
4 Body Tissues and Membranes

Chapter Outline

Body Tissues

- Epithelial Tissue
- Connective Tissue
- Muscular Tissue
- Nervous Tissue

Body Membranes

- Mucous Membranes
- Serous Membranes
- Synovial Membranes
- Meninges
- Cutaneous Membrane

Learning Objectives

1. Describe the general characteristics and functions of epithelial tissues.
2. Name the major types of epithelial tissues, and relate each one to a particular organ.
3. Describe the general characteristics and functions of connective tissues.
4. Name the major types of connective tissues, and relate each one to a particular organ.
5. Describe the general characteristics and functions of muscular tissues.
6. Name the major types of muscular tissues, and relate each one to a particular organ.
7. Describe the general characteristics and functions of nervous tissue.
8. Name the different types of membranes, and relate each one to a particular location in the body.
9. State the names and locations of the serous membranes found in the ventral cavity.

Medical Terminology

Medical Term	Meaning
cardi-	heart
end-	within
epi-	upon
leuk-, leuc-	white
peri-	around

What does the term *pericardium* mean?

New Terms

Basic Key Terms

cartilage	matrix	nervous tissue	pseudostratified
connective tissue	meninges	neuroglial cells	serous membrane
cutaneous membrane	mesentery	neuron	stratified
epithelial tissue	mucous membrane	parietal	synovial membrane
lacunae	muscular tissue	peritoneum	visceral

Clinical Key Terms

biopsy
carcinoma
diagnosis

leukemia
lymphoma
Pap smear

pathologist
sarcoma

Study Questions

I. Body Tissues (pp. 49–58)

A. Match the terms on the left with the descriptions of different tissue types on the right. Place the correct letters in the blanks on the left.

- ___ 1. blood
- ___ 2. fibrous connective tissue
- ___ 3. cartilage
- ___ 4. loose connective tissue
- ___ 5. skeletal muscle
- ___ 6. simple columnar epithelium
- ___ 7. simple squamous epithelium
- ___ 8. stratified squamous epithelium

- a. composes the outer layer of the skin
- b. commonly resides beneath epithelium
- c. hyaline and elastic are two types
- d. lines digestive tract
- e. striated and voluntary
- f. plasma is the matrix
- g. one layer of flat cells, covering a surface
- h. establishes the durability of tendons and ligaments

B. Match the terms on the left with the functions of the different tissue types on the right. Place the correct letters in the blanks on the left.

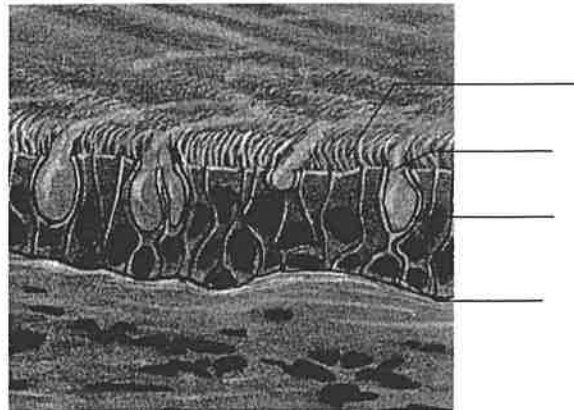
- ___ 1. adipose
- ___ 2. blood
- ___ 3. ciliated columnar epithelium
- ___ 4. fibrocartilage
- ___ 5. fibrous connective tissue
- ___ 6. nervous tissue
- ___ 7. skeletal muscle
- ___ 8. stratified squamous epithelium

- a. attaches muscles to bones
- b. conducts impulses
- c. long-term energy reserve
- d. its erythrocytes carry oxygen
- e. propels egg toward uterus
- f. protects inside of nose and mouth
- g. voluntary movement
- h. withstands pressure between vertebrae

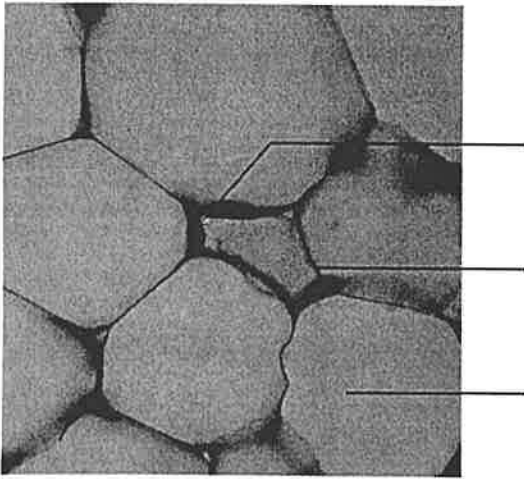


a.

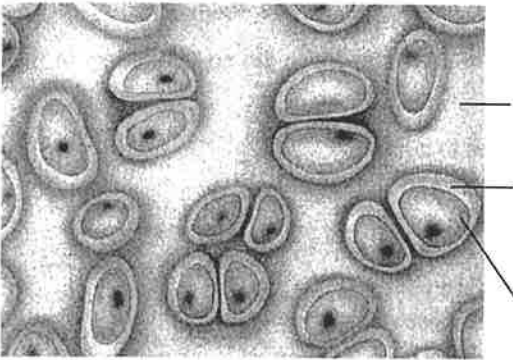
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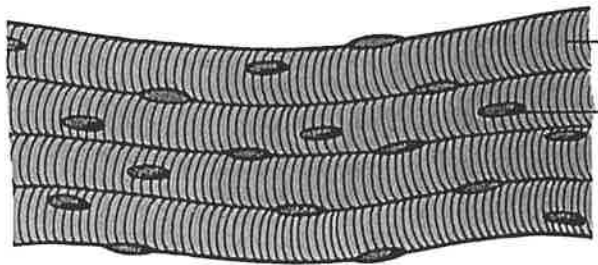
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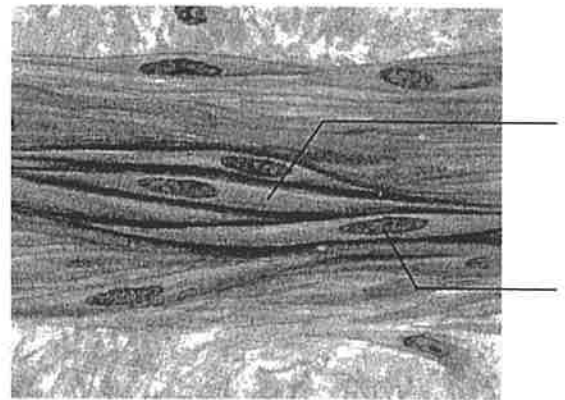
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d.



e.



f.

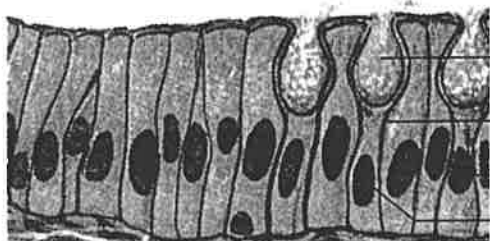
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C. Match the correct drawing (from the text) to each of the following tissue types. Place the correct letters in the blanks on the left.

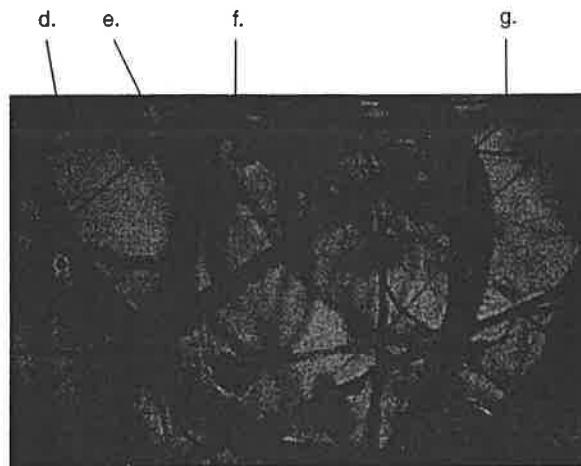
- ___ 1. adipose
- ___ 2. hyaline cartilage
- ___ 3. pseudostratified ciliated columnar epithelium
- ___ 4. skeletal muscle
- ___ 5. simple cuboidal epithelium
- ___ 6. smooth muscle

D. Match each labeled tissue structure in the drawings (from the text) to its correct name in the following list. Place the correct letters in the blanks on the left.

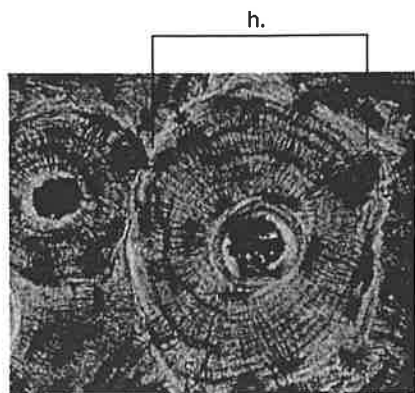
- ___ 1. collagenous fiber
- ___ 2. elastic fiber
- ___ 3. fibroblast
- ___ 4. goblet cell
- ___ 5. ground substance
- ___ 6. Haversian system
- ___ 7. intercalated disk
- ___ 8. mucus
- ___ 9. neuroglial cells
- ___ 10. nucleus for a cardiac muscle cell
- ___ 11. nucleus for a simple columnar epithelial cell
- ___ 12. platelet
- ___ 13. red blood cell
- ___ 14. squamous epithelial cell
- ___ 15. striation
- ___ 16. white blood cell



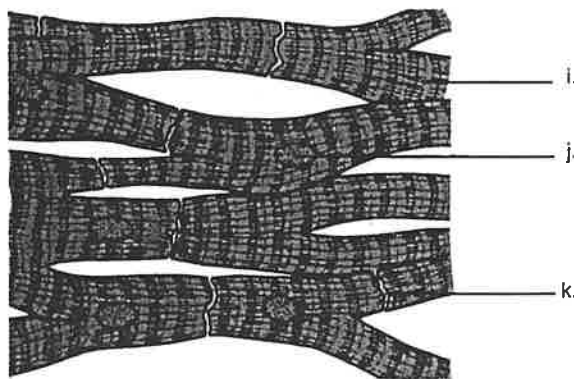
a.
b.
c.



b.
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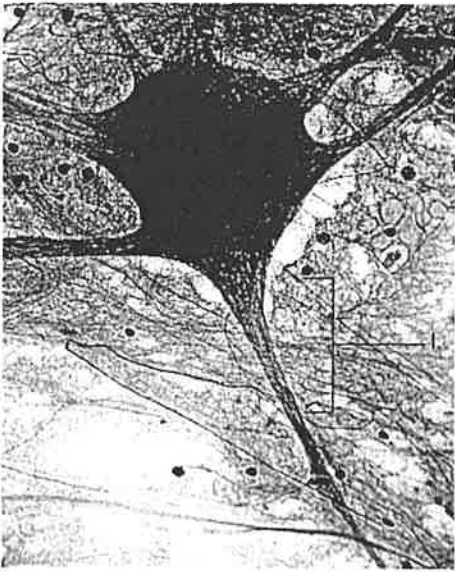


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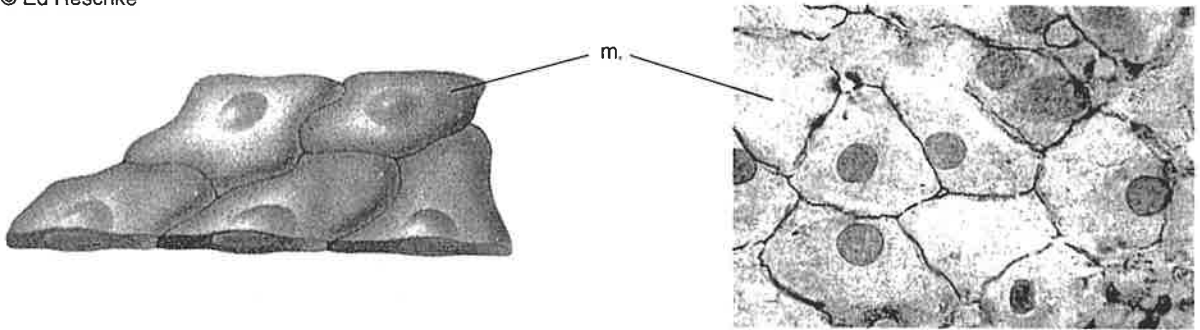
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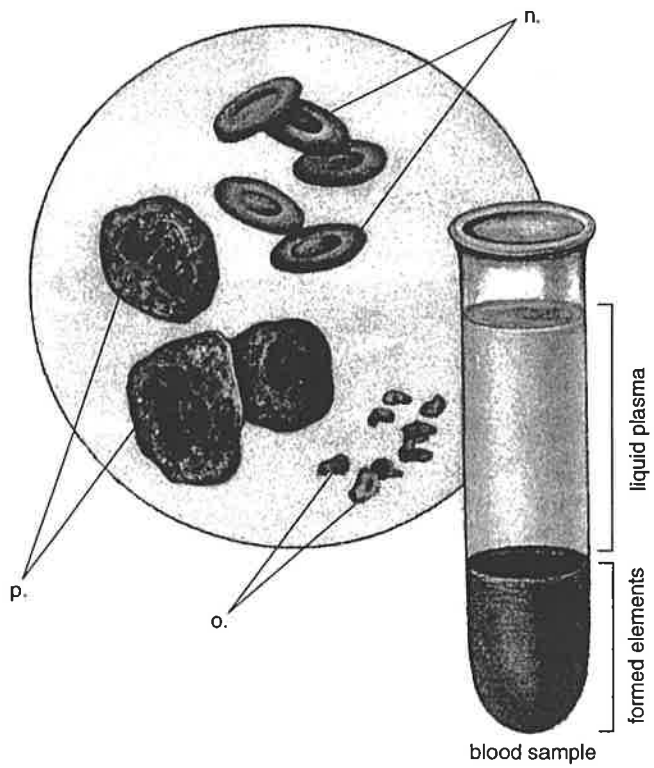
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f.

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B. Match the terms on the left with the descriptions on the right. Place the correct letters in the blanks on the left.

- ___ 1. meninges
- ___ 2. mucous
- ___ 3. serous
- ___ 4. synovial

- a. line joint cavities, allowing free movement
- b. cover the brain and spinal cord
- c. line body cavities sealed off from the external environment
- d. line body tracts communicating with the external environment