- 3. Hypodermis***



Skin color and thickness

Skin thickness:

Skin color:

- Melanin.
- Carotene.
- Hemoglobin.

Accessory structures of the skin

1. Nails:

2. Hairs:

3. Skin Glands:

- a. Sebaceous Glands
- b. Wax Glands
- c. Sweat glands
- d. Mammary gland

Clinical correlations

1. Cyanosis
2. Jaundice
3. Erythema
4. Pallor

A. Superficial fascia

Functions:

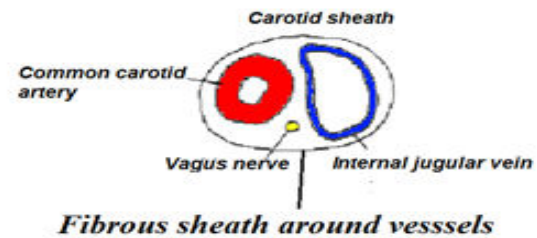
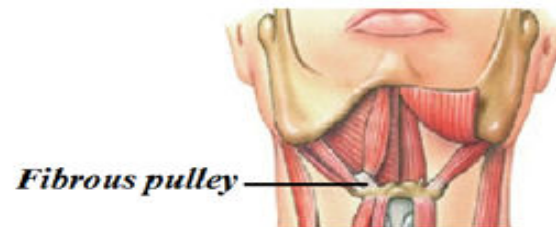
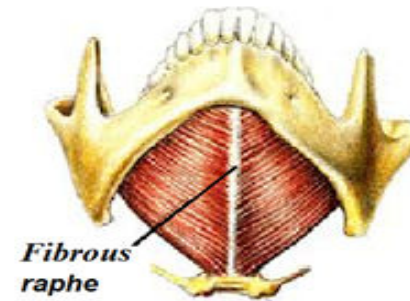
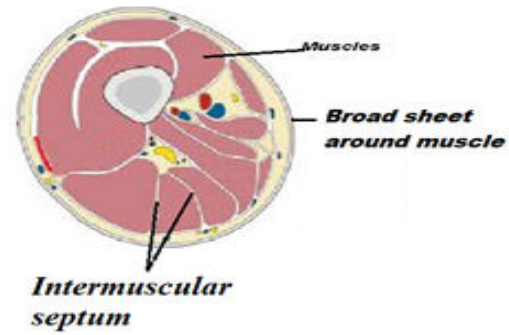
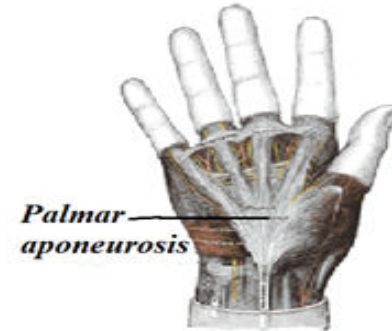
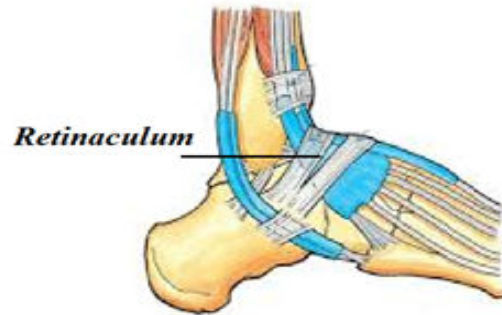
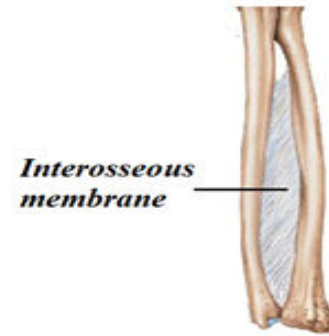
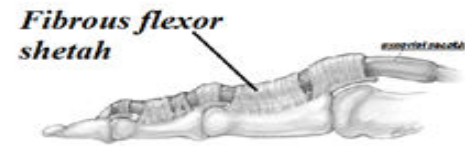
1. thermal insulator.
2. giving the body its contour and shape especially in females.
3. It facilitates the movement of the skin over the underlying structures.
4. Acts as a conducting medium.
5. It contains skin muscles: e.g. as in the face.
6. It contains special types of glands: mammary gland, deeply situated sweat glands and superficial lymph nodes.

B. Deep fascia

- It is an inelastic membrane formed of dense connective tissue.
- Formed mainly of compact and regular collagen fibers.
- Site:
 - Well defined in the limbs.
 - Very strong and thick in palm and sole.
 - absent in the face and anterior wall of the abdomen.

Parts and functions of deep fascia

1. Formation of broad sheets that surround muscles.
2. Formation of sheaths around big blood vessels.
3. Formation of intermuscular septa.
4. Formation of interosseous membranes.
5. Formation of palmar aponeurosis in the hand, and plantar aponeurosis in the sole of the foot.
6. Formation of retinacula.



Quiz

1. The epidermis is composed of
 - a. simple squamous epithelium.
 - b. keratinized stratified squamous epithelium
 - c. simple cuboidal epithelium
 - d. stratified cuboidal epithelium.

2. All of the following are functions of the skin except:

a. protection

b. vitamin B synthesis

c. excretion

d. temperature regulation

e. sensation

3. Skin color is due to all of the following factors except:

- a. Melanin
- b. hemoglobin in blood capillaries.
- c. carotene.
- d. keratin.

4. One of the following is not a part of deep fascia:

- a. Retinacula
- b. Tendon
- c. Intermuscular septa
- d. Interosseous membranes
- e. Palmar and planter aponeuroses

Thank you