

University of Anbar  
College of Dentistry



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Course: Terminology

Asst. Inst. Noor H. Aljanaby

# Terminology

# Integumentary System

# Integumentary System

- ▶ The skin and its accessory organs are called the **Integumentary System**. This bodycovering system protects against infection, dehydration, ultraviolet radiation, and injury.
- ▶ The **Integumentary System** (comes from the Latin word *integumentum* which means **covering** or **shelter**) includes:
  - ▶ the **skin** which covers the entire body
  - ▶ **hair**
  - ▶ **nails**
  - ▶ **sebaceous glands**
  - ▶ **sweat glands**

# Functions of the Skin

- ▶ The skin is the largest organ of the body. The functions of the skin are:
  - ▶ **Protection:** Protect against injury.
    - Protect against the sun UV(ultraviolet) rays.
    - Prevent entry of harmful microorganisms.
  - ▶ **Thermoregulation (Temperature Regulator):** Maintain the proper internal body temperature.
  - ▶ **Waste Elimination:** Excrete waste materials through perspiration.
  - ▶ **Sensory Organ:** Function as a sense organ for the body to feel pain, cold, heat, touch, and pressure.

# Skin Layers Components

The skin is composed of two main layers: **epidermis** and **dermis**.

## 1. **Epidermis** (from *epi*, meaning “upon or over” and *derm*, meaning “skin”)

- ▶ It is the skin’s **outer** layer.
- ▶ It is composed of several layers of epithelial tissue.
- ▶ It contains no blood vessels or nerves in it.
- ▶ It receives its nourishment from the dermis.
- ▶ The epidermis contains in its deepest layers the **melanocytes**.
- ▶ The **melanocytes**: they are cells that can produce melanin.
- ▶ The **melanin**: is dark pigment that is present in the skin and other parts of the body. It gives the skin its color and help to protect against sunlight.

# Skin Layers Components

## 2. Dermis (also called **corium**):

- The deeper layer of skin that lies below the epidermis.
- The dermis is attached through subcutaneous tissue to underlying structures such as muscle and bone.
- This layer supplies **nourishment** and **support** for the skin.
- It contains **blood vessels, nerves, hair follicles, sebaceous glands** and **sweat glands**.
- The **hair follicles** produce hair. **Hair** is composed of keratin.
- **Keratin**: is a hard protein that forms the hair and nails.

# Associated Skin Structures

Specialized structures within the skin are part of the integumentary system:

## ➤ Hypodermis

- Also called the **subcutaneous layer**.
- The layer of tissue beneath the skin.
- It serves as a supportive layer that connects the skin to the underlying muscles and bones.
- It is composed primarily of: adipose tissue (fat), connective tissue, blood vessels and nerves.

# Associated Skin Structures

- **Hair:** A threadlike keratinized outgrowth from the skin (root: **trich/o**).
- **Nails:** A nail is platelike keratinized outgrowth of the skin that covers the dorsal surface of the terminal phalanges (root: **onych/o**).
- **Glands:**
  - The **sweat (*sudoriferous*) glands** act mainly in temperature regulation by releasing a watery fluid that evaporates to cool the body. (root: **hidr/o**)
  - The **sebaceous glands** release an oily fluid, sebum, that lubricates the hair and skin and prevents drying. (root: **seb/o**)

# Roots Pertaining to the Integumentary System

Roots Pertaining to the Skin and Associated Structures			
Root	Meaning	Example	Definition of Example
<b>derm/o,</b> <b>dermat/o</b>	skin	dermabrasion (derm-ah-BRA-zhun)	surgical procedure used to resurface the skin and remove imperfections
<b>kerat/o</b>	keratin, horny layer of the skin	keratinous (keh-RAT-ih-nus)	containing keratin; horny
<b>melan/o</b>	dark, black, melanin	melanosome (MEL-ah-no-some)	a small cellular body that produces melanin
<b>hidr/o</b>	sweat, perspiration	anhidrosis (an-hi-DRO-sis)	absence of sweating
<b>seb/o</b>	sebum, sebaceous gland	seborrhea (seb-or-E-ah)	excess flow of sebum (adjective: seborrheic)
<b>trich/o</b>	hair	trichomycosis (trik-o-mi-KO-sis)	fungal infection of the hair
<b>onych/o</b>	nail	onychias (o-NIK-e-ah)	inflammation of the nail and nail bed (Note: not an <i>itis</i> ending)

# Some Terms Pertaining to the Integumentary System

- ▶ **Dermatology:** is the medical specialty that deals with the skin. It is the study of skin and skin diseases.
- ▶ **Dermatologist:** the physician who specializes in the diagnosis and treatment of skin disorders.
- ▶ **Dermatopathology:** is study of diseases of the skin.
- ▶ **Trichology:** study of the hair.
- ▶ **Hyperhidrosis:** excess production of sweat.
- ▶ **Dermatome:** instrument for cutting the skin.
- ▶ **Keratogenesis:** formation (genesis) of keratin.
- ▶ **Melanoma:** a tumor containing melanin.
- ▶ **Melanocyte:** a cell that produces melanin.

# Skin Disorders

- **Skin lesion:** means any wound or injury to the skin.
- **Burns:** tissue injuries caused by contact with thermal, chemical, electrical, or radioactive agents.
- **Dermatitis:** inflammation of the skin. The skin becomes **erythematous** (means the skin becomes red) and **pruritic** (means itchy) and sometimes edema. (edema= swelling)
- **Epidermatitis:** inflammation of the epidermis layer only.
- **Dermatolysis (Dermolysis):** loosening or separation of the skin.
- **Onychomalacia:** softening of the nail(s).
- **Keratosis:** condition of thickened skin.

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- **Abscess:** localized collection of pus at the site of an infection.
  - **Acne:** inflammatory disease of the sebaceous glands and hair follicles of the skin.
  - **Eczema:** it is type of chronic dermatitis; the skin becomes red and itchy.
  - **Hidradenitis:** inflammation of a gland that produces sweat/ perspiration.
  - **Onychomycosis:** a fungal infection of a nail.
  - **Psoriasis:** inflammatory condition that affect the skin causing red circles and silvery scale.
  - **Pyoderma:** presence of pus in the skin.
  - **Scleroderma:** hardening of the skin.

# Exercises

Identify and define the roots in the following words.

	Root	Meaning of Root
1. hypodermis ( <i>hi-po-DER-mis</i> )	_____	_____
2. seborrheic ( <i>seb-o-RE-ik</i> )	_____	_____
3. hypermelanosis ( <i>hi-per-mel-ab-NO-sis</i> )	_____	_____
4. dyskeratosis ( <i>dis-ker-ab-TO-sis</i> )	_____	_____
5. hypohidrosis ( <i>hi-po-hi-DRO-sis</i> )	_____	_____
6. hypertrichosis ( <i>hi-per-trih-KO-sis</i> )	_____	_____
7. eponychium ( <i>ep-o-NIK-e-um</i> )	_____	_____

Fill in the blanks.

8. Dermatopathology (*der-mah-to-pah-THOL-o-je*) is study of diseases of the \_\_\_\_\_.
9. Keratolysis (*ker-ab-TOL-ih-sis*) is loosening of the skin's \_\_\_\_\_.
10. A melanocyte (*MEL-ab-no-site*) is a cell that produces \_\_\_\_\_.
11. Trichoid (*TRIK-oyd*) means resembling a(n) \_\_\_\_\_.
12. Onychomycosis (*on-ih-ko-mi-KO-sis*) is a fungal infection of a(n) \_\_\_\_\_.
13. Hidradenitis (*hi-drad-eh-NI-tis*) is inflammation of a gland that produces \_\_\_\_\_.
14. A hypodermic (*hi-po-DER-mik*) injection is given under the \_\_\_\_\_.



Write words for the following definitions.

15. loosening or separation of the skin

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16. study of the skin and skin diseases

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17. softening of a nail

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18. excess production of sweat

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19. study of the hair

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20. instrument for cutting the skin

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21. formation (-genesis) of keratin

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22. a tumor containing melanin

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Use *-derma* as a suffix meaning “skin” to write words for the following. Use the word part appendices if needed.

23. hardening of the skin

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24. presence of pus in the skin

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