TEJIDOS

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NURS 1231

TEJIDOS

- DEFINICION
- TIPOS:
  - TEJIDO EPITELIAL
  - TEJIDO CONECTIVO
  - TEJIDO MUSCULAR
  - TEJIDO NERVIOSO

TEJIDOS EPITELIALES

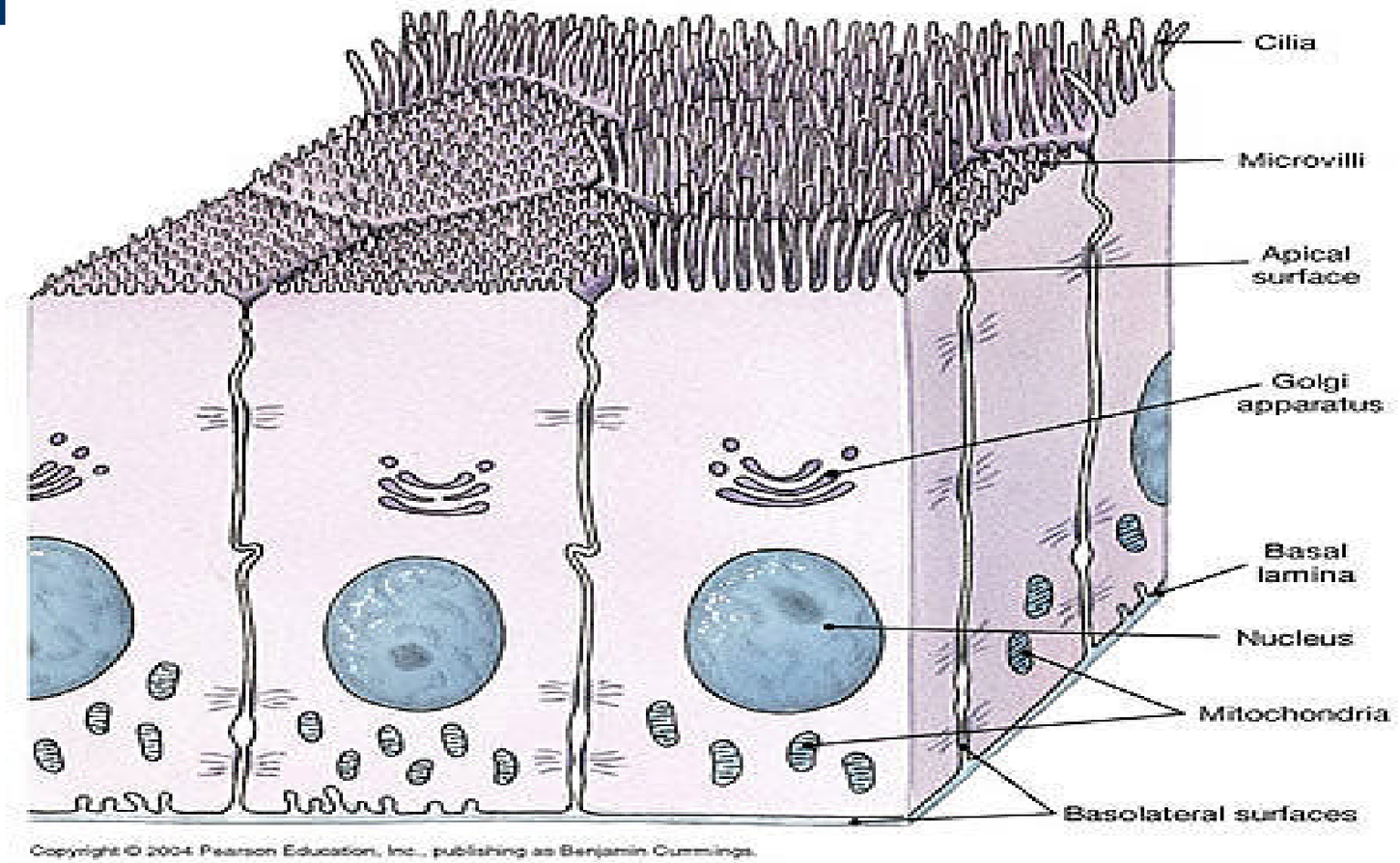
- Cubren superficies
- Uniones especializadas
- Avascular
- Regeneración
- Producción de secreciones

FUNCIONES

- Protección
- Permeabilidad absorción
- Filtración
- Secreción
- Recepción sensorial
- - Tipos:
  - Epitelios de revestimiento
  - Epitelios glandulares.

REGIONES FUNCIONALES

- Superficie Apical
- Superficie Basolateral



UNIONES INTERCELULARES

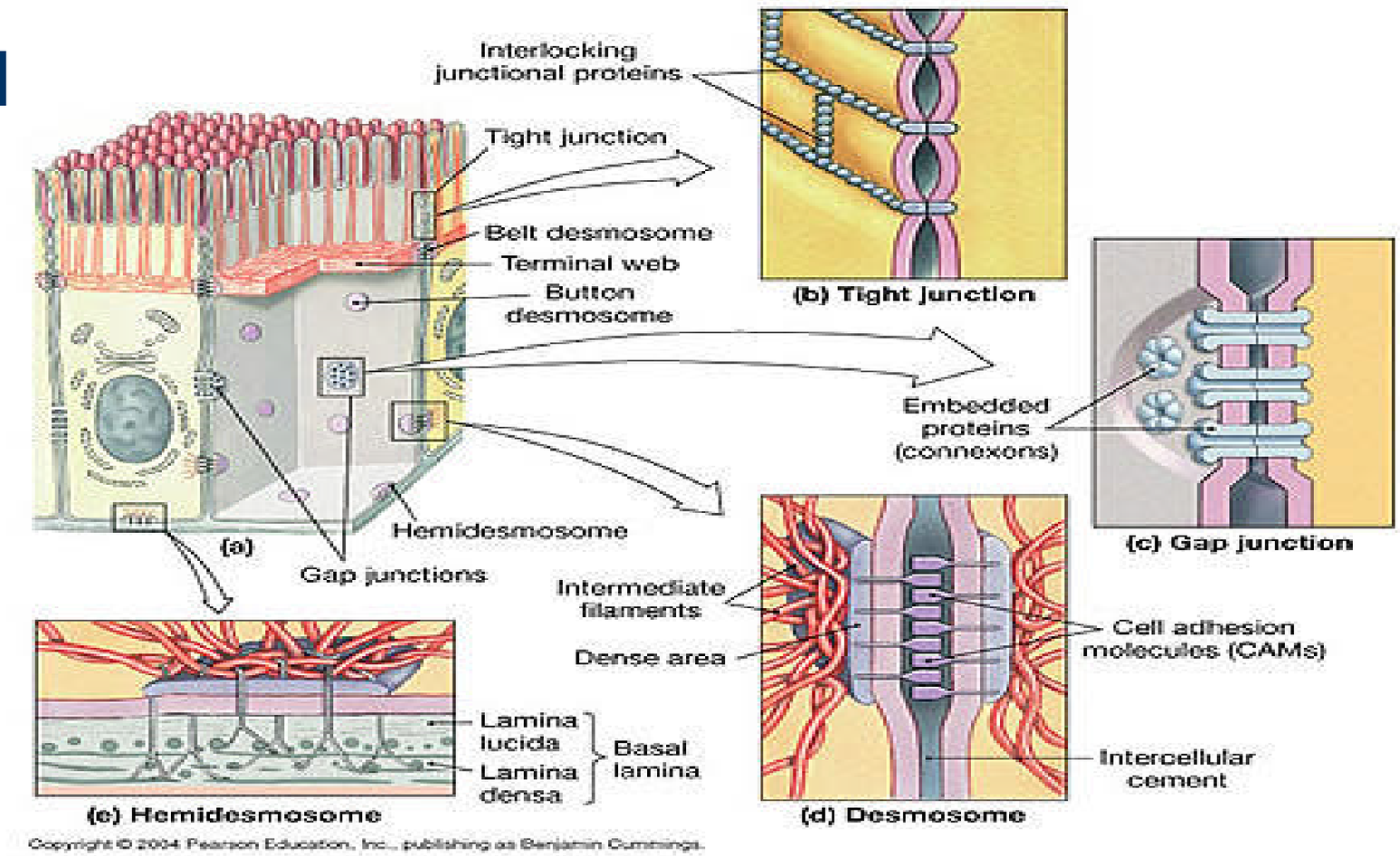


Table. 5.01

TABLE 5.1 TYPES OF TISSUE

TYPE	FUNCTION	LOCATION	DISTINGUISHING CHARACTERISTICS
Epithelial	Protection, secretion, absorption, excretion	Cover body surfaces, cover and line internal organs, compose glands	Lack blood vessels, readily divide; cells are tightly packed
Connective	Bind, support, protect, fill spaces, store fat, produce blood cells	Widely distributed throughout body	Mostly have good blood supply; cells are farther apart than epithelial cells with extracellular matrix in between
Muscle	Movement	Attached to bones, in the walls of hollow internal organs, heart	Able to contract in response to specific stimuli
Nervous	Transmit impulses for coordination, regulation, integration, and sensory reception	Brain, spinal cord, nerves	Cells connect to each other and to other body parts

CRITERIOS DE CLASIFICACIÓN

- **Forma de las células:**
  - ***planas,***
  - ***cúbicas***
  - ***cilíndricas***
- La superficie puede presentar diferenciaciones:
  - capa mucosa
  - cilios o microvellosidades.
- **Número de capas de células:**
  - **simples**
  - **estratificados**

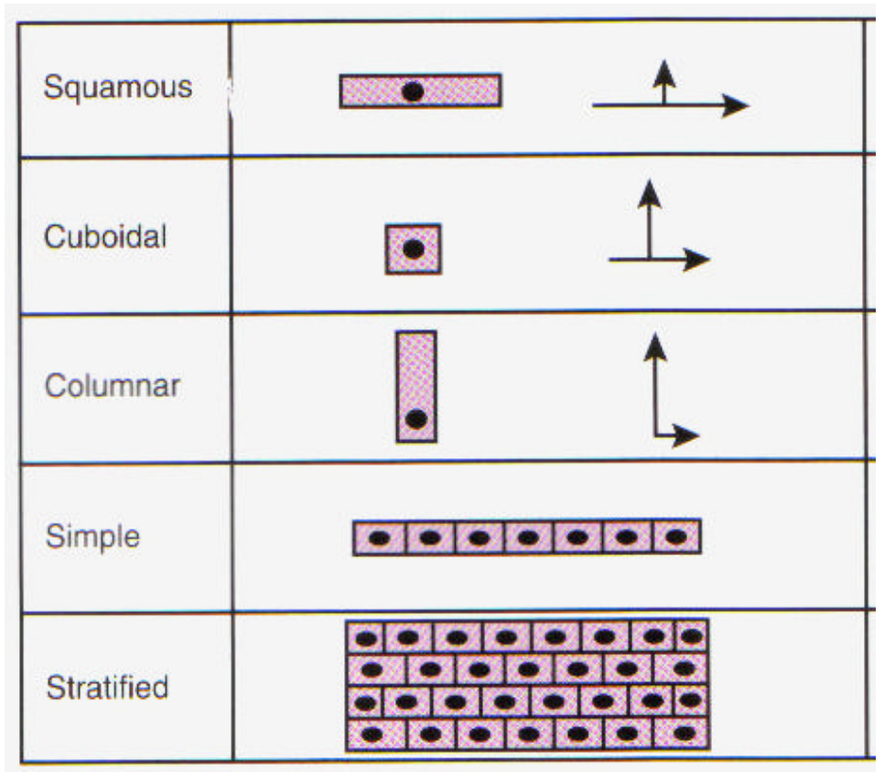
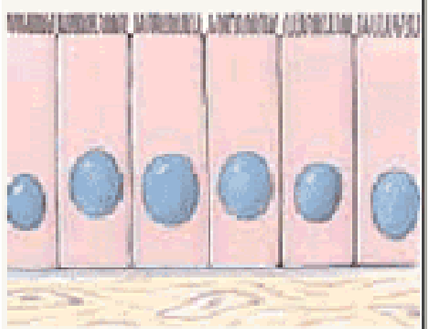
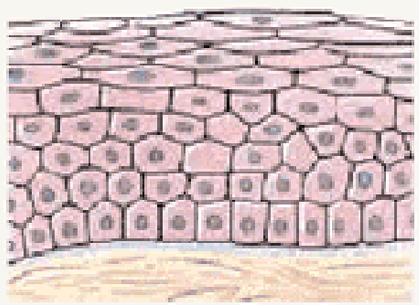
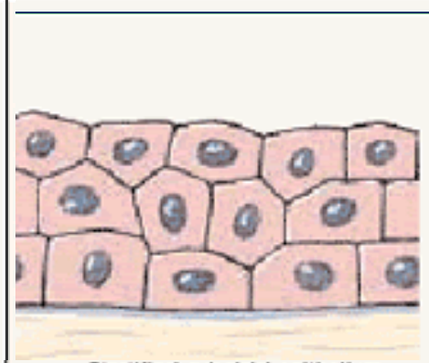
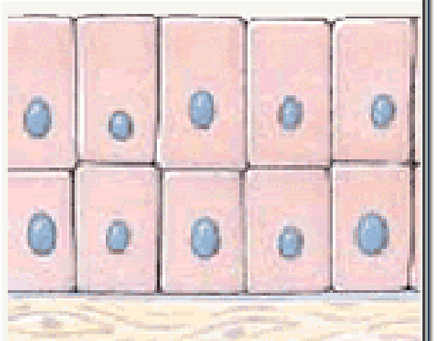
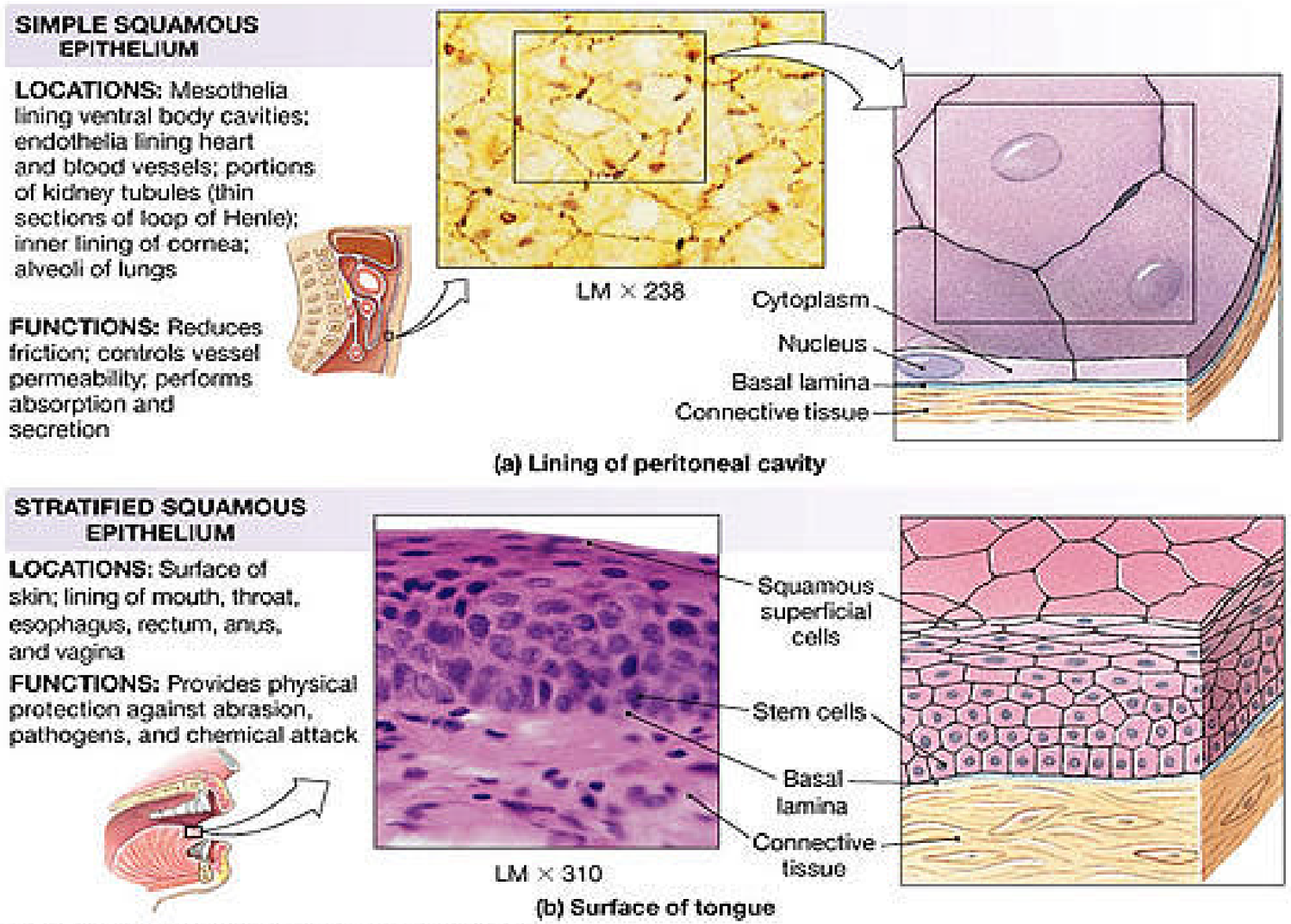
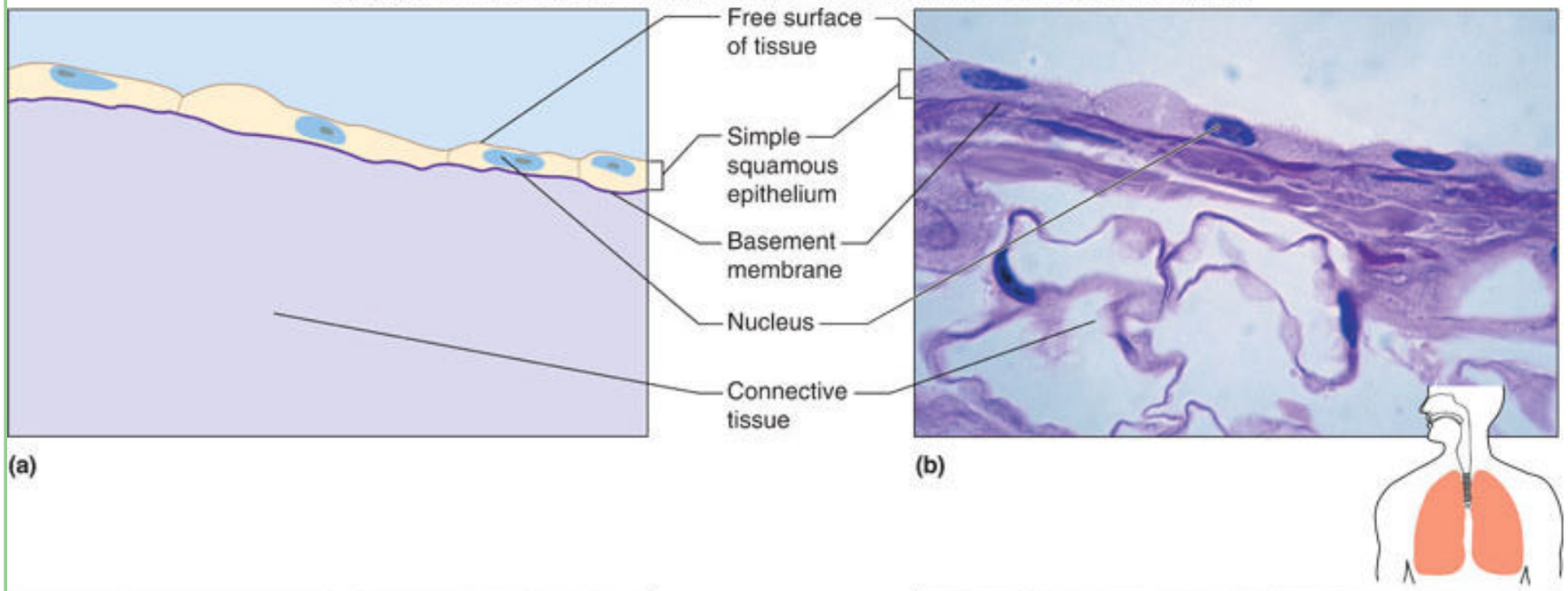


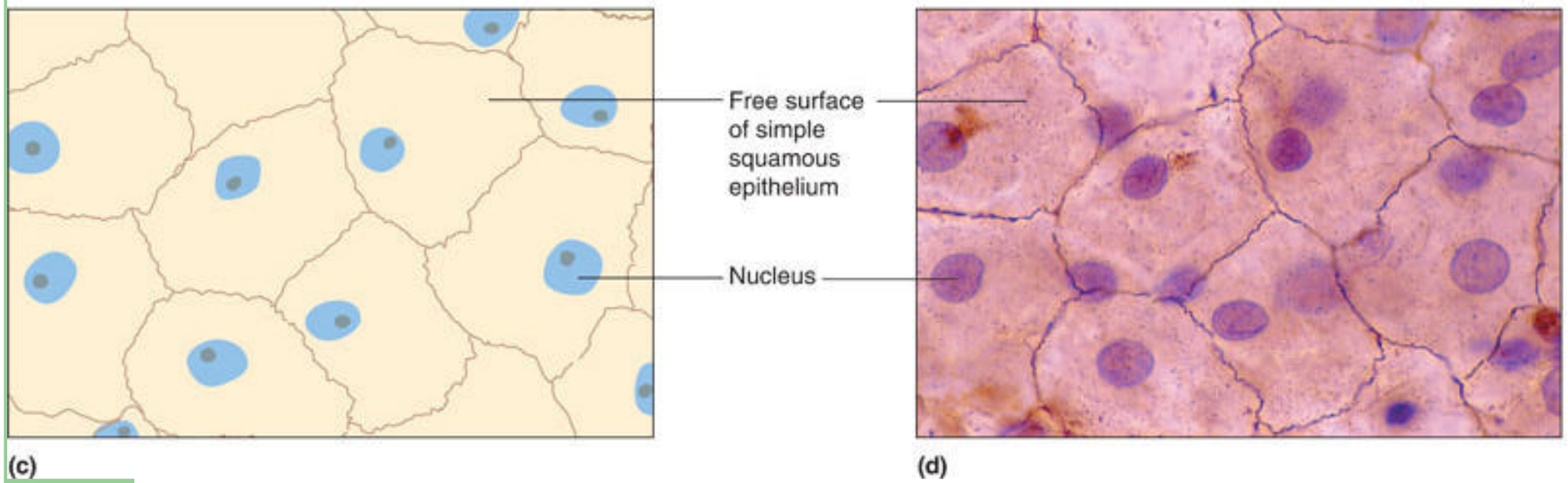
TABLE 4–1 CLASSIFYING EPITHELIA

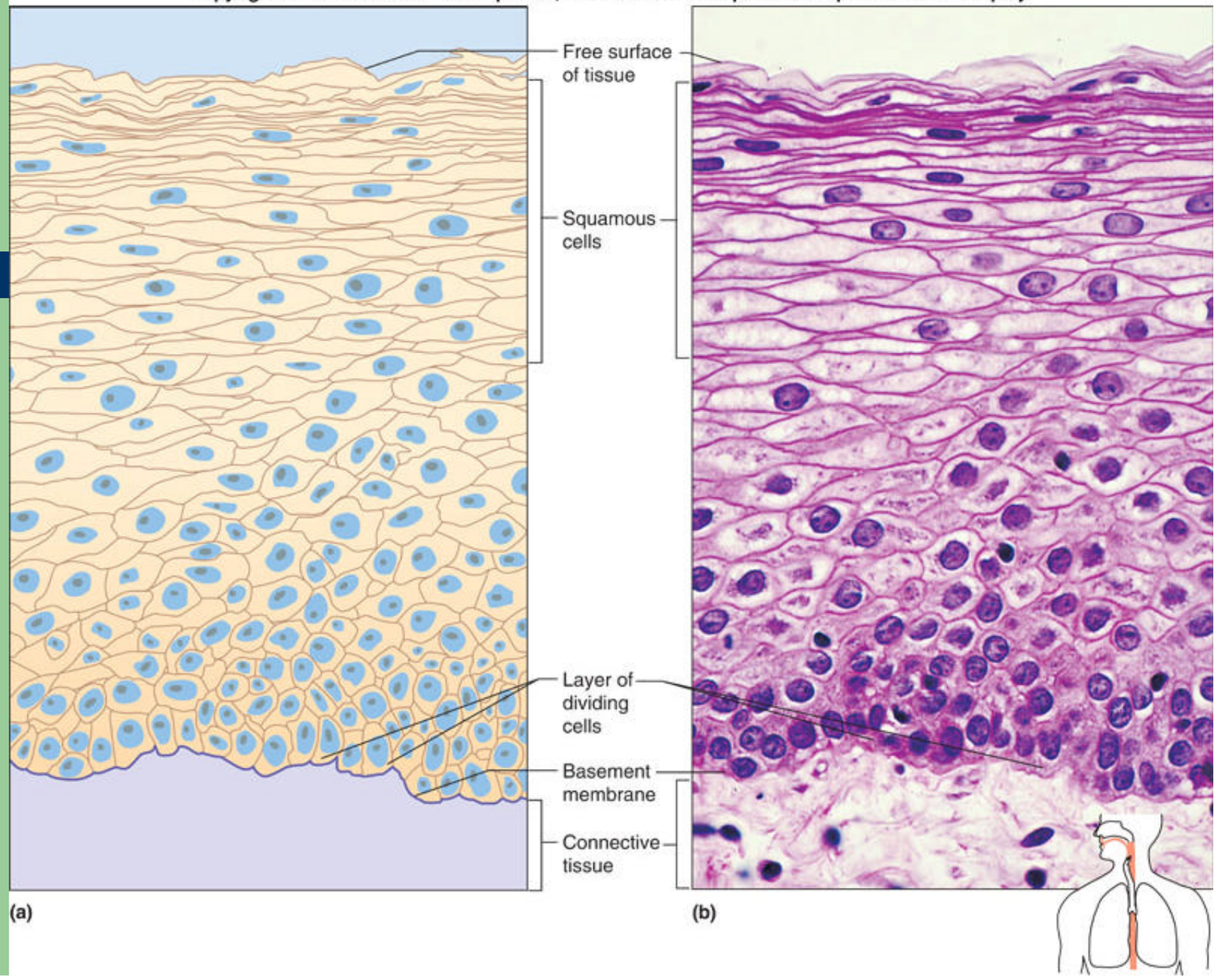
	Squamous	Cuboidal	Columnar
Simple	 Simple squamous epithelium	 Simple cuboidal epithelium	 Simple columnar epithelium
Stratified	 Stratified squamous epithelium	 Stratified cuboidal epithelium	 Stratified columnar epithelium

EPITELIO ESCAMOSO







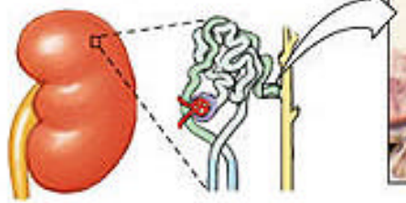


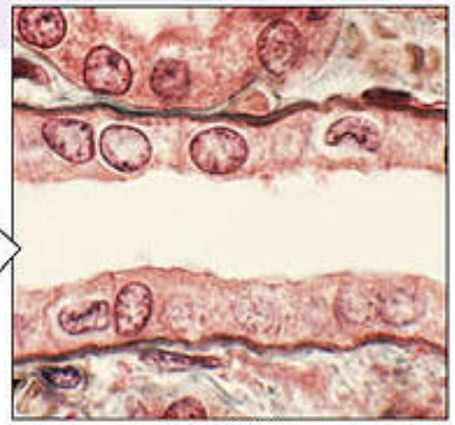
EPITELIO CUBOIDAL

SIMPLE CUBOIDAL EPITHELIUM

LOCATIONS: Glands; ducts; portions of kidney tubules; thyroid gland

FUNCTIONS: Limited protection, secretion, absorption





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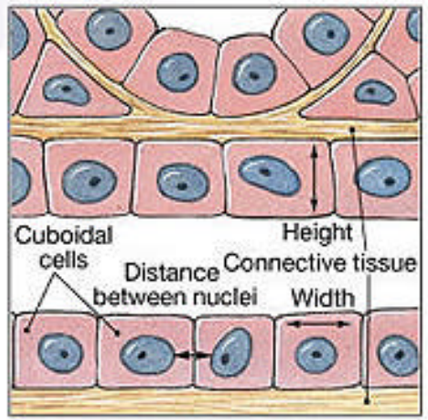
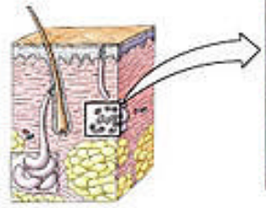


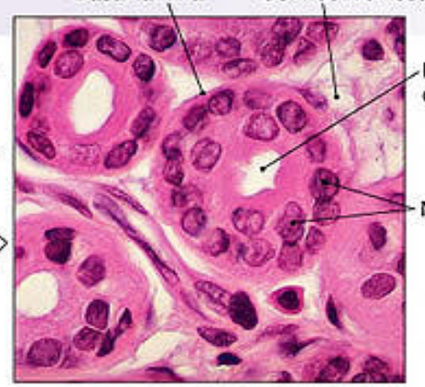
(a) Kidney tubule

STRATIFIED CUBOIDAL EPITHELIUM

LOCATIONS: Lining of some ducts (rare)

FUNCTIONS; Protection, secretion, absorption





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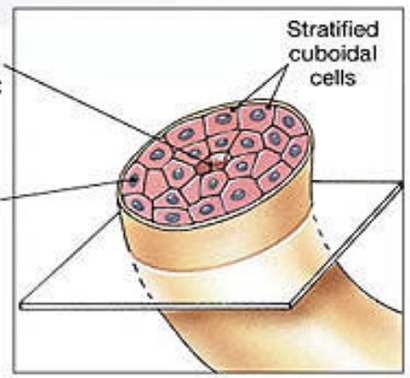
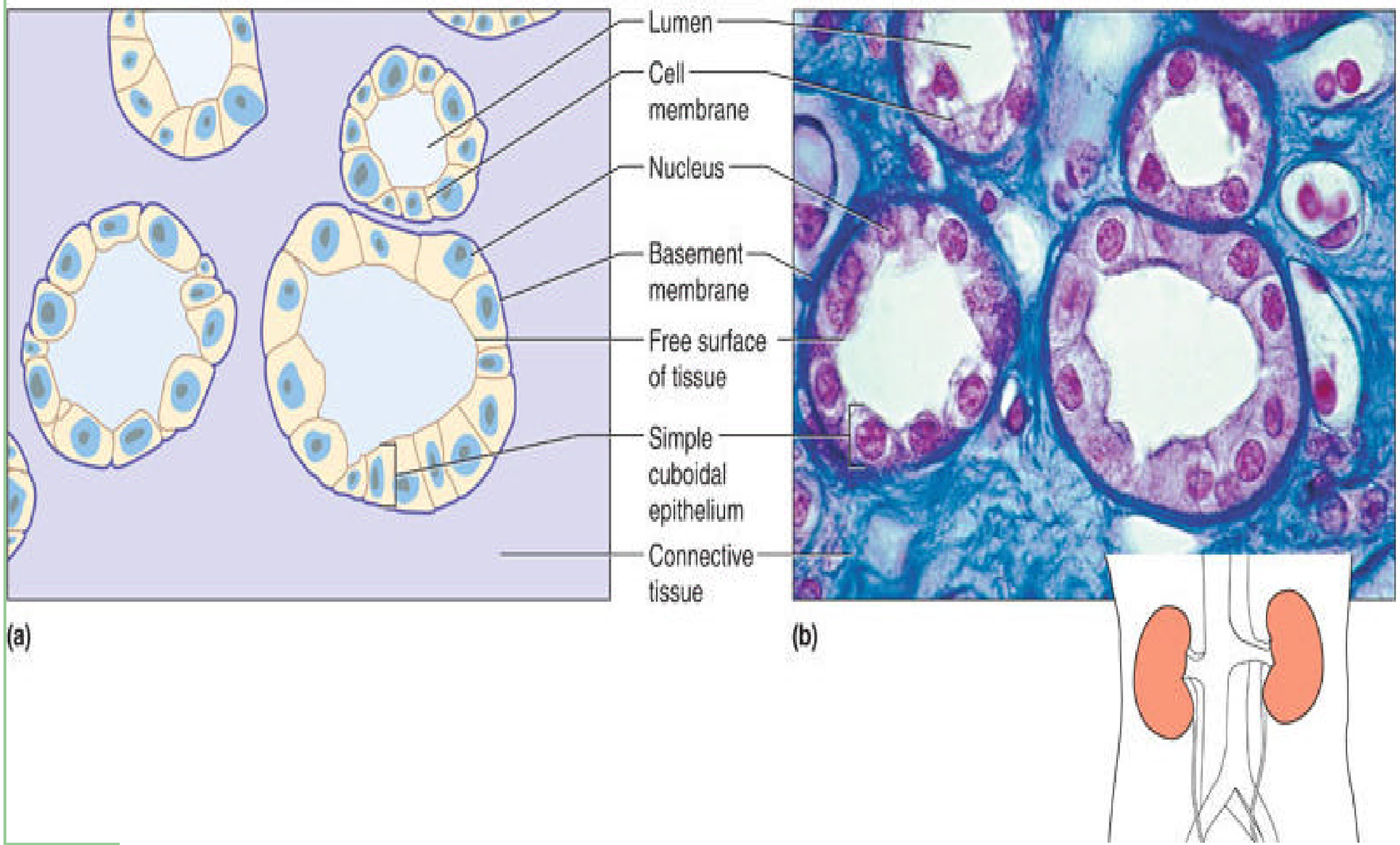
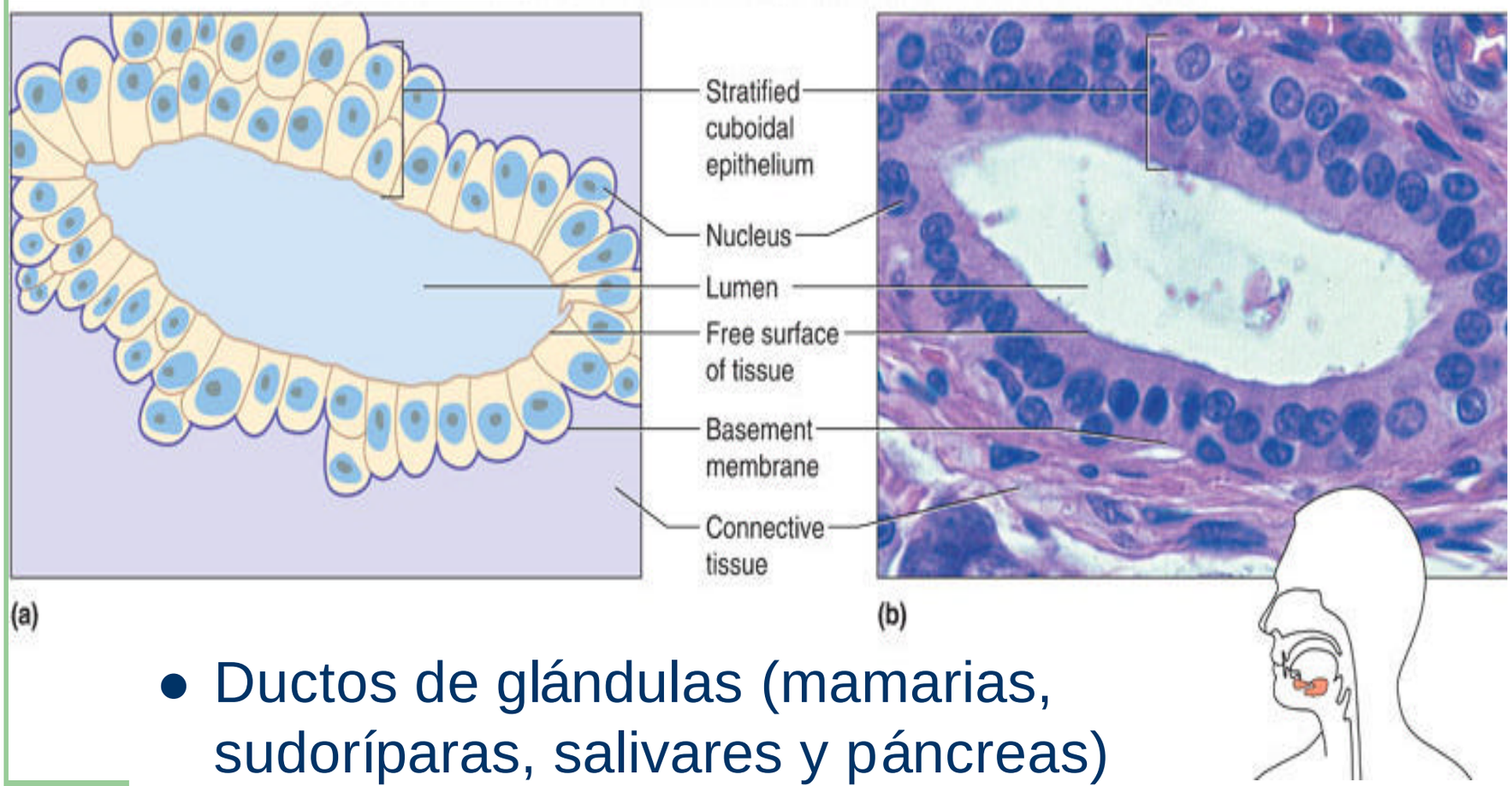


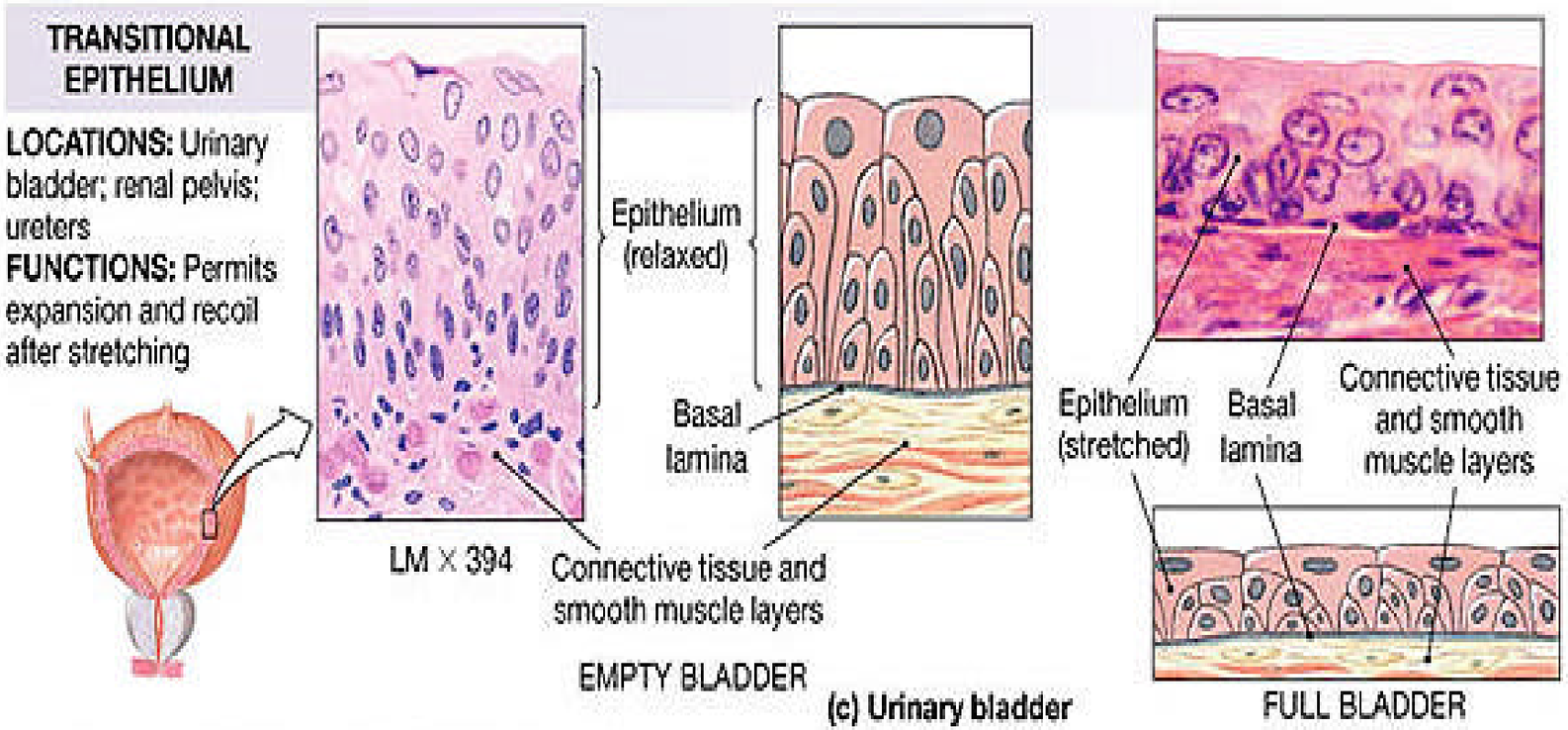
(b) Sweat gland duct

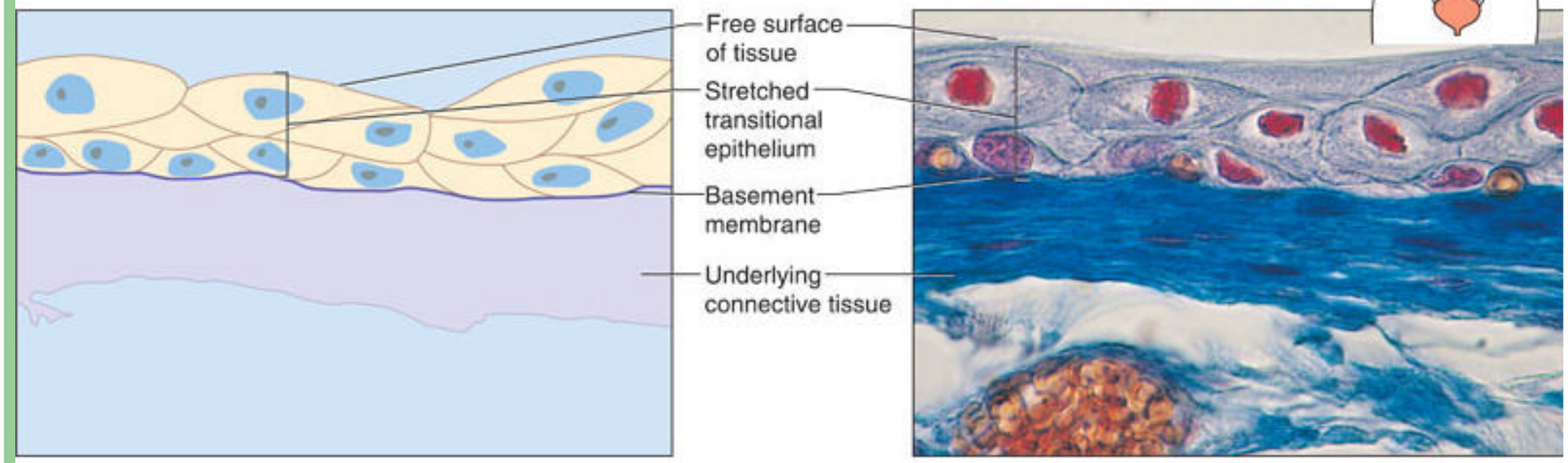

Lumen
Cell membrane
Nucleus
Basement membrane
Free surface of tissue
Simple cuboidal epithelium
Connective tissue
(a)
(b)



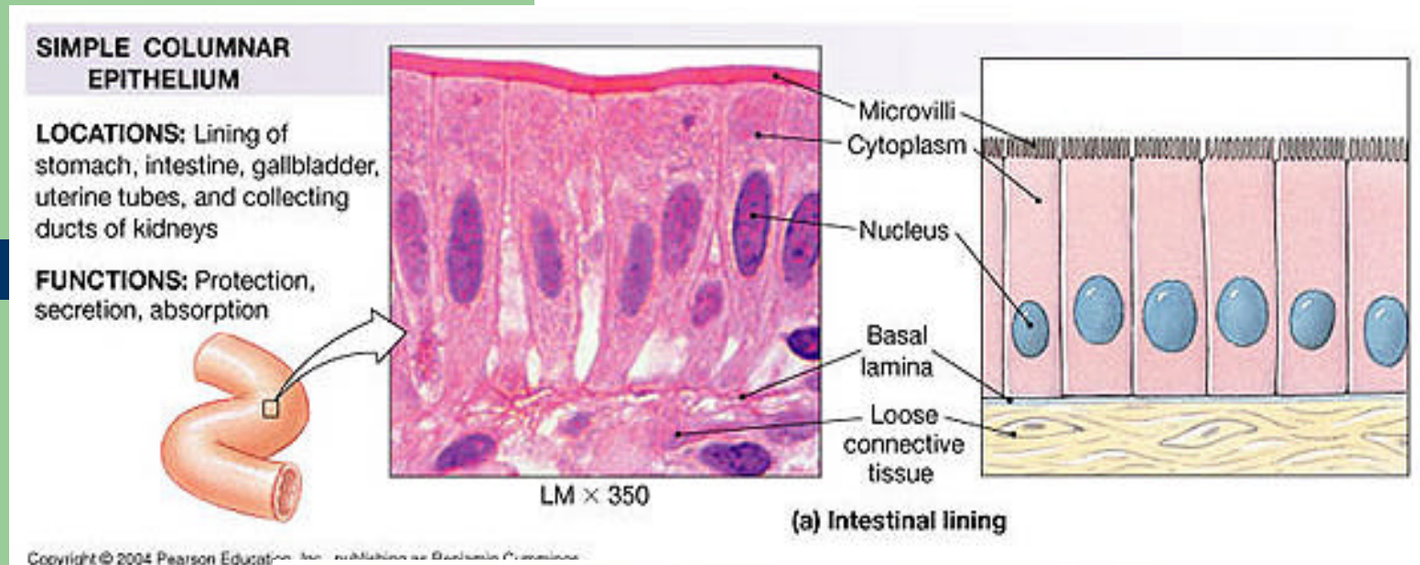
- Ductos de glándulas (mamarias, sudoríparas, salivares y páncreas)
- Folículos ováricos y túbulos seminíferos

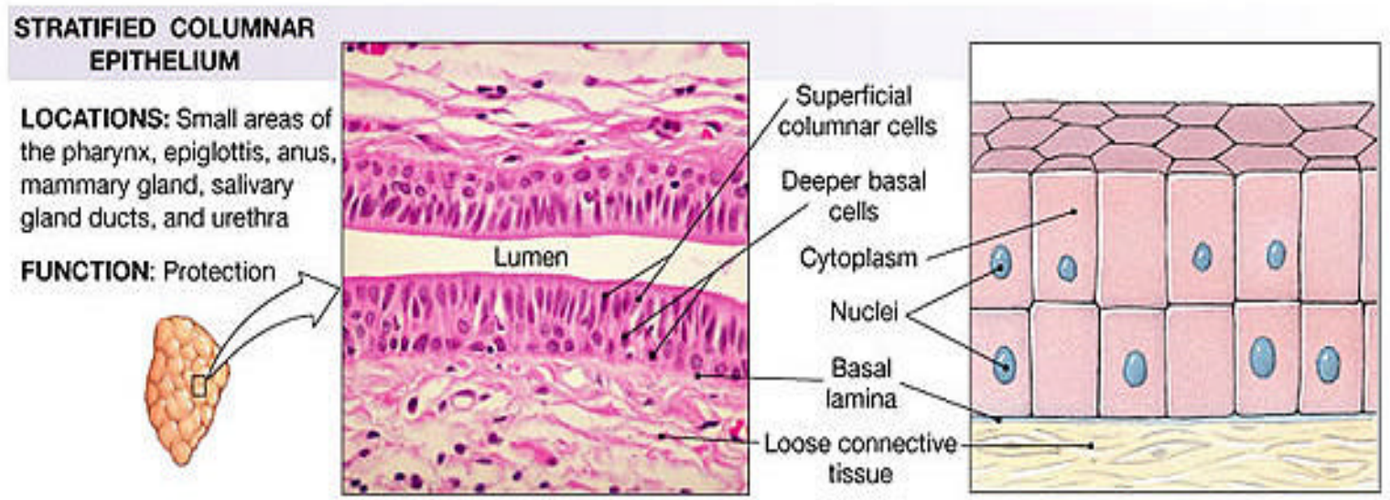
Epitelio transcisional



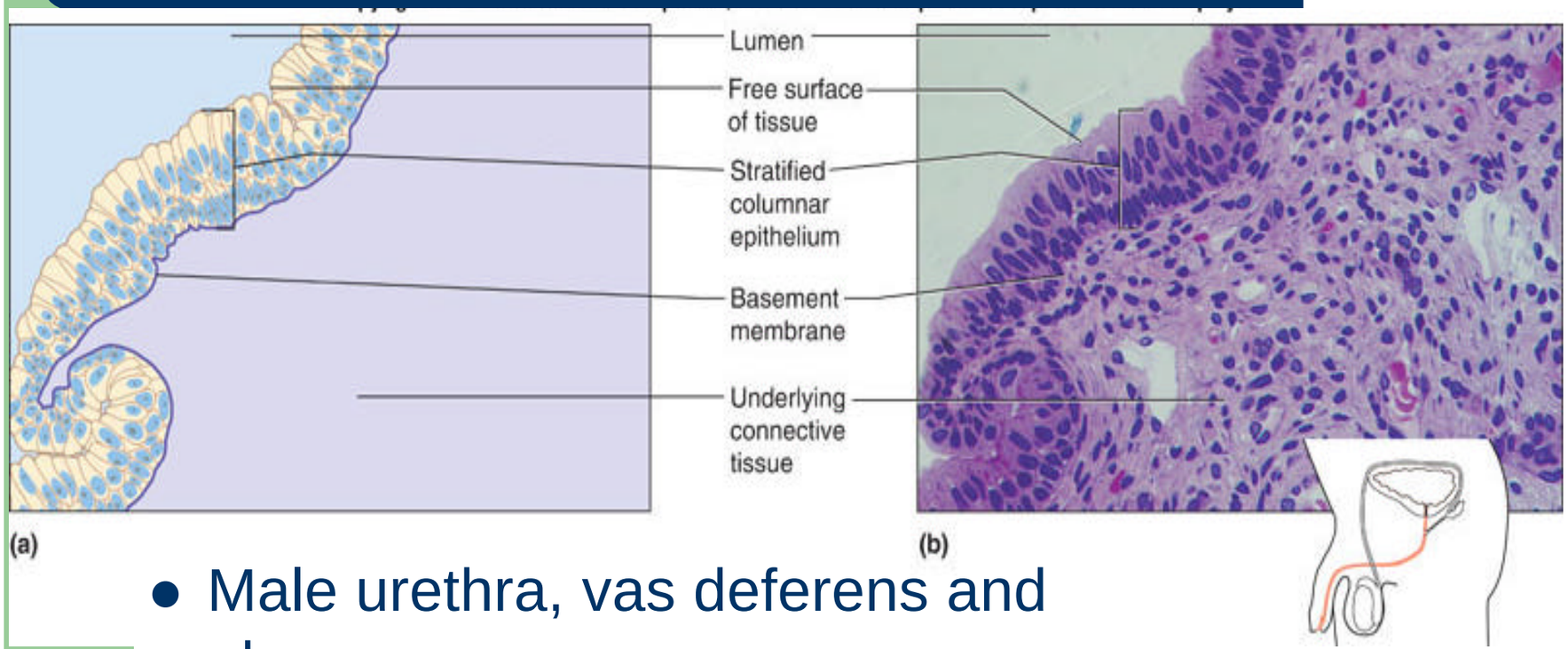

Free surface of tissue
Stretched transitional epithelium
Basement membrane
Underlying connective tissue
(c)
(d)

EPITELIO COLUMNAR



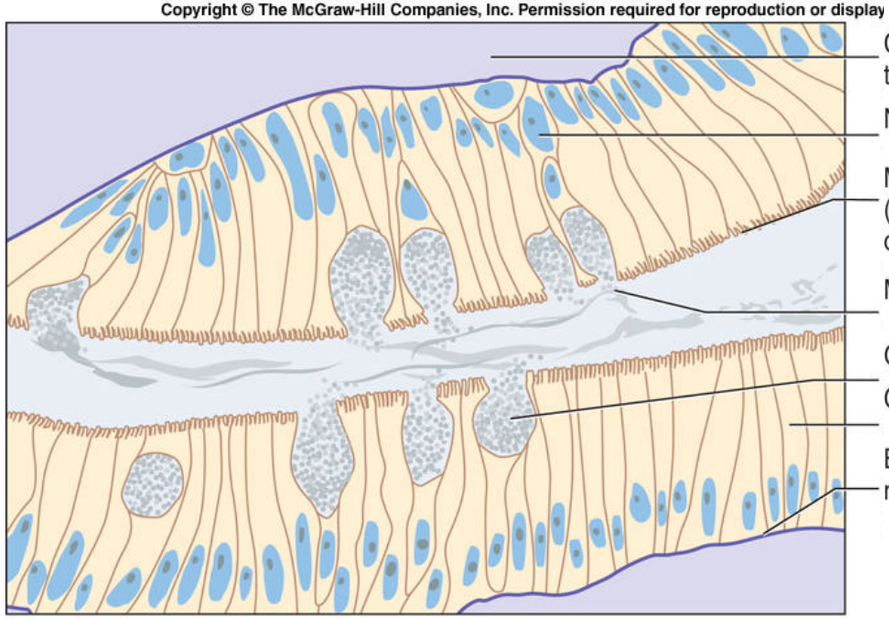


Epitelio columnar estratificado



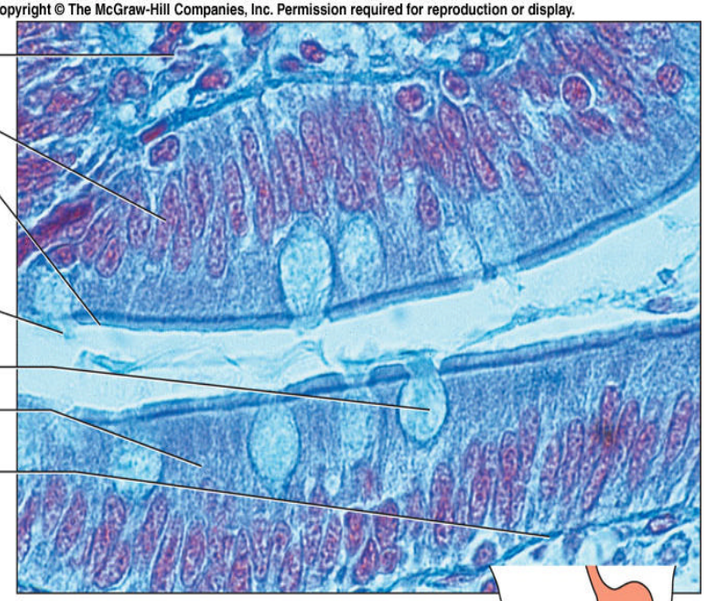
- Male urethra, vas deferens and pharynx

Epitelio columnar simple

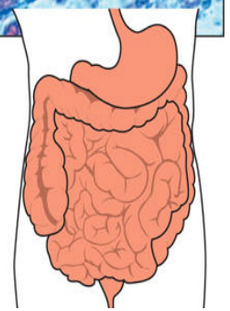


Connective tissue
Nucleus
Microvilli (free surface of tissue)
Mucus
Goblet cell
Cytoplasm
Basement membrane

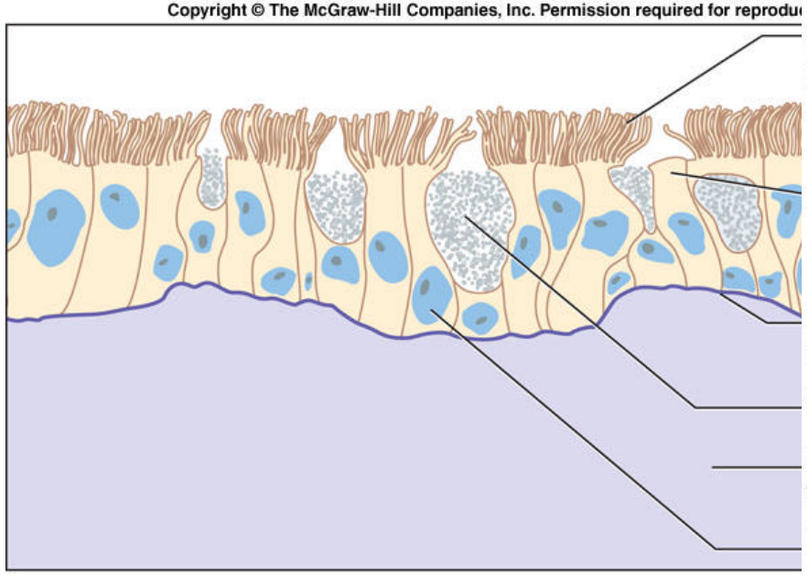
(a)



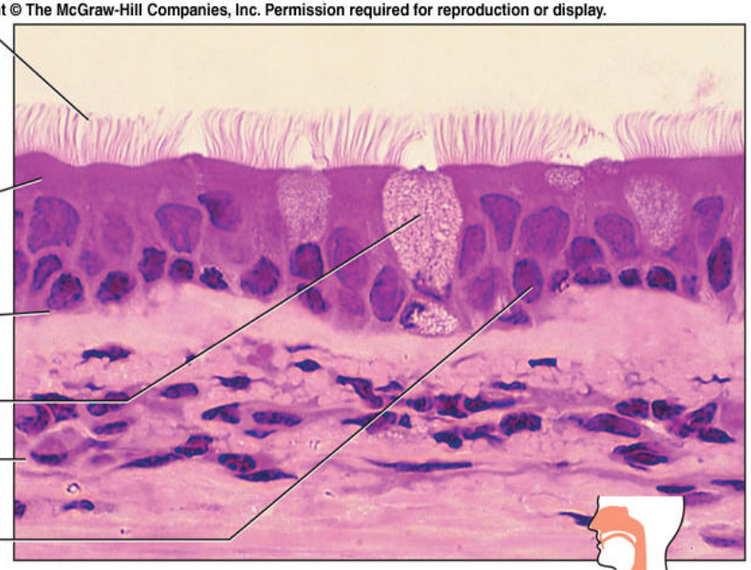
(b)



Epitelio columnar pseudoestratificado



(a)



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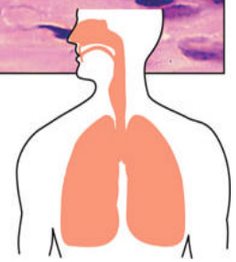
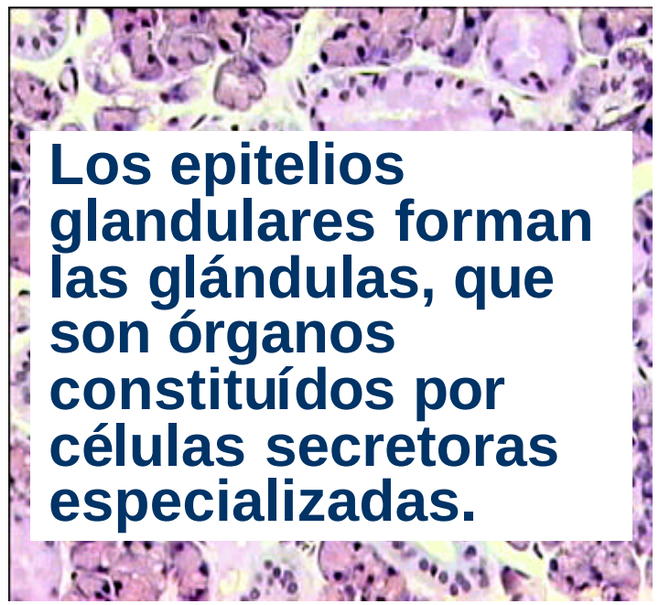


TABLE 5.3 EPITHELIAL TISSUES

TYPE	FUNCTION	LOCATION
Simple squamous epithelium	Filtration, diffusion, osmosis; covers surface	Air sacs of the lungs, walls of capillaries, linings of blood and lymph vessels
Simple cuboidal epithelium	Secretion, absorption	Surface of ovaries, linings of kidney tubules, and linings of ducts of certain glands
Simple columnar epithelium	Absorption, secretion, protection	Linings of uterus, stomach, and intestine
Pseudostratified columnar epithelium	Protection, secretion, movement of mucus	Linings of respiratory passages
Stratified squamous epithelium	Protection	Outer layer of skin, linings of oral cavity, throat, vagina, and anal canal
Stratified cuboidal epithelium	Protection	Linings of larger ducts of mammary glands, sweat glands, salivary glands, and pancreas
Stratified columnar epithelium	Protection, secretion	Vas deferens, part of the male urethra, parts of the pharynx
Transitional epithelium	Distensibility, protection	Inner lining of urinary bladder and linings of ureters and part of urethra
Glandular epithelium	Secretion	Salivary glands, sweat glands, endocrine glands

GLANDULAS
CLASIFICACION DEPENDIENDO DEL LUGAR DONDE SECRETAN

- ***Glándulas exocrinas:***
  - glándulas sudoríparas, glándulas salivales.
- ***Glándulas endocrinas***
  - hipófisis, tiroides.
- ***Glándulas mixtas***
  - páncreas = segrega el jugo pancreático que va al intestino e insulina que va a la sangre.

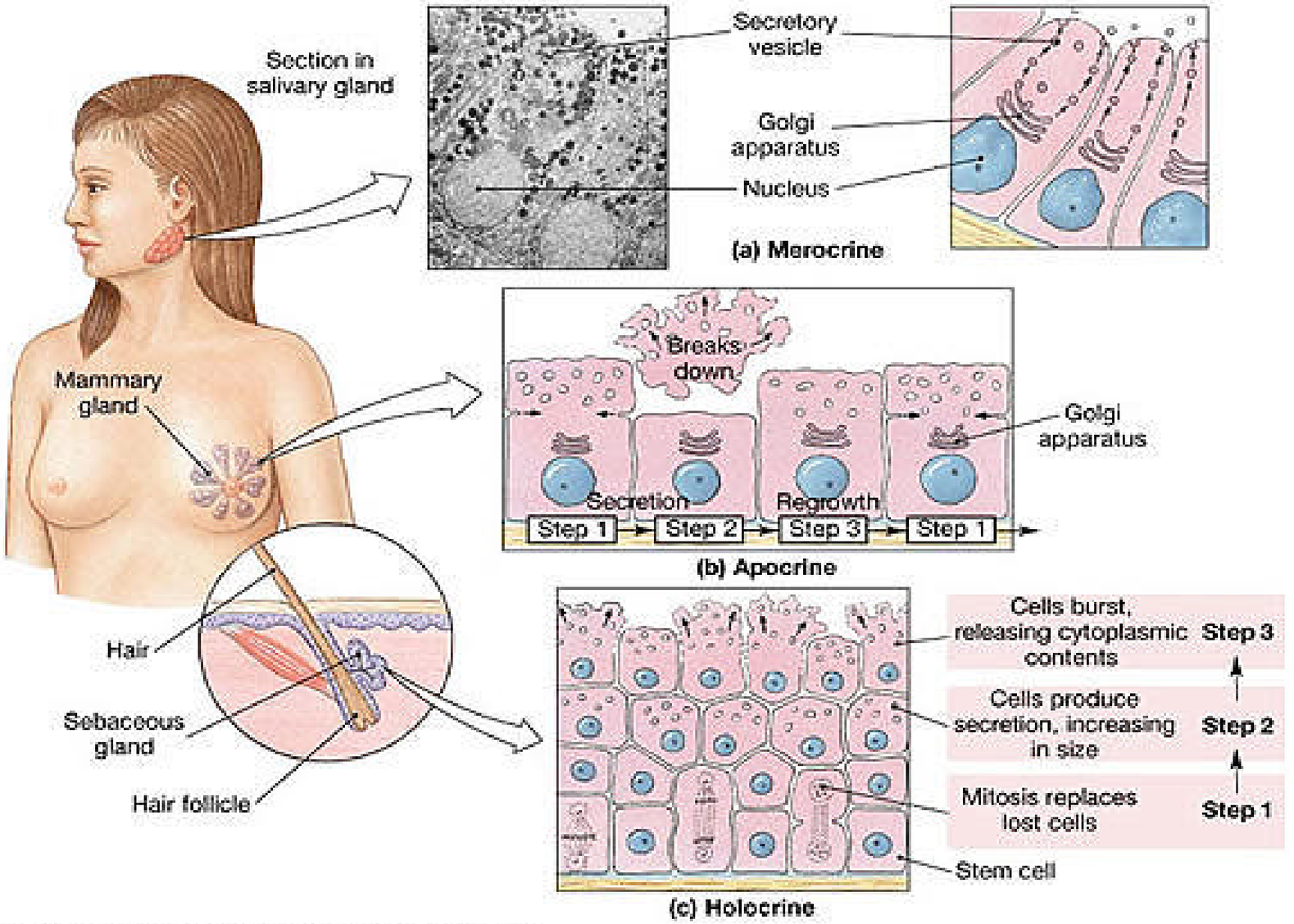


Los epitelios glandulares forman las glándulas, que son órganos constituídos por células secretoras especializadas.

MODOS DE SECRECION

La secreción se produce según tres modalidades:

- - ***Merocrina:*** la sustancia secretada sale de la célula sin que ésta pierda citoplasma.
- - ***Apocrina:*** la sustancia secretada se libera con la porción de citoplasma celular que la rodea.
- - ***Holocrina:*** la secreción se efectúa por la ruptura de la célula secretora.



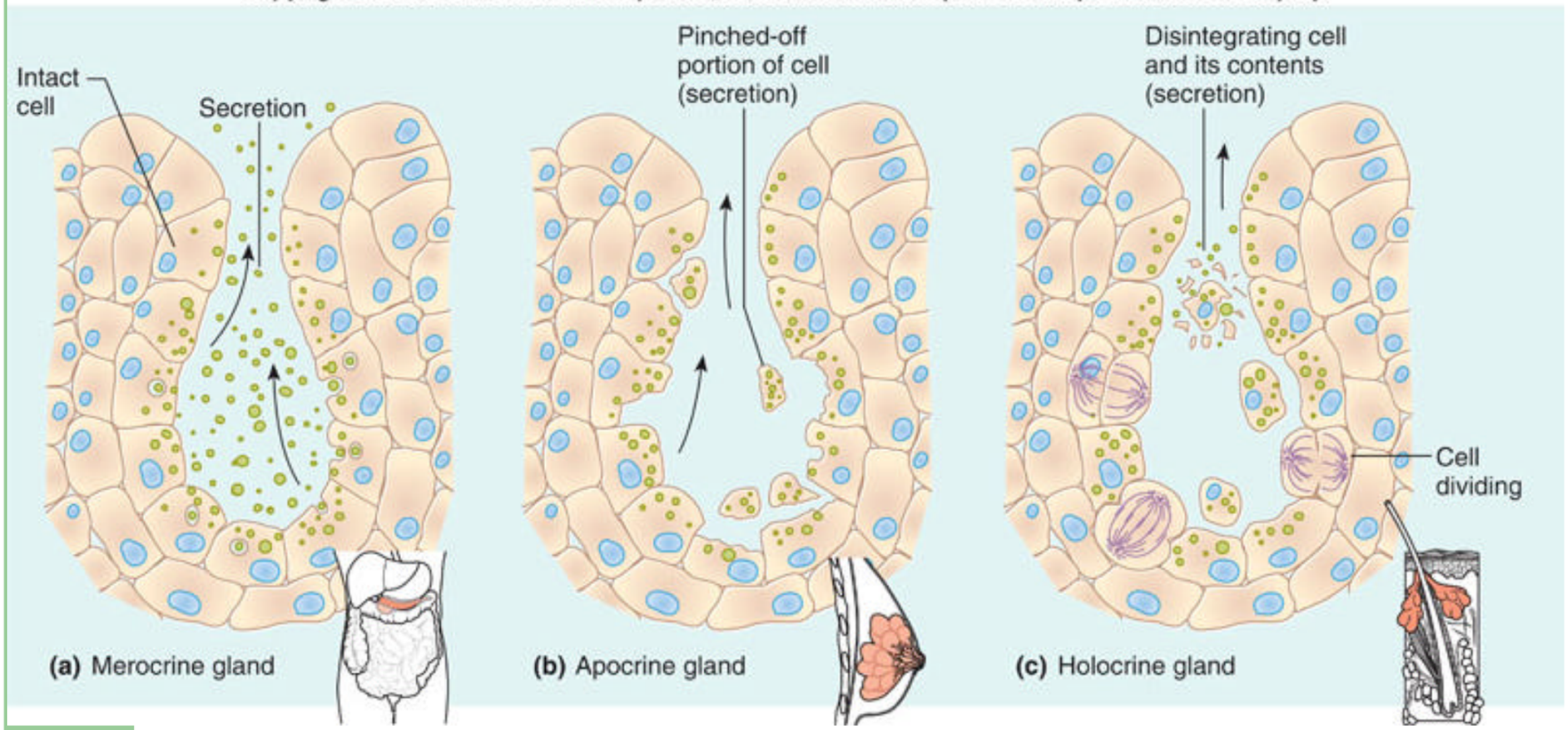


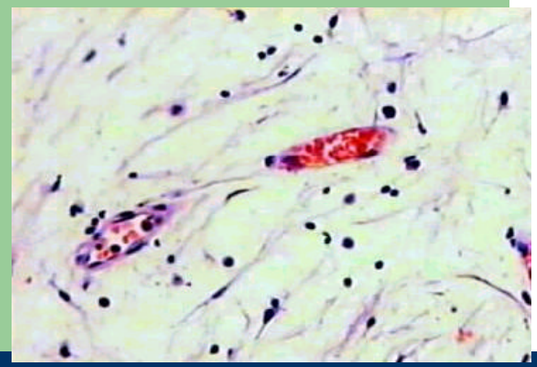
Table. 5.02

TABLE 5.2 TYPES OF EXOCRINE GLANDULAR SECRETIONS

TYPE OF GLAND	DESCRIPTION OF SECRETION	EXAMPLE
Merocrine glands	A fluid product released through the cell membrane by exocytosis	Salivary glands, pancreatic glands, sweat glands of the skin
Apocrine glands	Cellular product and portions of the free ends of glandular cells pinched off during secretion	Mammary glands, ceruminous glands lining the external ear canal
Holocrine glands	Entire cells filled with secretory products disintegrate	Sebaceous glands of the skin

TIPOS DE SECRECION

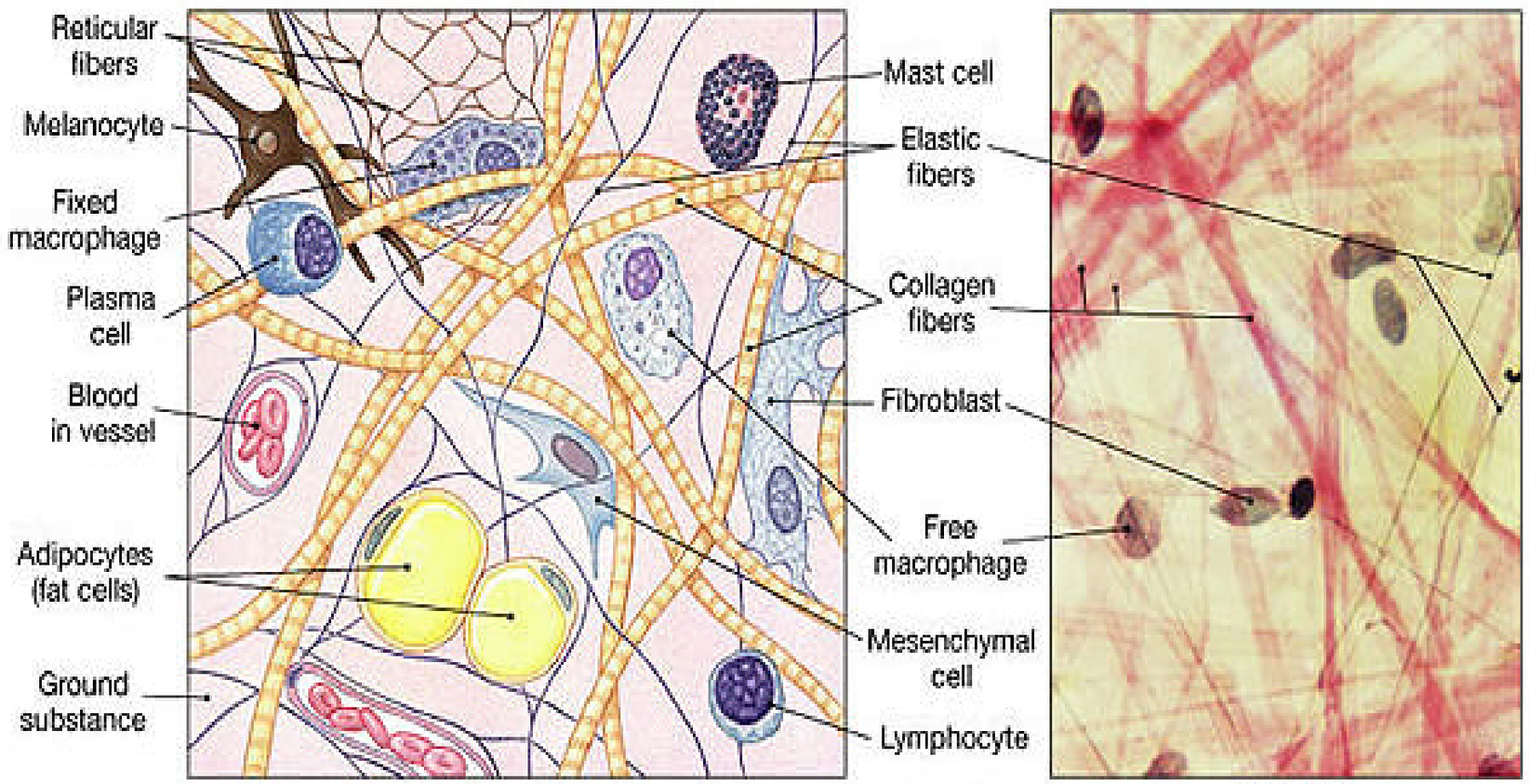
- SEROSA
  - acuosa
- MUCOSA
- MIXTA



TEJIDOS CONECTIVOS

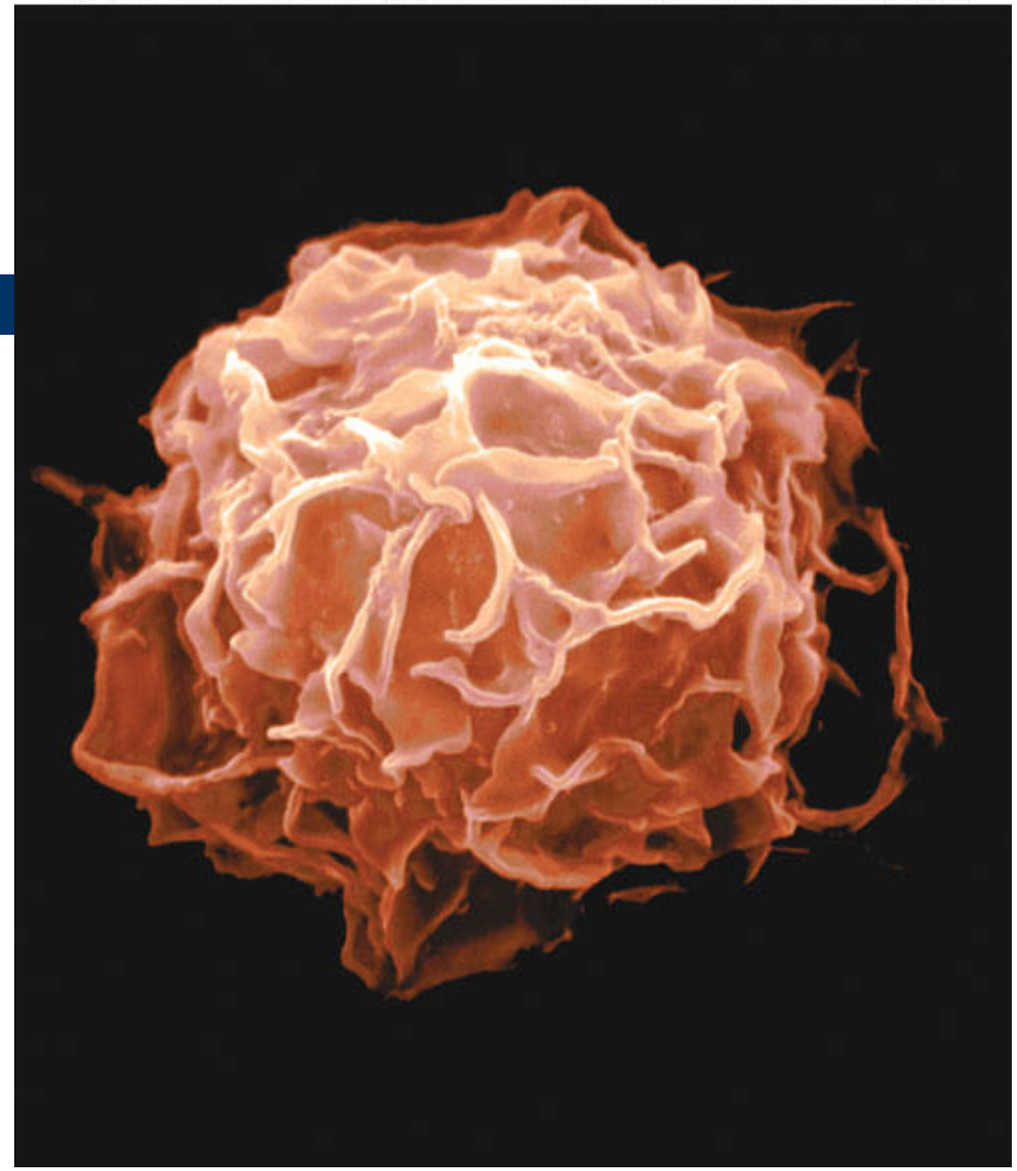
- Series de tejidos muy diferentes entre sí, pero que tienen un origen común
- Funciones: rellenar, unir y sostener

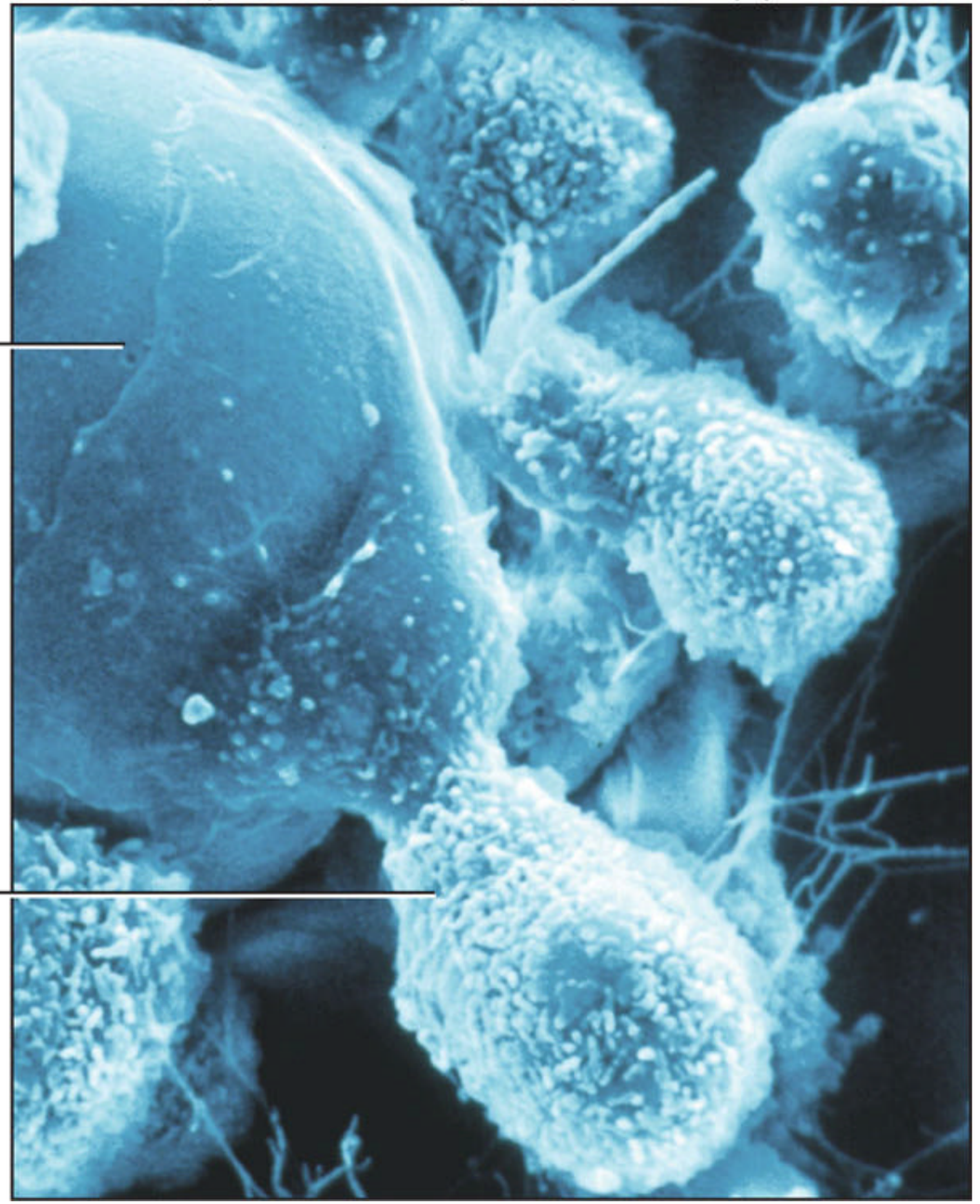
TEJIDO CONECTIVO



Mast cell

- Release heparin and histamine





Fibroblasto

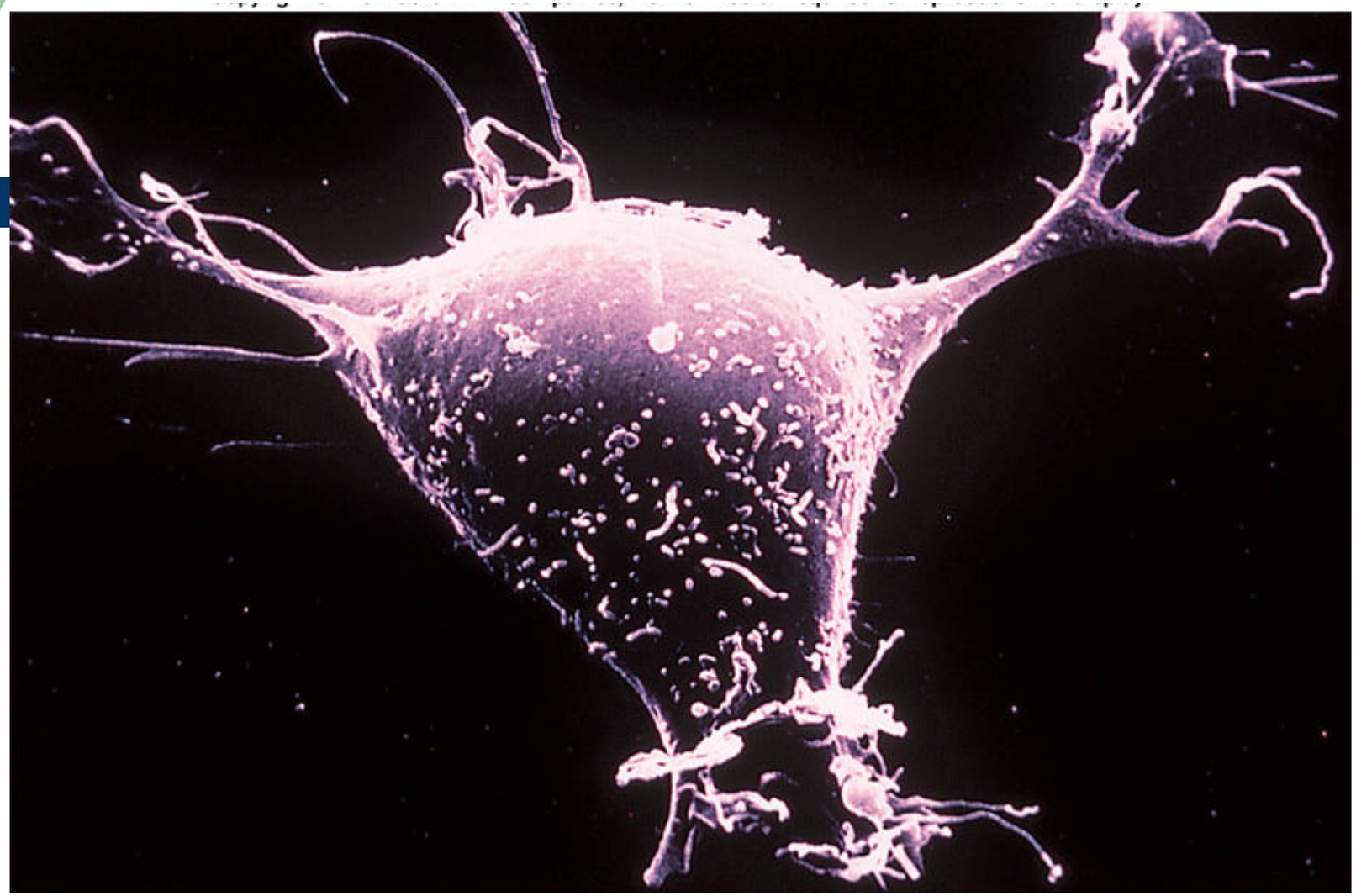


TABLE 5.4 COMPONENTS OF CONNECTIVE TISSUE

CELL TYPE	FUNCTION
Fibroblasts	Produce fibers
Macrophages	Carry on phagocytosis
Mast cells	Secrete heparin and histamine

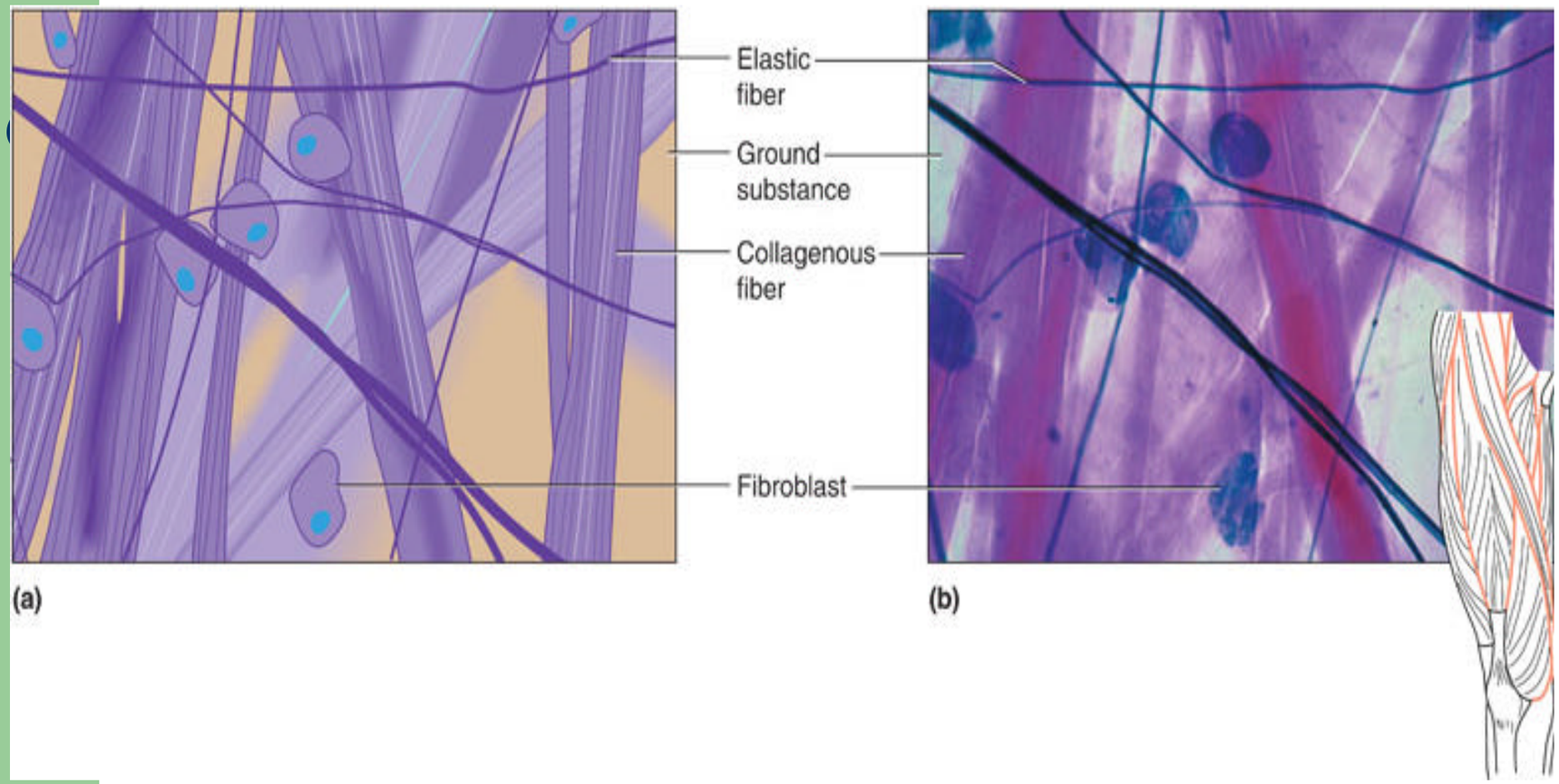
TISSUE FIBERS	FUNCTION
Collagenous	Provide great tensile strength
Elastic	Stretch easily
Reticular	Lend delicate support

Tejidos conectivos

TABLE 5.5 CONNECTIVE TISSUES

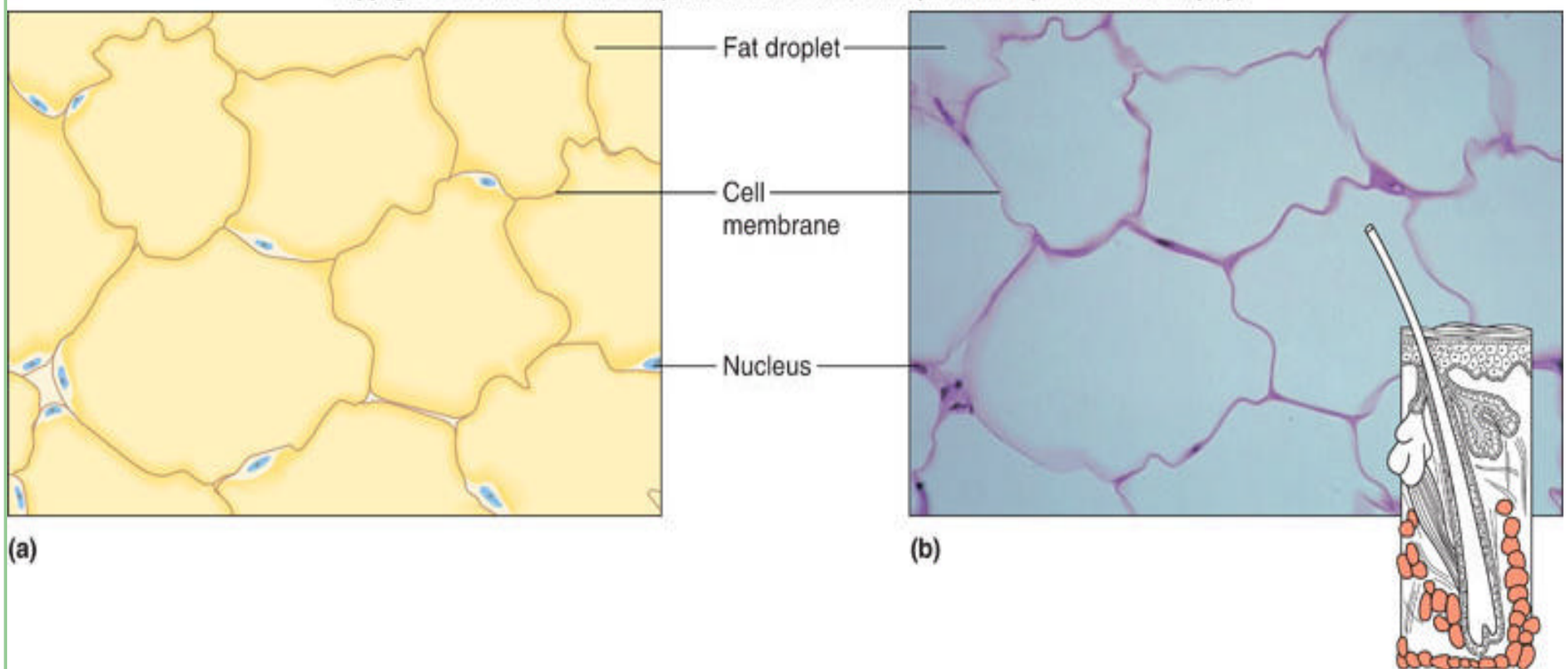
TYPE	FUNCTION	LOCATION
Loose connective tissue	Binds organs together, holds tissue fluids	Beneath skin, between muscles, beneath epithelial tissues
Adipose tissue	Protects, insulates, stores fat	Beneath skin, around kidneys, behind eyeballs, on surface of heart
Dense connective tissue	Binds organs together	Tendons, ligaments, deeper layers of skin
Hyaline cartilage	Supports, protects, provides framework	Nose, ends of bones, rings in the walls of respiratory passages
Elastic cartilage	Supports, protects, provides flexible framework	Framework of external ear and parts of larynx
Fibrocartilage	Supports, protects, absorbs shock	Between bony parts of spinal column, parts of pelvic girdle and knee
Bone	Supports, protects, provides framework	Bones of skeleton
Blood	Transports substances, helps maintain stable internal environment	Throughout body within a closed system of blood vessels and heart chambers

Tejido conectivo suelto (aerolar)

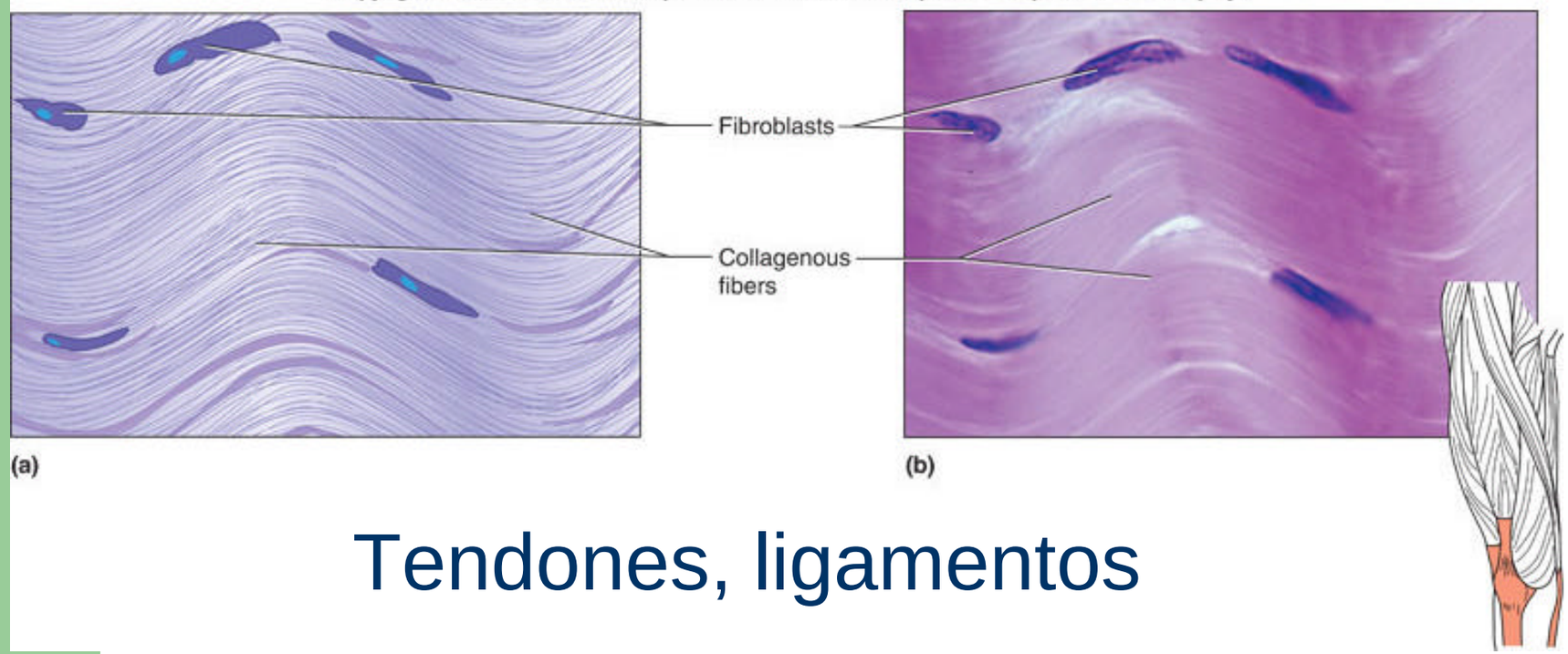


- Entre los musculos

Tejido adiposo

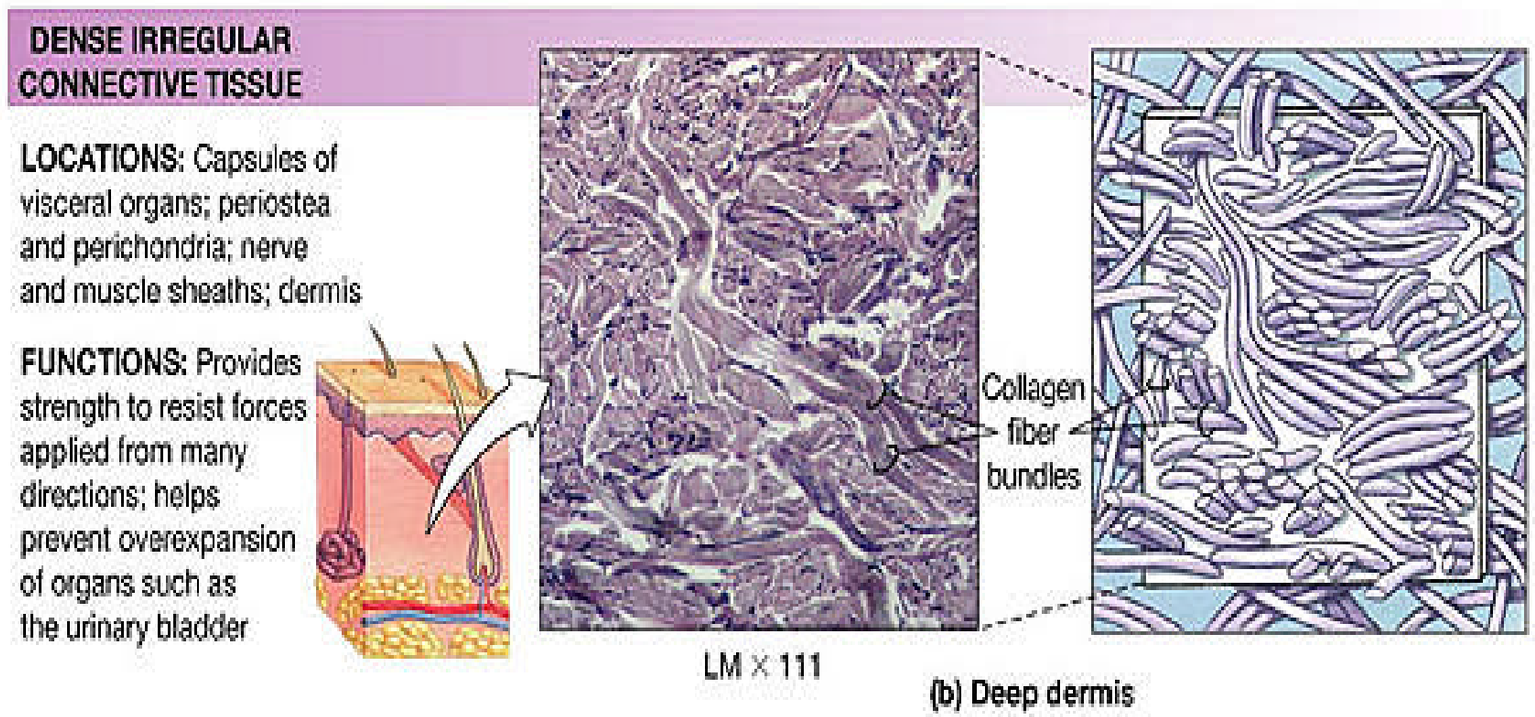


TEJIDO CONECTIVO DENSO REGULAR

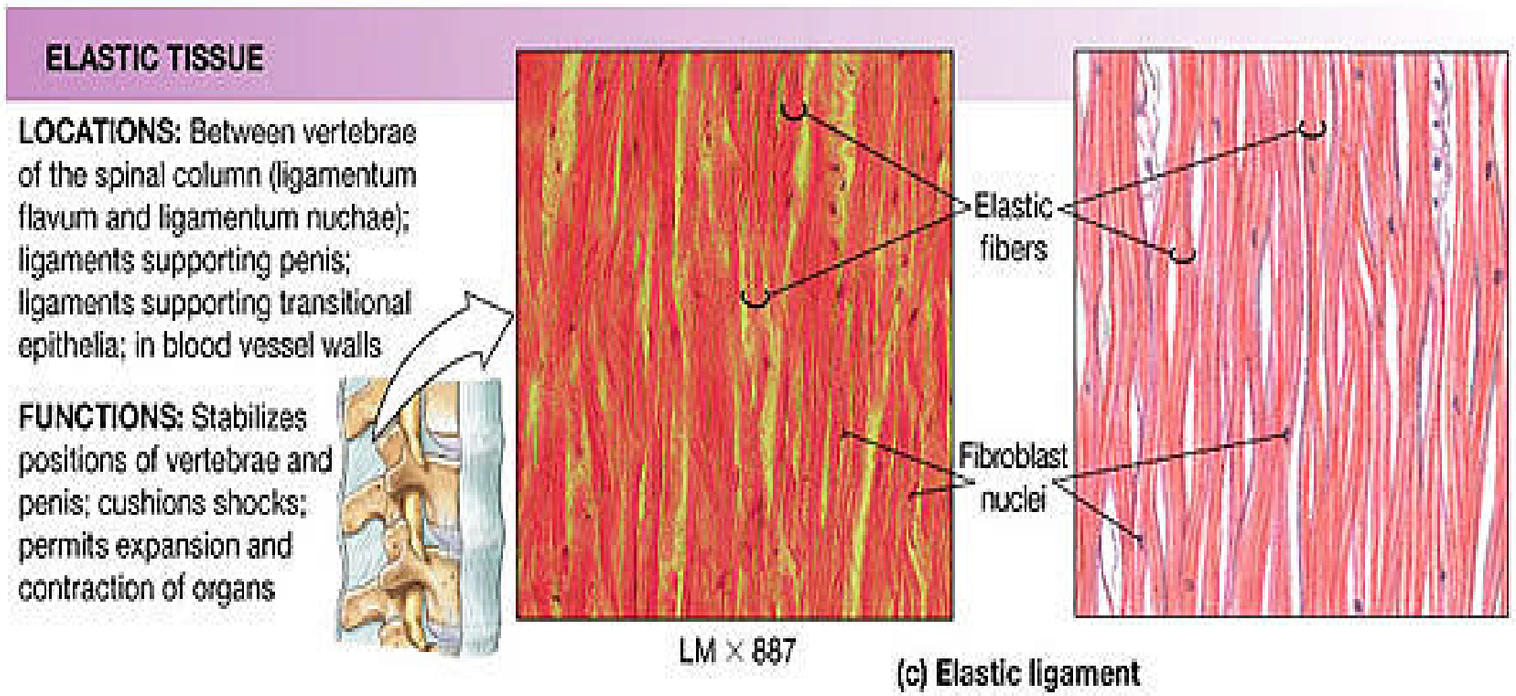


Tendones, ligamentos

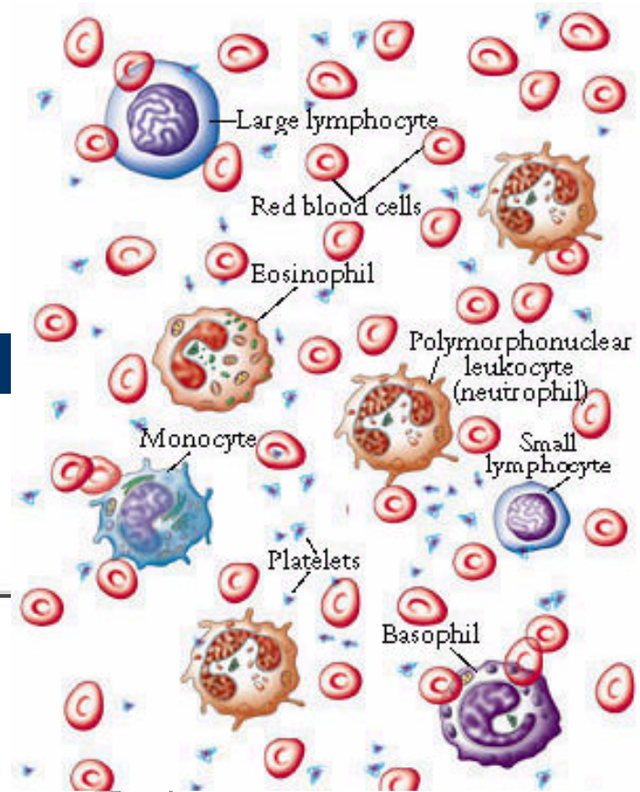
TEJIDO CONECTIVO DENSO IRREGULAR

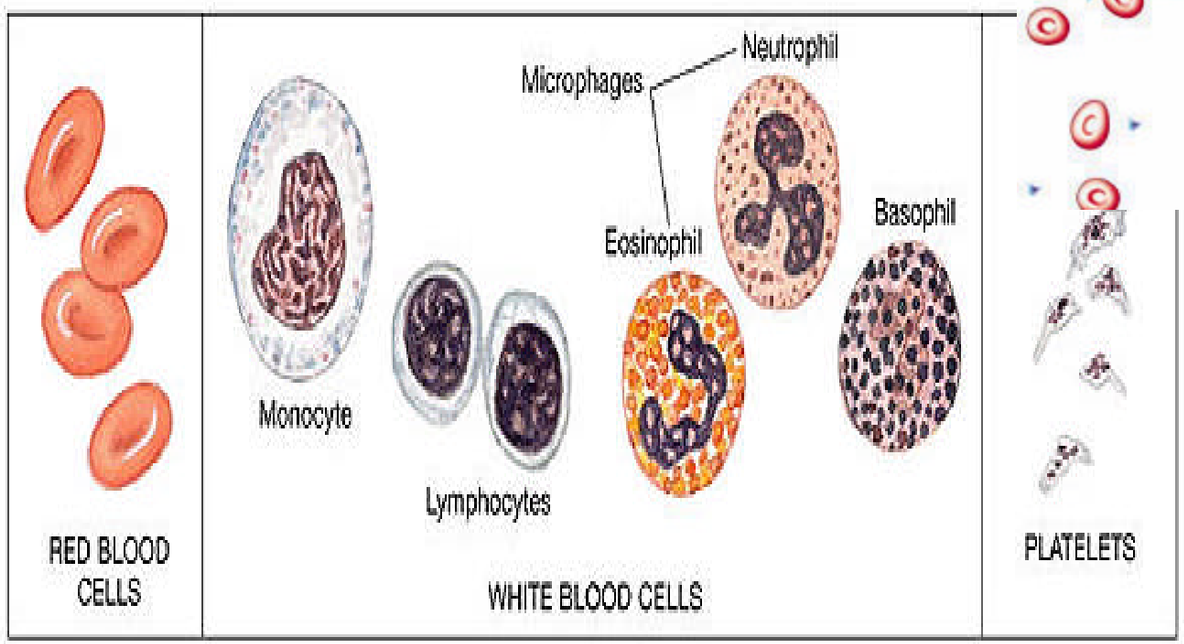


TEJIDO ELASTICO

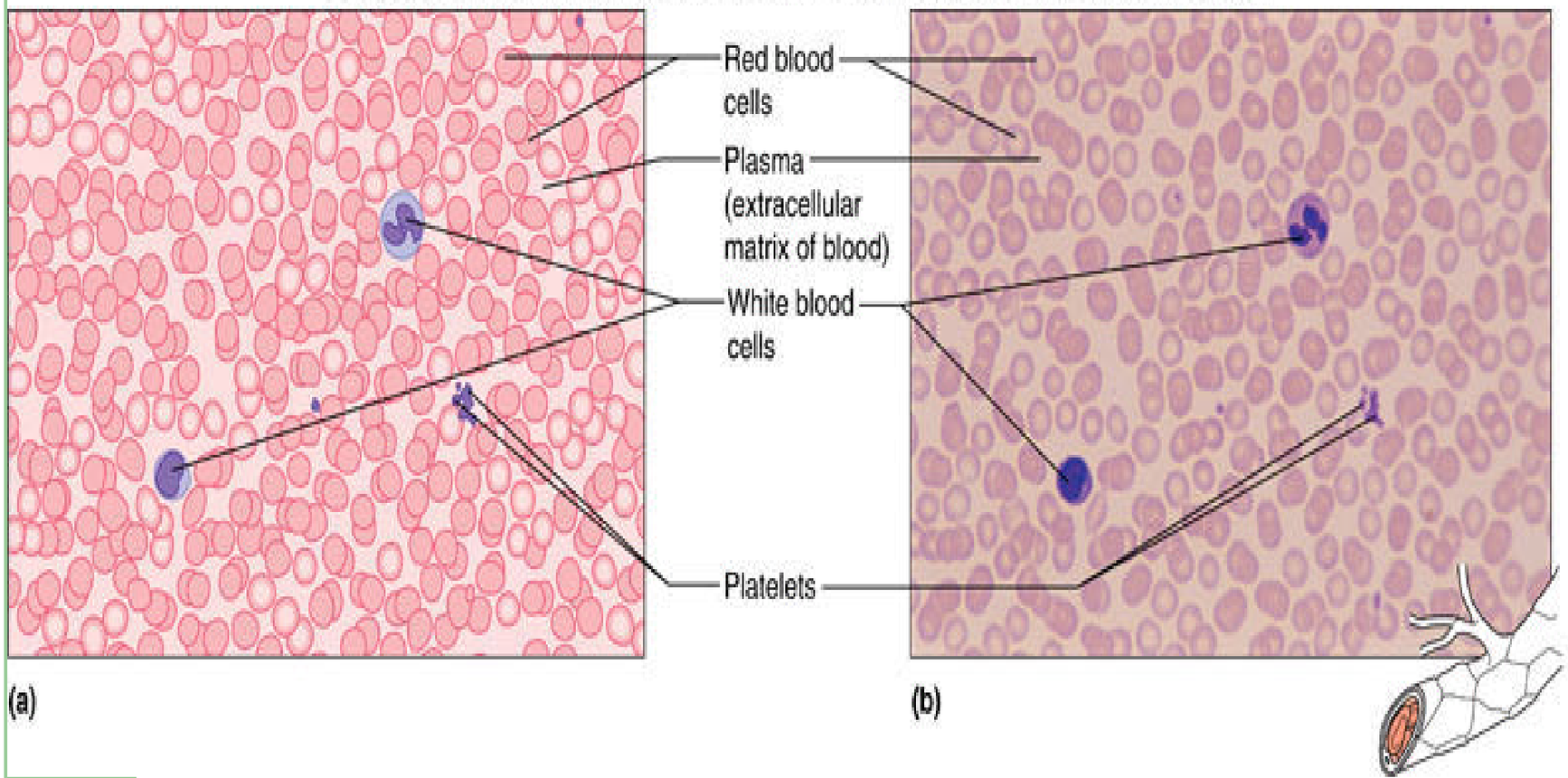


TEJIDO CONECTIVO FLUIDO SANGRE



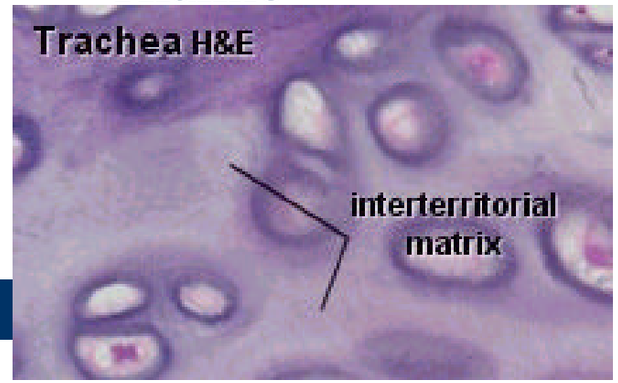


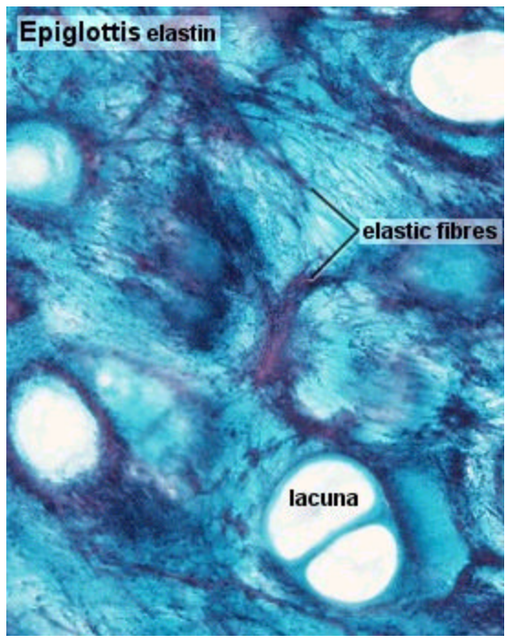
sangre



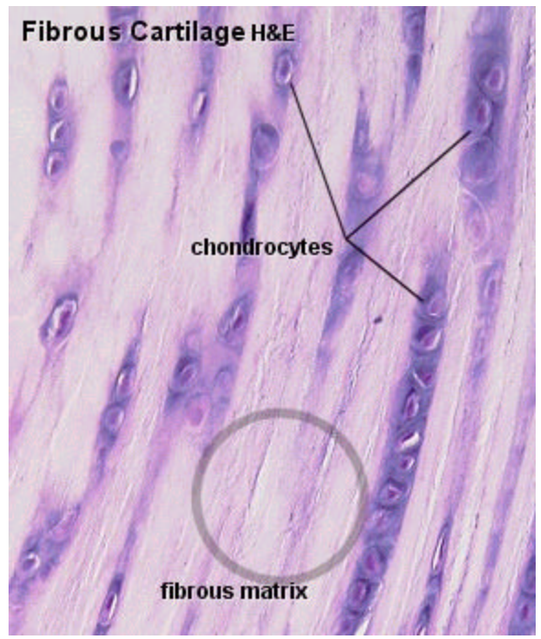
TIPOS DE CARTILAGO

Hialino



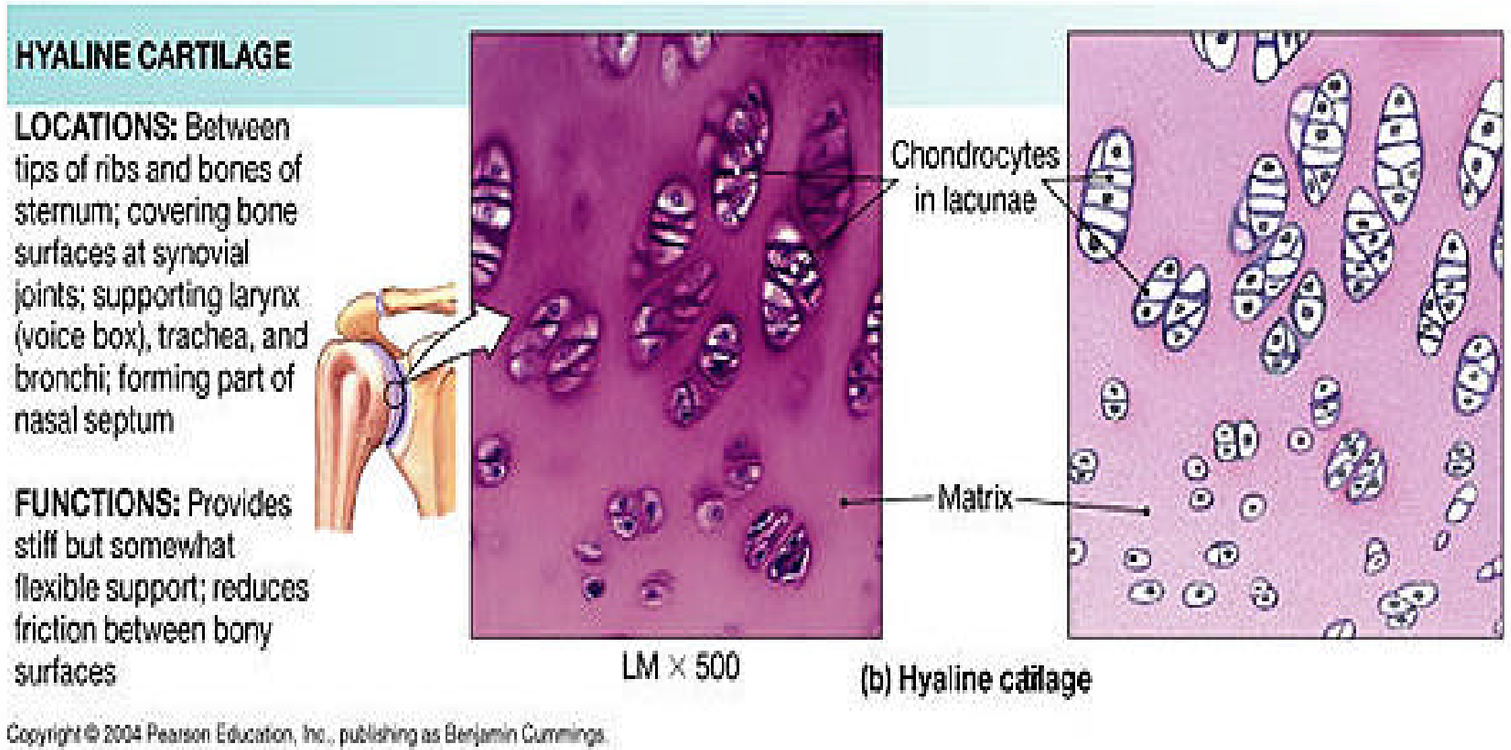


Elastico

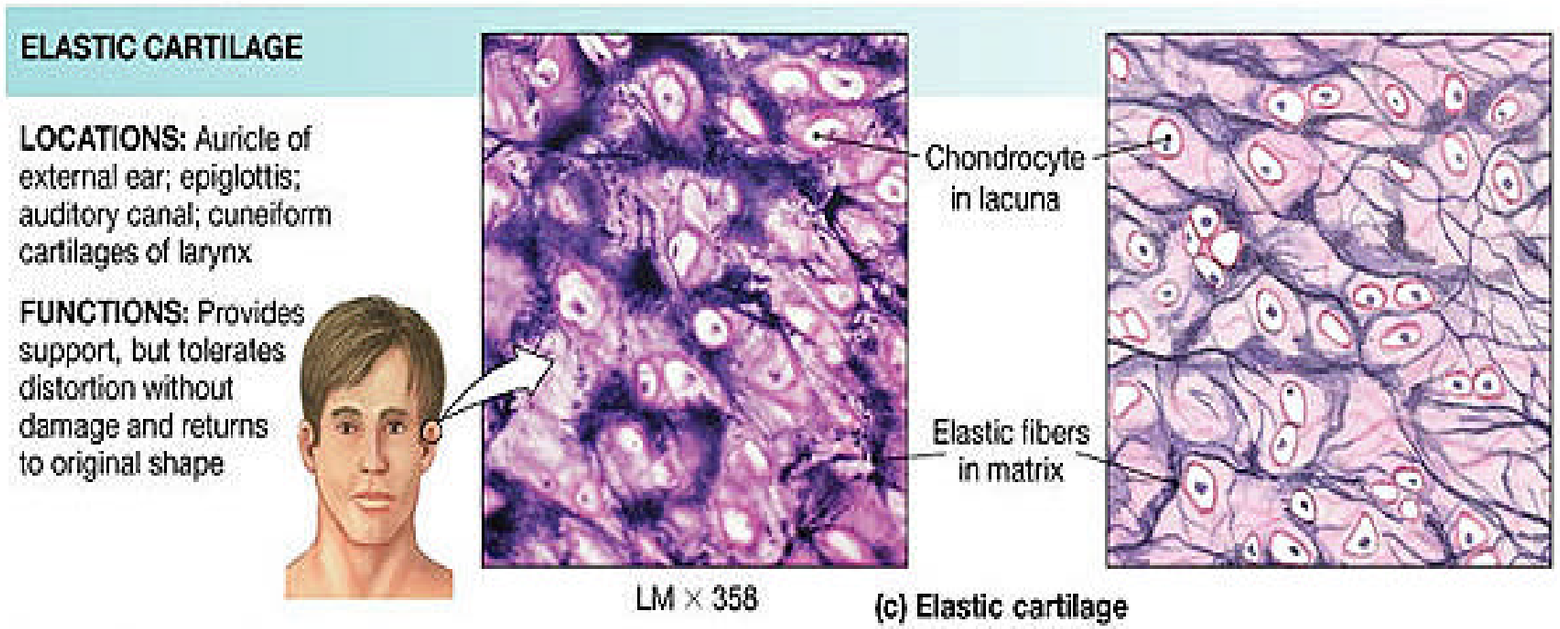


Fibroso

CARTILAGO HIALINO



CARTILAGO ELASTICO



FIBROCARTILAGO

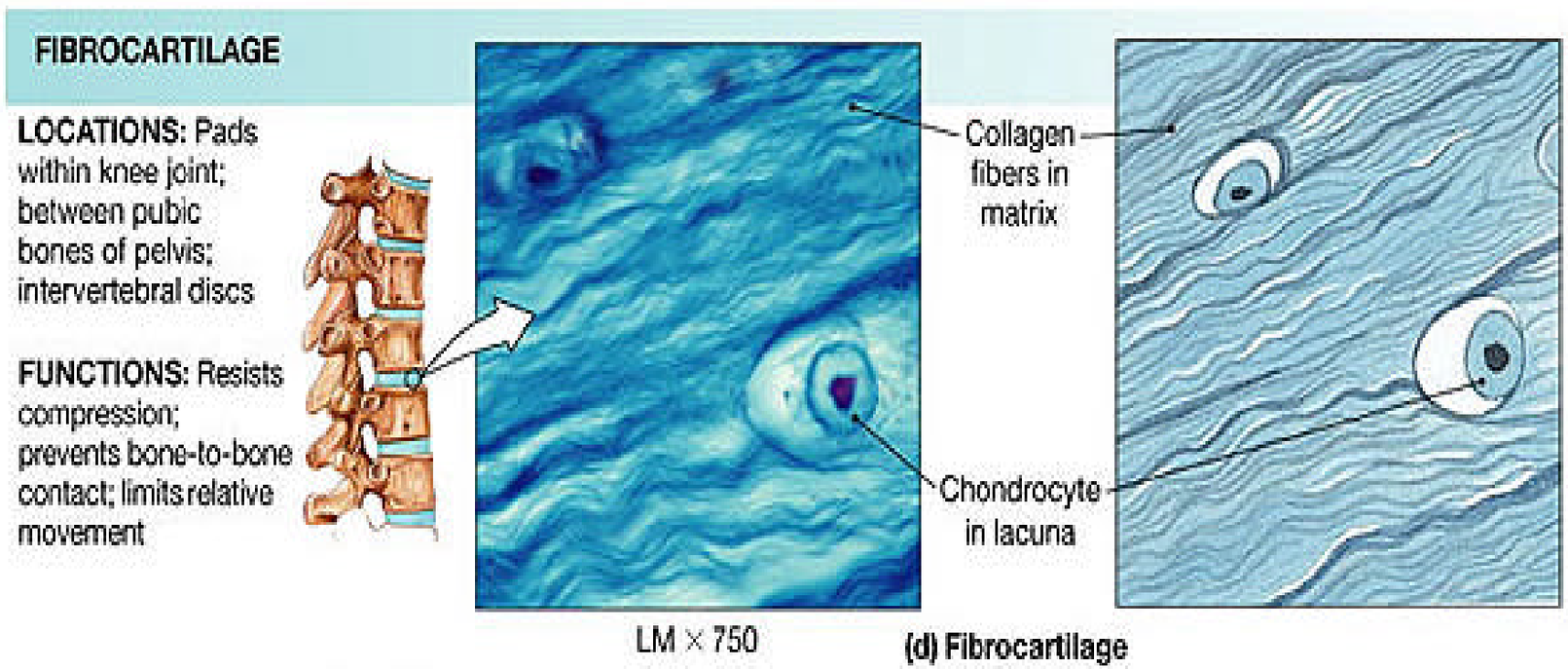
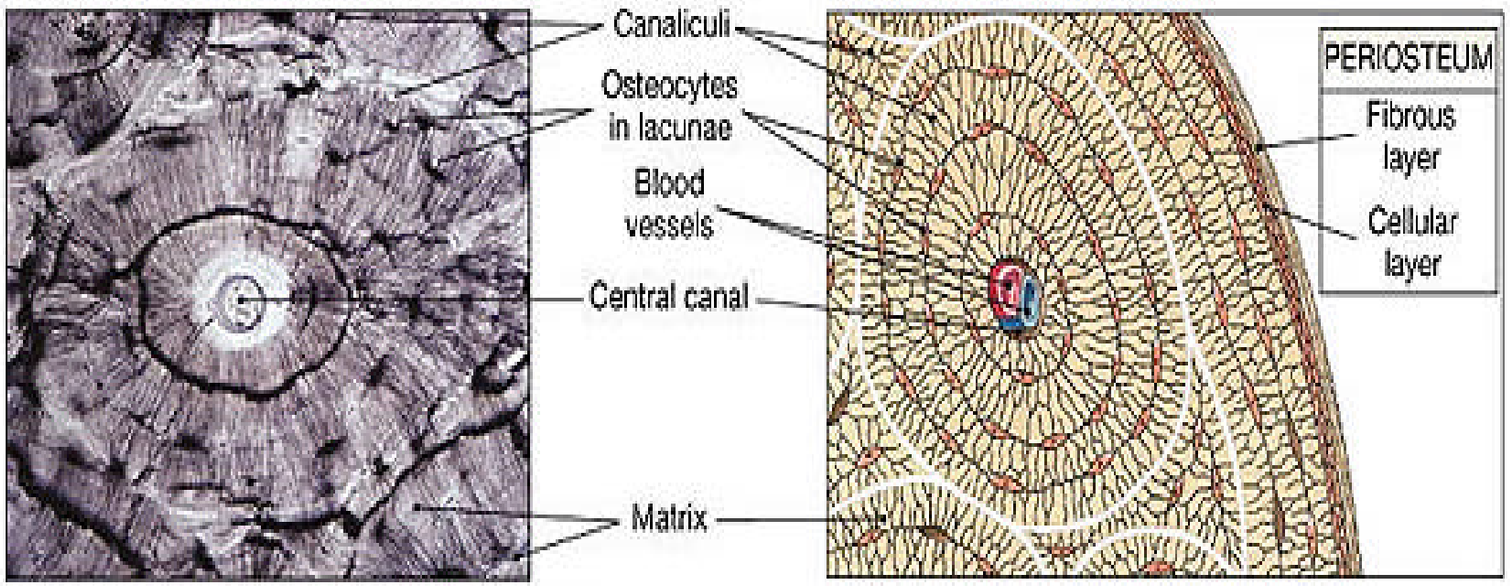
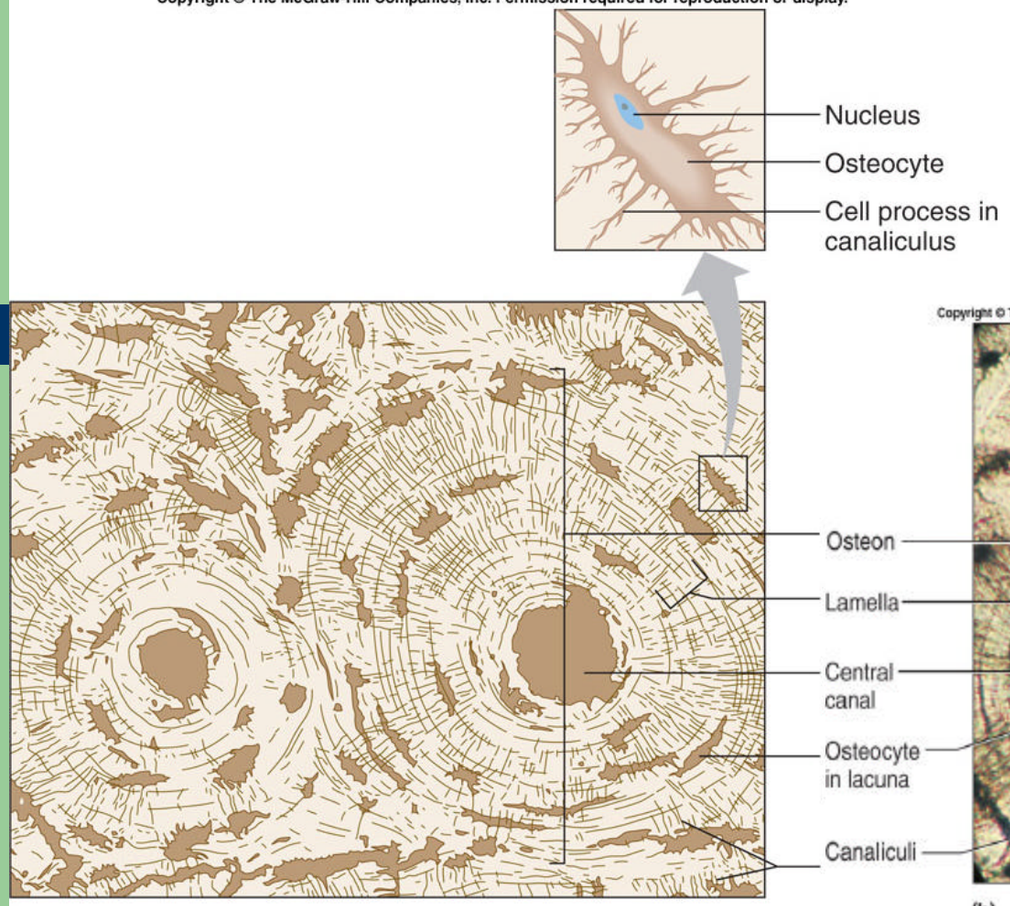


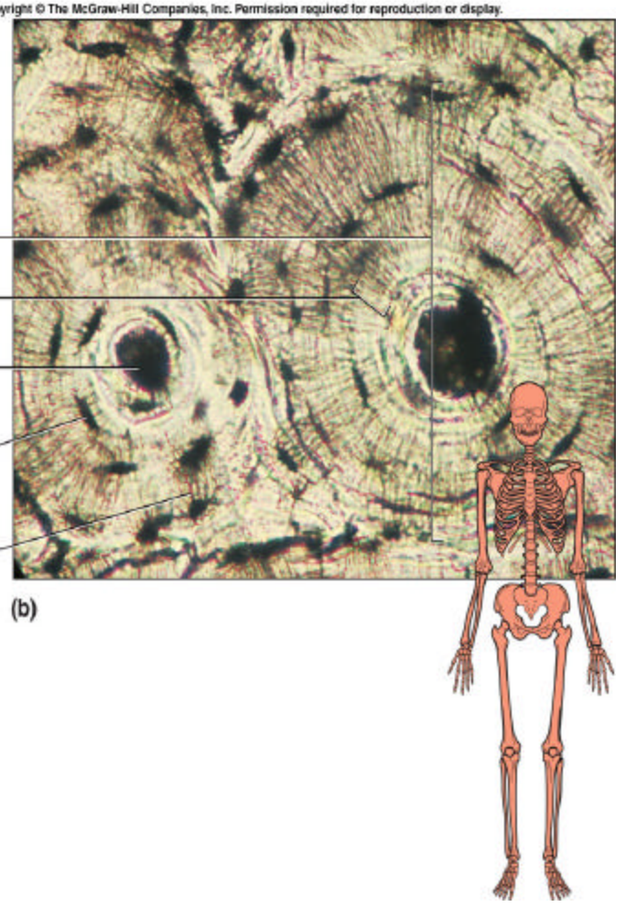
TABLE 5.6 MUSCLE AND NERVOUS TISSUES

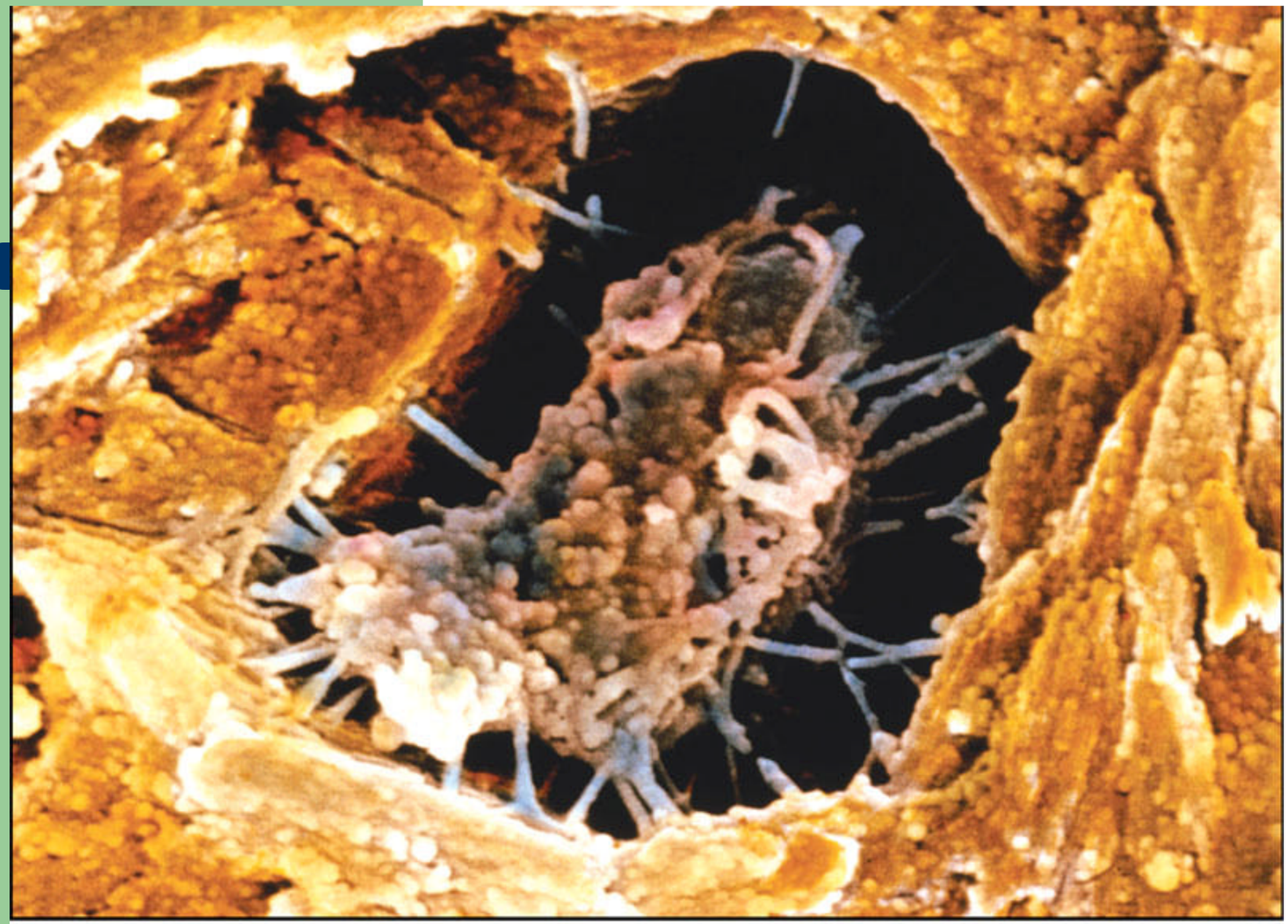
TYPE	FUNCTION	LOCATION
Skeletal muscle tissue (striated)	Voluntary movements of skeletal parts	Muscles usually attached to bones
Smooth muscle tissue (lacks striations)	Involuntary movements of internal organs	Walls of hollow internal organs
Cardiac muscle tissue (striated)	Heart movements	Heart muscle
Nervous tissue	Sensory reception and conduction of nerve impulses	Brain, spinal cord, and peripheral nerves

HUESO







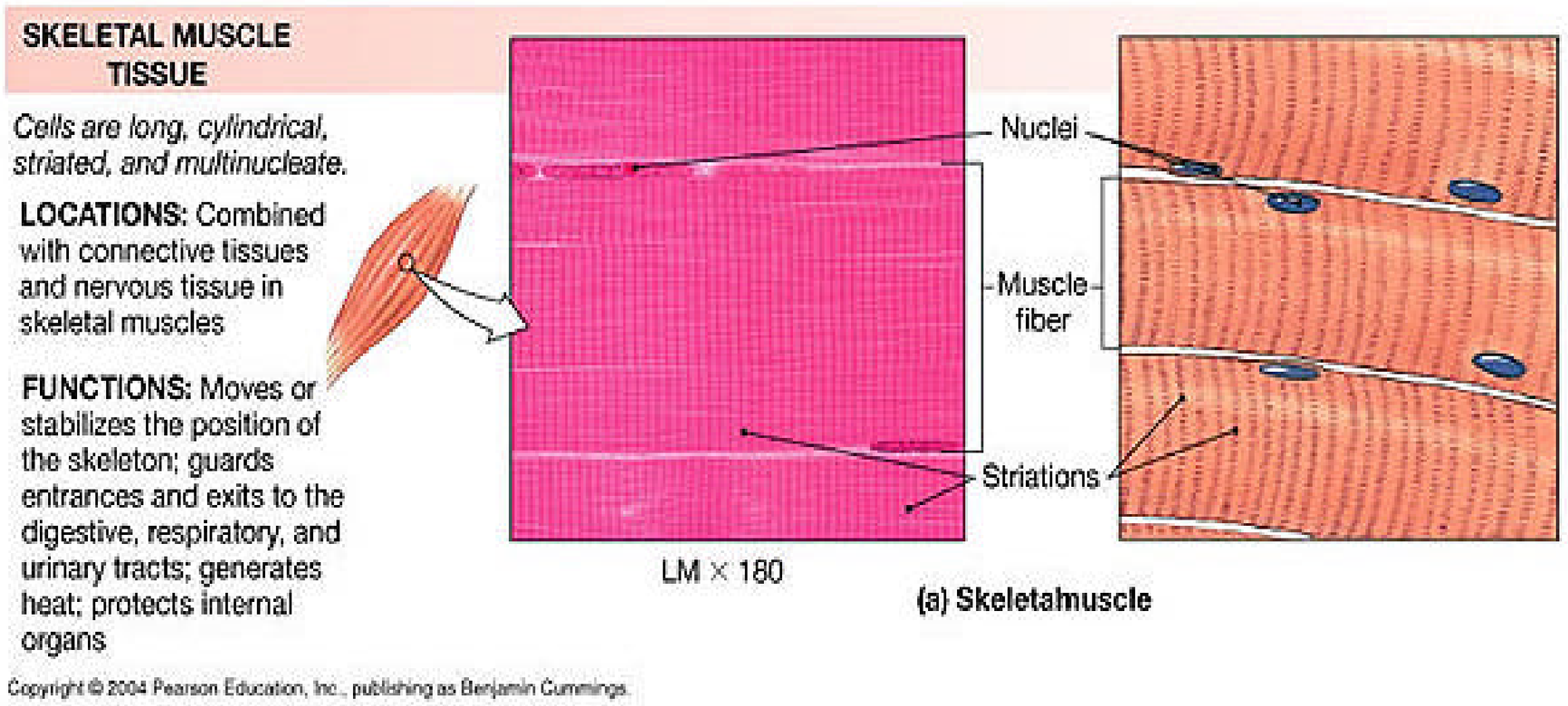


(c)

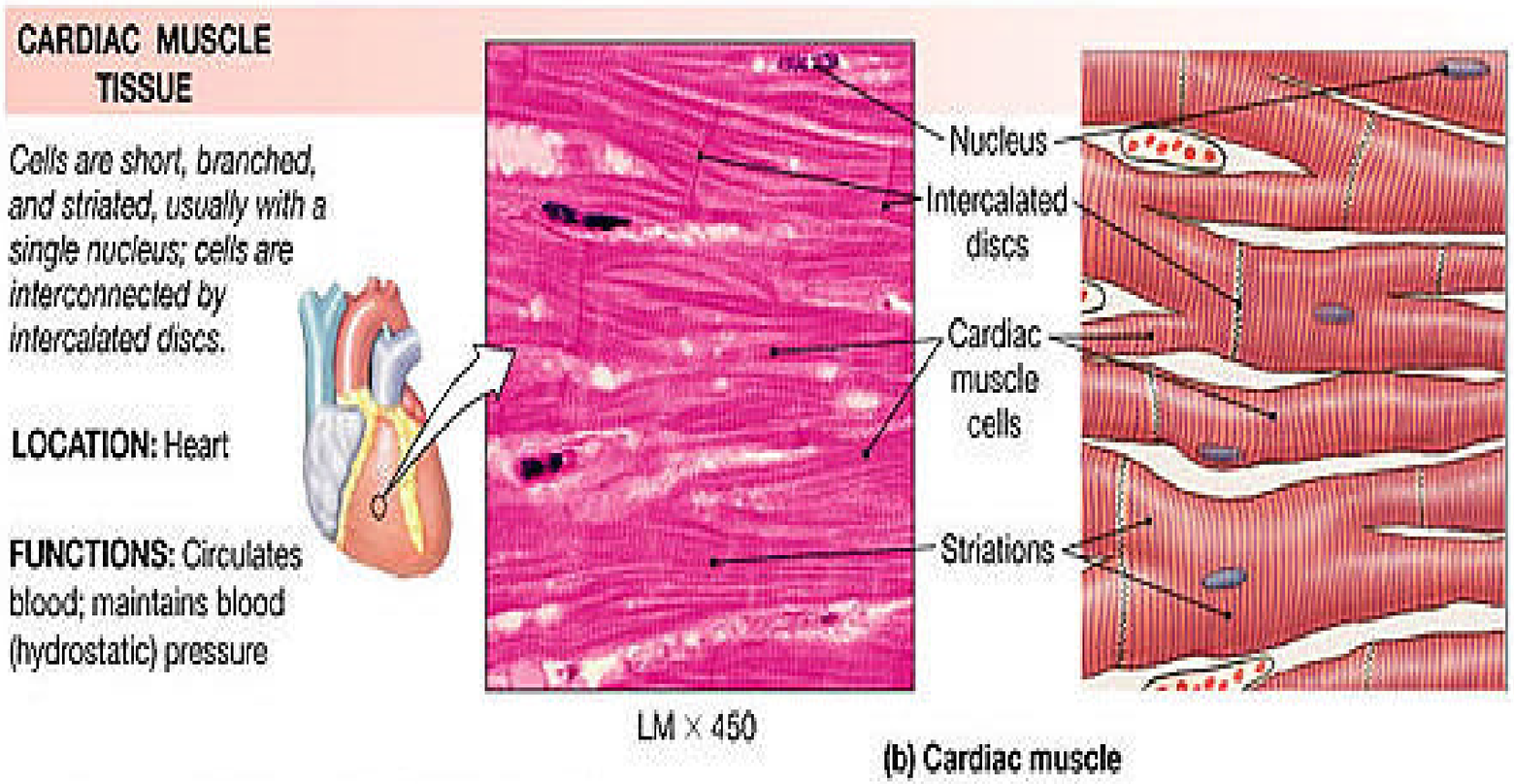
TEJIDOS MUSCULARES

- Contractilidad
- movimiento de las diversas partes del cuerpo
- Sus células están organizadas como largas unidades estructurales denominadas *fibras musculares.*
- Se clasifican en:
- - **Tejido muscular liso involuntario.**
- **- Tejido muscular estriado voluntario.**
- **- Tejido muscular estriado involuntario o cardíaco.**

TEJIDO MUSCULAR ESQUELETAL



TEJIDO MUSCULAR CARDIACO



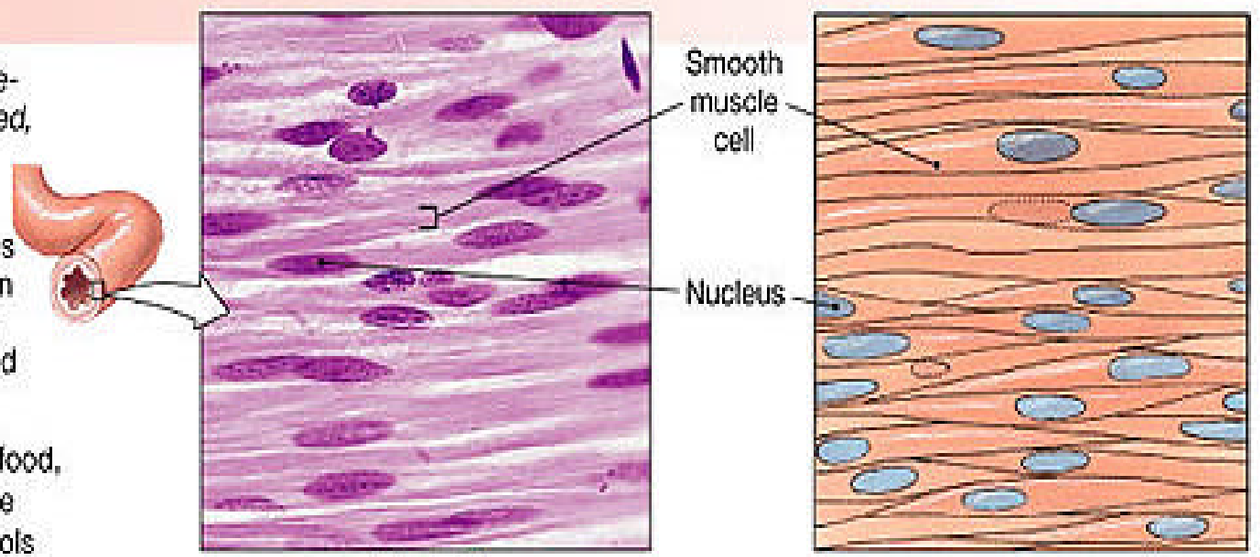
TEJIDO MUSCULAR LISO

SMOOTH MUSCLE TISSUE

Cells are short, spindle-shaped, and nonstriated, with a single, central nucleus

LOCATIONS: Encircles blood vessels; found in the walls of digestive, respiratory, urinary, and reproductive organs

FUNCTIONS: Moves food, urine, and reproductive tract secretions; controls diameter of respiratory passageways; regulates diameter of blood vessels

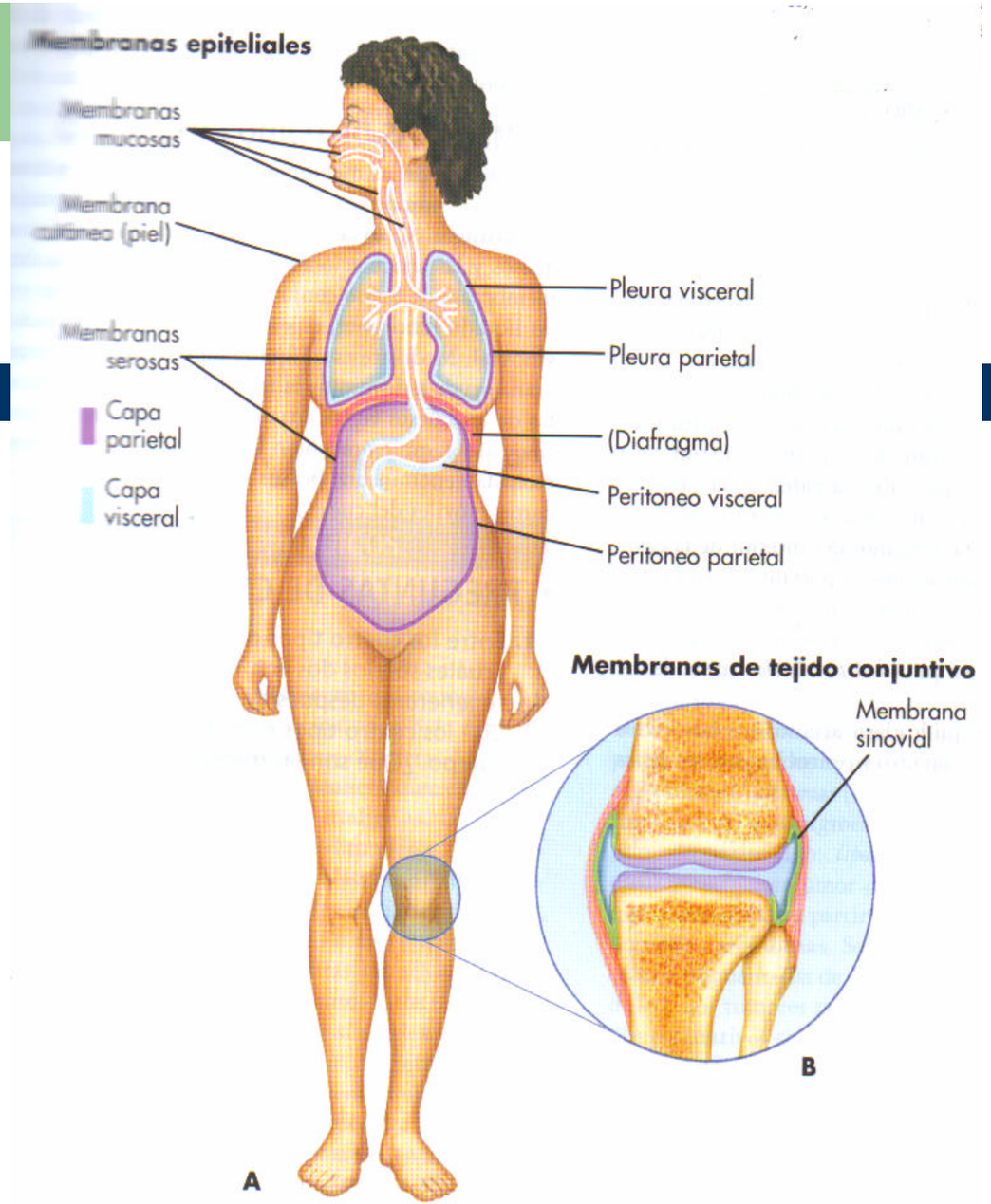


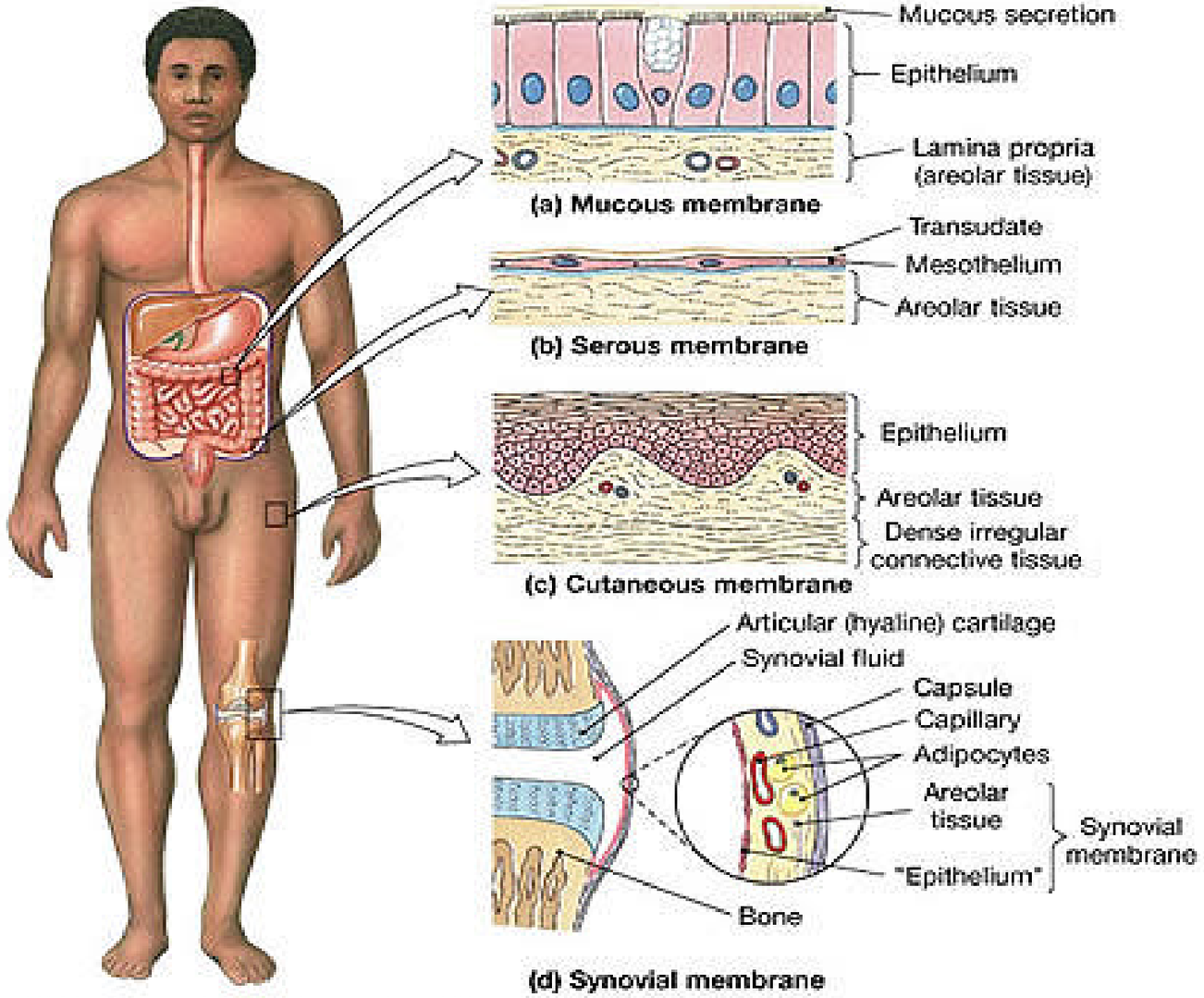
LM × 235

(c) Smooth muscle

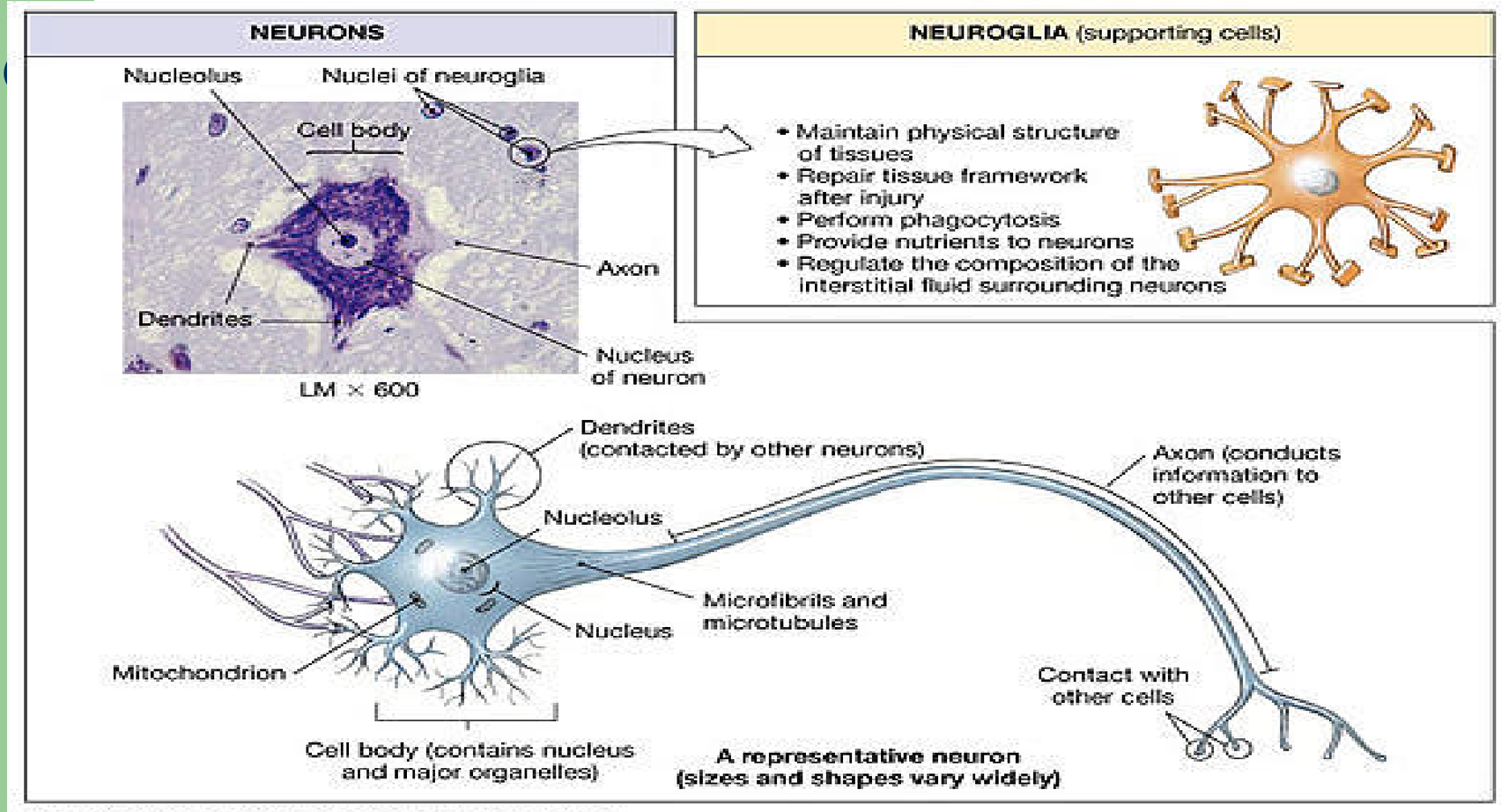
MEMBRANAS

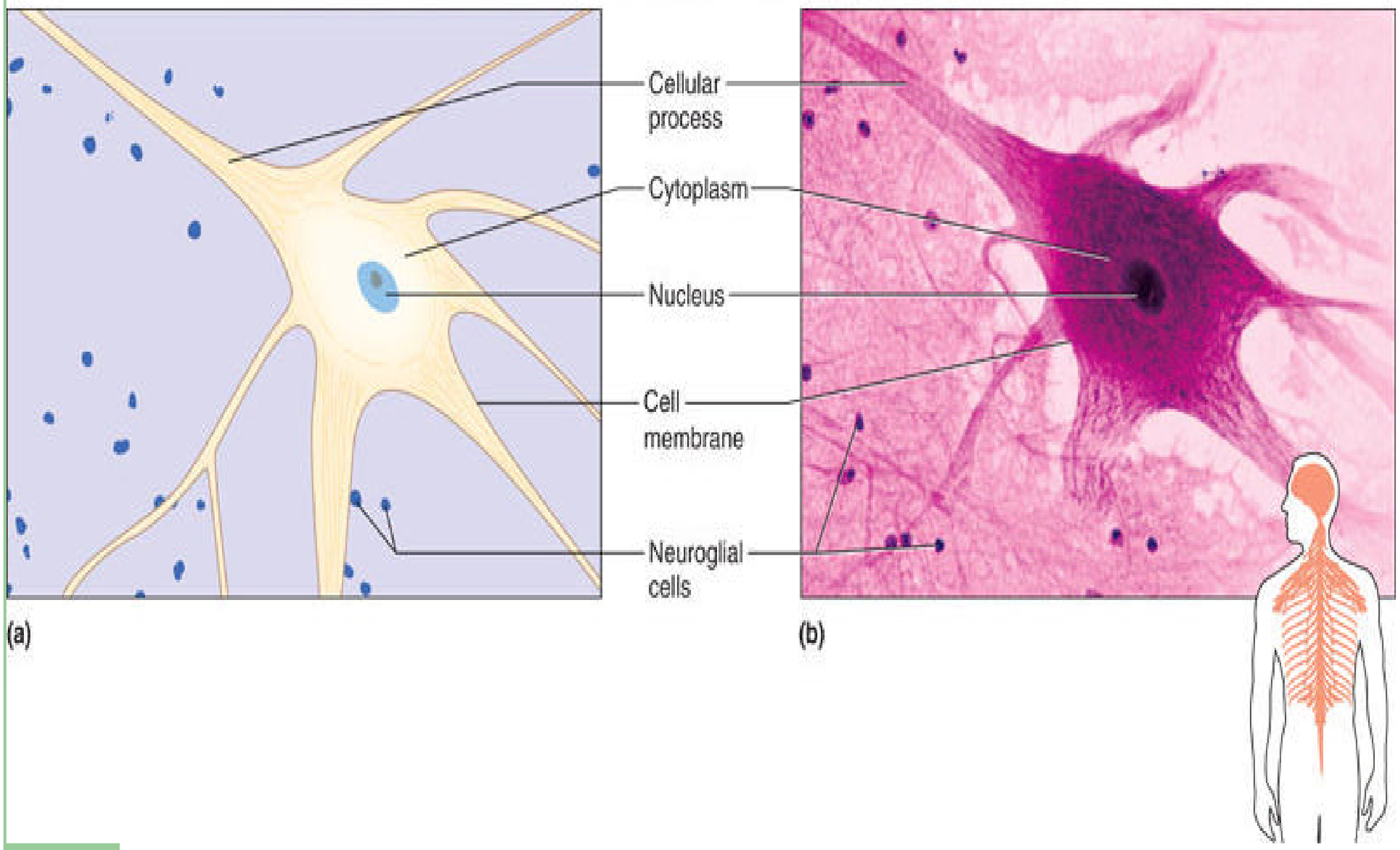
- **BARRERA FISICA**
- CUBREN SUPERFICIES DEL CUERPO
- CONSISTEN DE EPITELIO Y TEJIDO CONECTIVO
- 4 TIPOS:
  - MUCOSA=delinea cavidades y tubos que dan para el exterior del cuerpo
  - SEROSA=cubre órganos internos: pleura, peritoneo
  - CUTANEA=piel
  - SINOVIAL=articulaciones


Membranas epiteliales
Membranas mucosas
Membrana cutánea (piel)
Membranas serosas
Capa parietal
Capa visceral
Pleura visceral
Pleura parietal
(Diafragma)
Peritoneo visceral
Peritoneo parietal
Membranas de tejido conjuntivo
Membrana sinovial
A
B



TEJIDO NERVIOSO




Cellular process
Cytoplasm
Nucleus
Cell membrane
Neuroglial cells
(a)
(b)