

# Integumentary System Study Guide

## Latin and Greek Roots

Give an example of a word from this chapter that contains each prefix or suffix.

Latin/Greek Root	Meaning	Example
a-	Without	
Cut-	Skin	
Cyan	Dark Blue	
Epi-	Above	
Flamm-	Flame	
Hypo-	Below	

Latin/Greek Root	Meaning	Example
Mal-	Ill, bad	
Melan-	Black	
-oma	Tumor	
rect-	Straight	
Strat-	Layer	

## Vocabulary

1. **Epidermal Ridges** -
2. **Keratin** -
3. **Melanocytes** –
4. **Freckles** -
5. **Sebum** -
6. **Scar Tissue** -

## Short Answer

7. Which layer of the skin (**Epidermis**, **Dermis**, or **Hypodermis**) is responsible for or contains the structures needed for the following functions?
  - a. Protection –
  - b. Lipid Storage –
  - c. Sensory Reception –
  - d. Cooling Body Temperature –

8. What specifically differentiates **thick skin** from **thin skin**? What areas of the body have thick skin?
9. Place each of these thin skin strata in the epidermis in order from youngest (1) to oldest(4).
- \_\_\_\_\_ Stratum corneum
- \_\_\_\_\_ Stratum granulosum
- \_\_\_\_\_ Stratum basale
- \_\_\_\_\_ Stratum spinosum
10. Why does the stratum basale form epidermal ridges? How are these ridges visible to us?
11. Describe how skin cells change as they move from the lower layer up. When do they stop dividing? At what point are they the most heavily keratinized? At what point do they die?
12. Why does skin peel off in sheets instead of just one cell at a time?
13. Why would human evolution favor skin with more melanin in areas near the equator, and skin with less melanin in areas closer to the poles?
14. List the three types of skin cancer, and explain which cells they affect. Which is the most dangerous?

15. Use the ABCD rule to identify which of these two moles is more likely to be cancerous.



16. What type of tissue is found in the upper layers of the epidermis? What is found in the dermis? The subcutaneous layer?
17. What layer is tattoo ink injected into. Why this layer?
18. What determines the border between hair shaft and hair root?

19. What is the purpose of hair?
20. The arrector pili muscle is a vestigial structure in humans. What purpose does it serve in other animals?
21. What is the relationship between sebum and acne?
22. Compare apocrine sweat glands and merocrine sweat glands. What does each secrete? Which is responsible for body odor?
23. Describe what occurs during each of these stages of wound repair:
- a. Inflammation –
  - b. Scab formation –
  - c. Scar tissue formation –
24. Compare the roles of fibroblasts and macrophages in skin repair.
25. What is the underlying change that occurs in skin to account for each of these symptoms of aging?
- a. Increased injury and infection rate –
  - b. Reduced bone strength –
  - c. Grey or white hair color –
  - d. Wrinkling –
26. Compare how skin visibly changes during cyanosis and jaundice. What is the underlying cause of each?
27. What causes rickets?

28. What is botox, and how does it help to remove wrinkles in skin?
29. Give an example of a fungal infection, bacterial infection, and viral infection of the skin. Which can be treated with antibiotics?
30. Describe the difference between the effects of first-degree, second-degree, and third-degree burns.

## Skin Anatomy

Be able to label each of the following structures or regions of skin: **hypodermis, dermis, epidermis, meocrine sweat gland, hair follicle, hair shaft, sebaceous gland, adipose tissue, blood vessel, arrector pili.**

