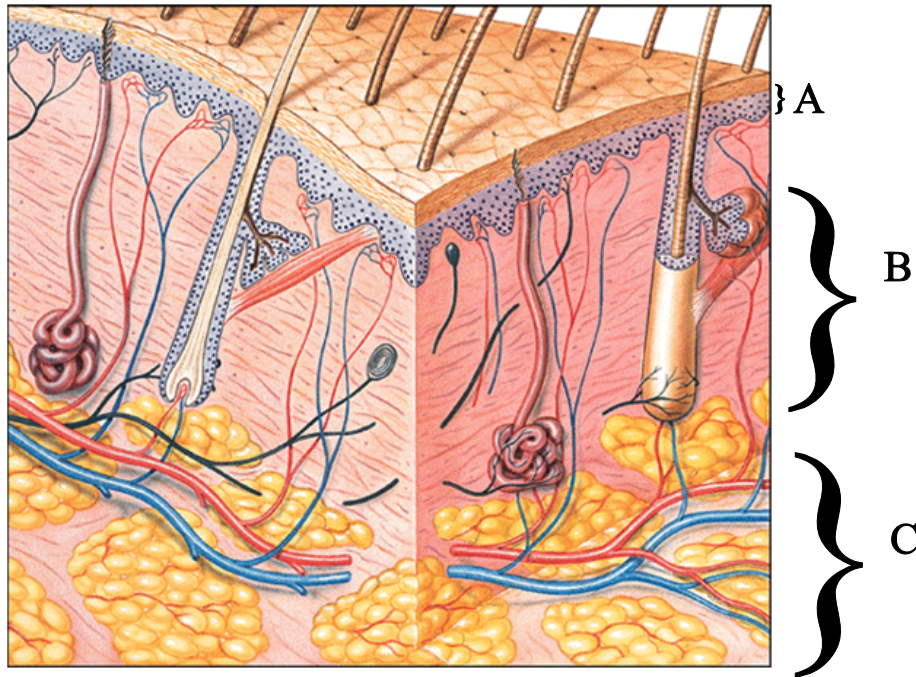


## CHAPTER 5: THE INTEGUMENTARY SYSTEM

**READING ASSIGNMENT:** Read pages 153-170 and 173-175. Omit Response to injury on pages 170-172.

### I. Overview



A.

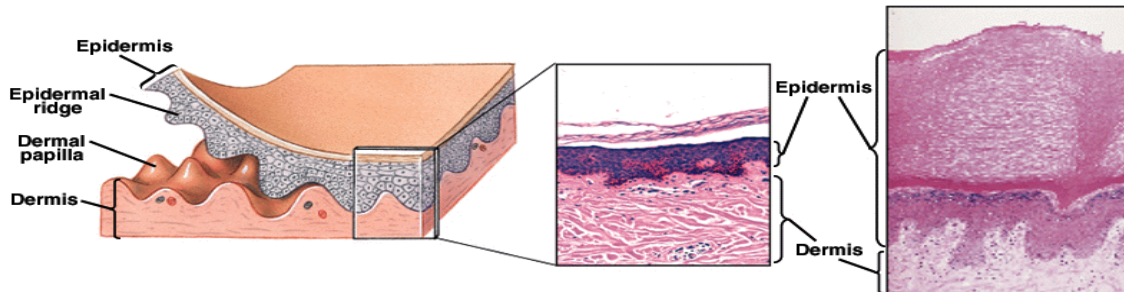
B.

C.

## II. MAJOR COMPONENTS OF THE INTEGUMENTARY SYSTEM

### A. The Epidermis

- 1) Tissue
- 2) Cells
- 3) Layers: thick vs thin



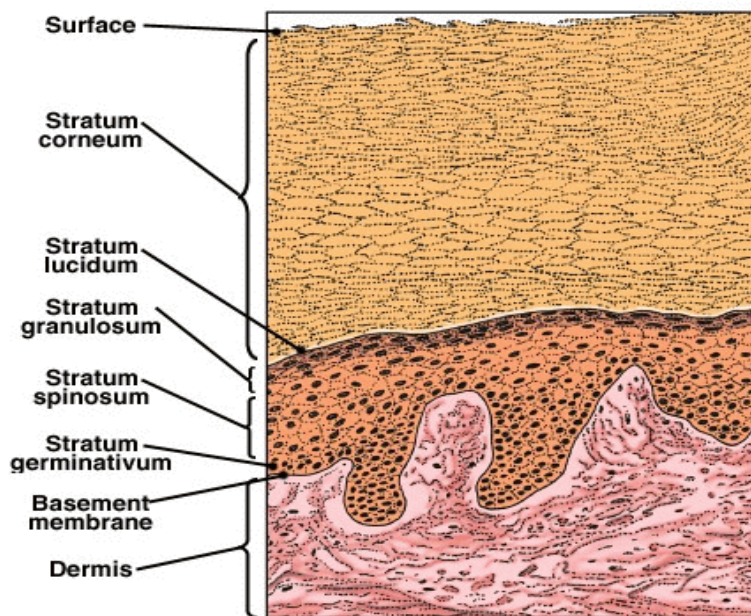
a) Stratum corneum - 25-30 rows of dead squamous cells (flat), keratinization (cornification) present.

b) Stratum lucidum - present in thick skin only, clear layer, keratinocytes are flat, packed tightly together.

c) Stratum granulosum - darkly staining layer of 3-5 rows of keratinocytes, keratinocytes stop dividing and synthesize waterproofing proteins (keratohyaline and keratin)

d) Stratum spinosum - 8-10 rows of keratinocytes bound together by desmosomes

e) Stratum germinativum (basale) - single layer of cells attached to basement membrane that separates epidermis from dermis



**B. The Dermis**

Tissue

1) Papillary layer -

2) Reticular layer -

**C. The Hypodermis (subcutaneous layer)**

**ASSIGNMENT: Read pages 158-159 and describe the factors responsible for skin color.**

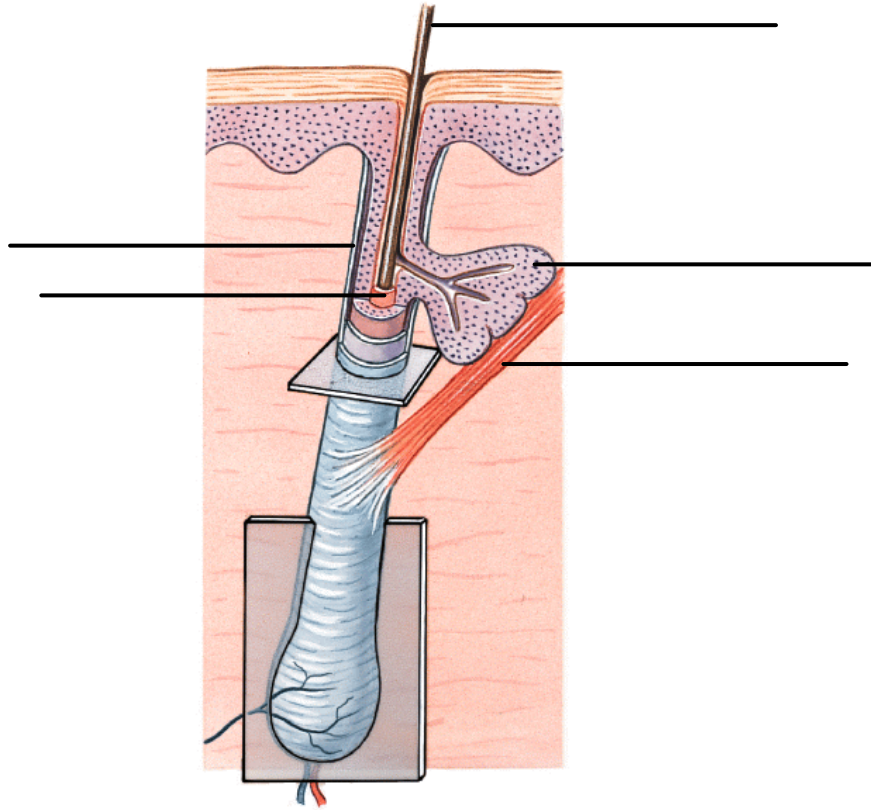
1) What are the two pigments responsible for skin color? What is the function of the pigments?

2) What is the role of melanocytes?

3) What accounts for the differences in color between Caucasian and dark-skinned individuals?

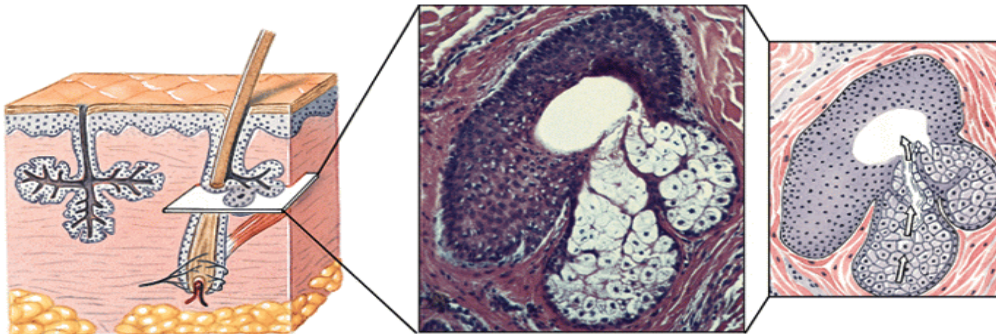
4) How do blood vessels in the dermis contribute to skin color?

## II. Accessory Structures

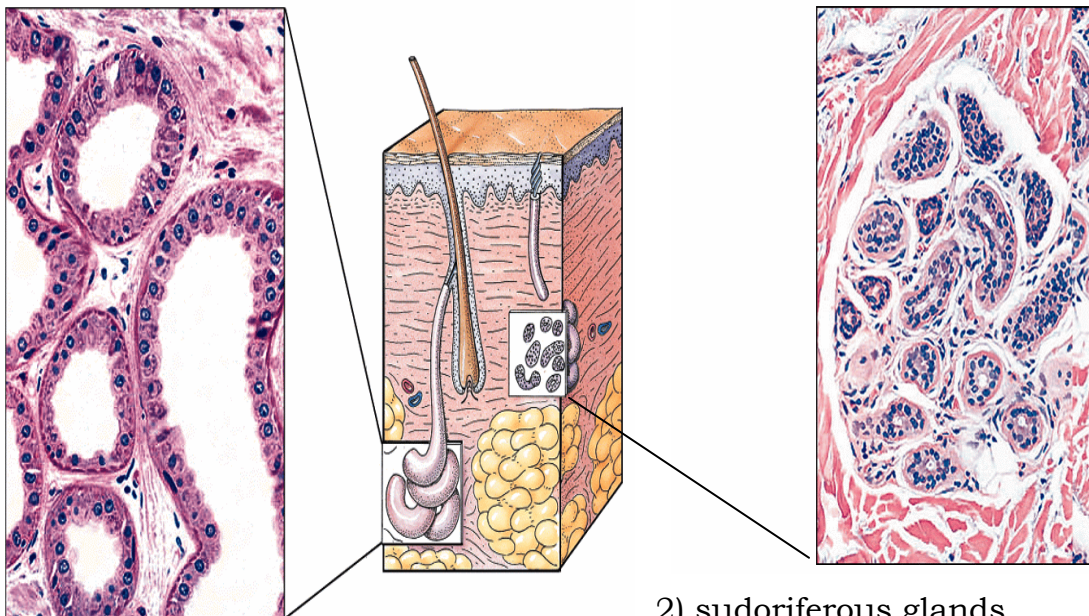


### A. Hair

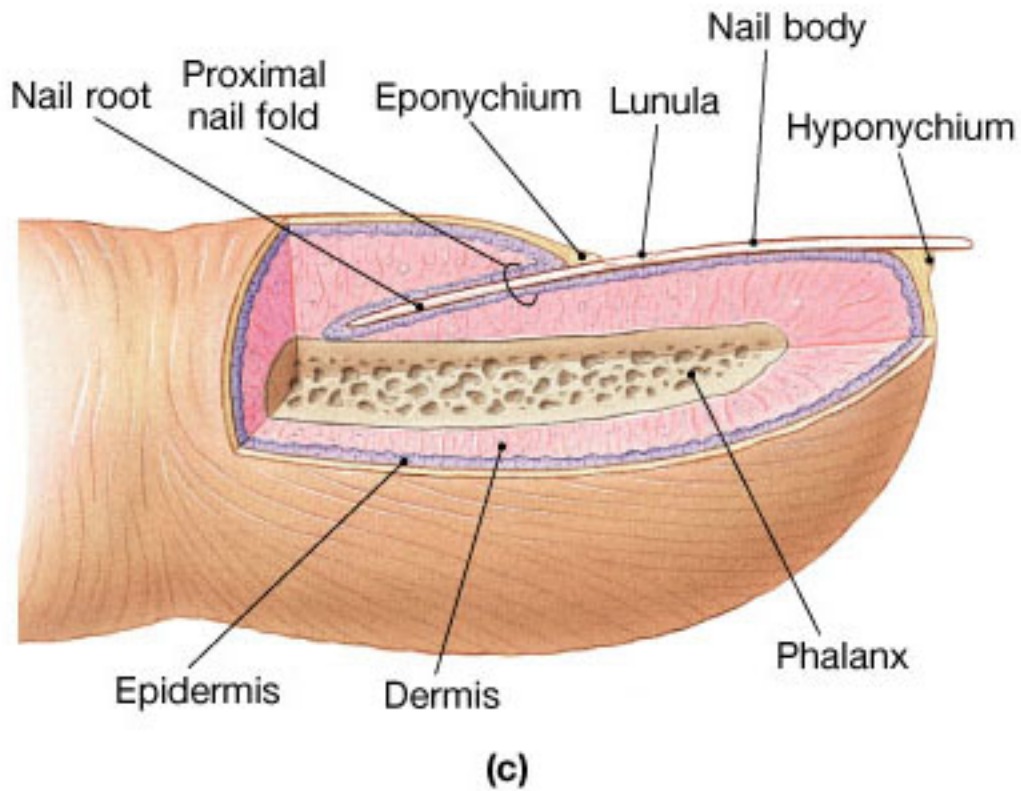
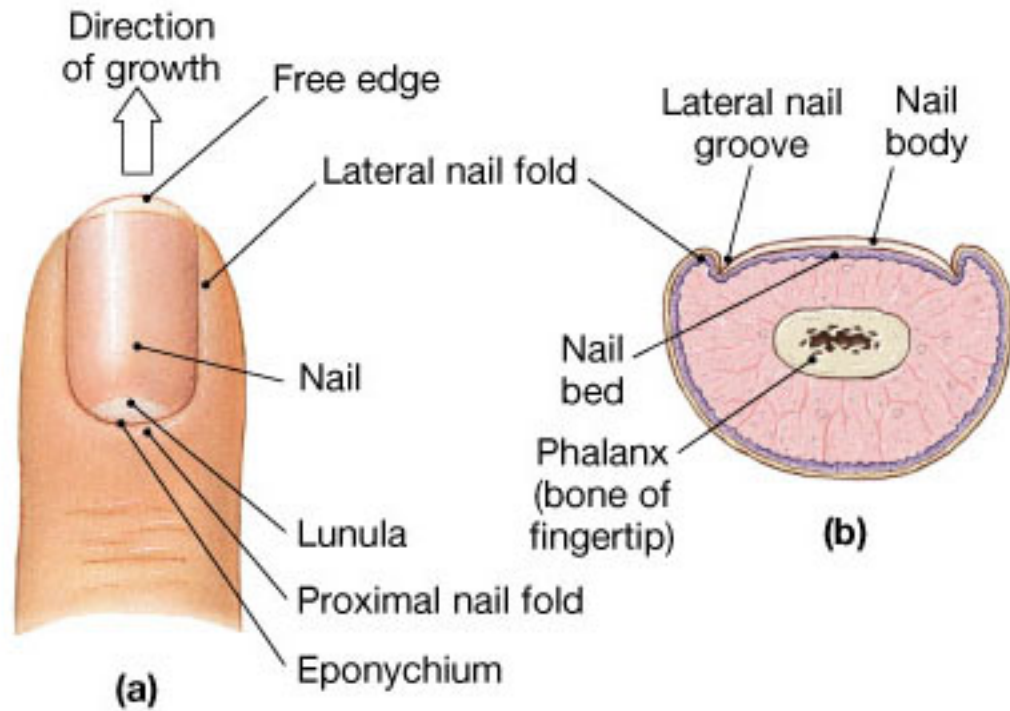
1) sebaceous glands



B. Glands



### C. Nails



**FUNCTIONS OF THE INTEGUMENTARY SYSTEM**

## ASSIGNMENTS

### Lecture Guide

- 1) List the major components and accessory structures of the integumentary system in the table below.

Major Components	Accessory Structures

- 2) What are the major functions of the skin?
- 3) Which part(s) of the integuments have a blood supply? nerves and receptors? adipose tissue? connective tissue? epithelial tissue?
- 4) Order the layers of the epidermis from deepest to most superficial.
- 5) Describe the structure of hair. What secretions maintain the health of hair? What do these secretions contribute to maintain healthy hair? What determines hair color?
- 6) Define: sebaceous gland, sudoriferous gland, apocrine gland, merocrine gland, sebum, mammary gland, ceruminous glands.
- 7) What causes goose bumps?
- 8) Name the parts of a nail. How do nails grow?
- 9) How does the skin help to maintain body temperature?
- 10) What causes skin color (darkness) to vary among individuals? Mickey Montour blushed when he locked his keys in his car on a date with Harriet Hartline. What caused his face to turn red?

### Textbook Chapter 5 (pages 177)

Level 1 Reviewing Facts and Terms: 1-5, 7-10, 12, 14, 15, 17

Level 2 Reviewing Concepts: 22-24

Level 3 Critical Thinking and Clinical Application: 28

### Study Guide (pages 87-102)

- (L1) Multiple Choice: 1-3, 5-11, 14-17, 19-22, 24, 25, 28  
 Completion: 1, 3, 4, 8-18  
 Drawing/Illustration Labeling: Fig. 5.1-Fig 5.3  
 Matching: 1-4, 6, 9-11
- (L2) Concept Map I, II, and III  
 Body trek  
 Multiple choice 13  
 Short Essay: 1-3, 8
- (L3) Critical Thinking/Application: 1, 2, 7

Answers are located in the back of the study guide.