

# **TECIDO EPITELIAL**

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# Tecido epitelial

## Características principais

Formado basicamente por células

Suas células apresentam pouco espaço entre si, portanto, são justapostas;

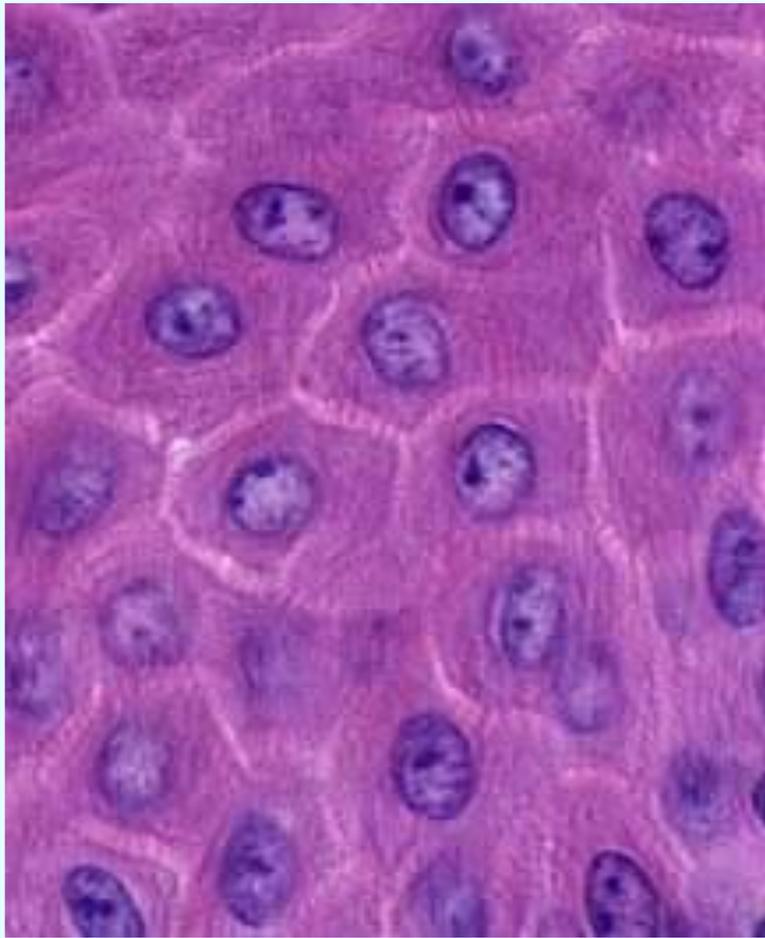
Assim as células estabelecem muitas junções intercelulares com as células epiteliais vizinhas;

As células epiteliais estão sempre apoiadas sobre uma lâmina basal, que esta assentada sobre um tecido conjuntivo.

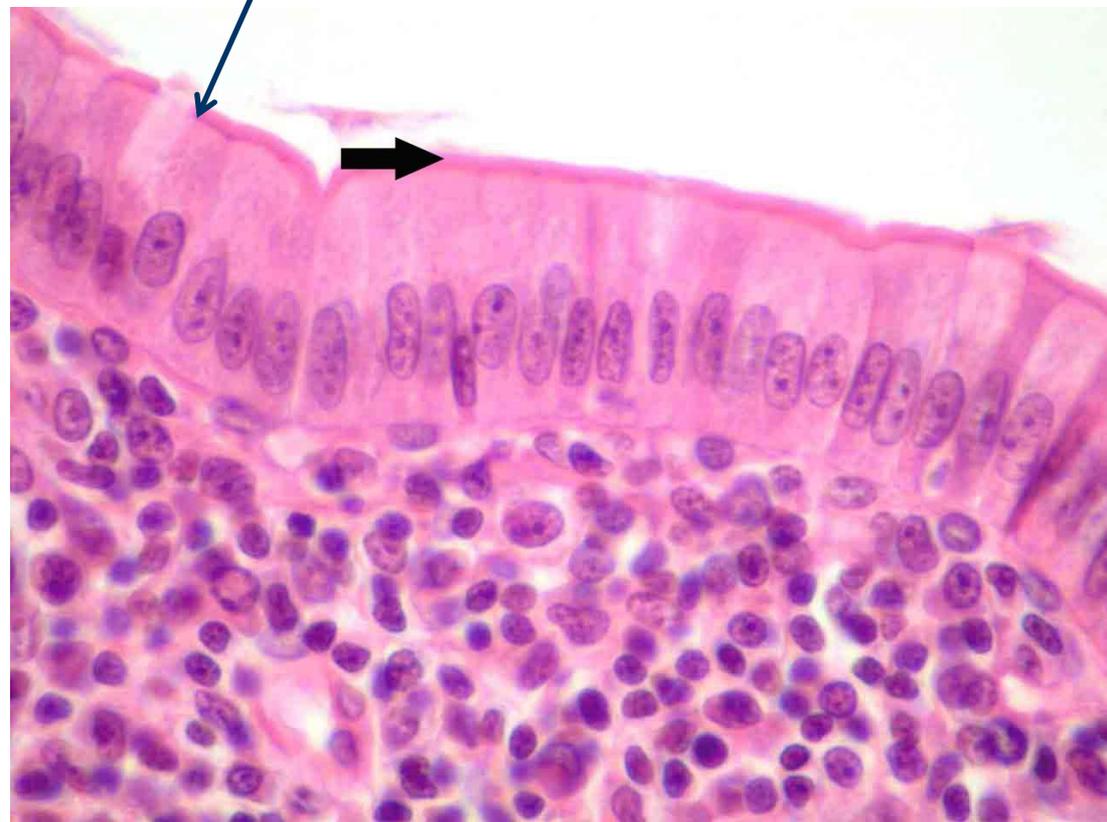
# Funções do Tecido Epitelial

- **secreção,**
- **proteção**
- **digestão,**
- **absorção,**
- **transporte,**
- **sensorial,**
- **reprodução,**
- **filtração.**

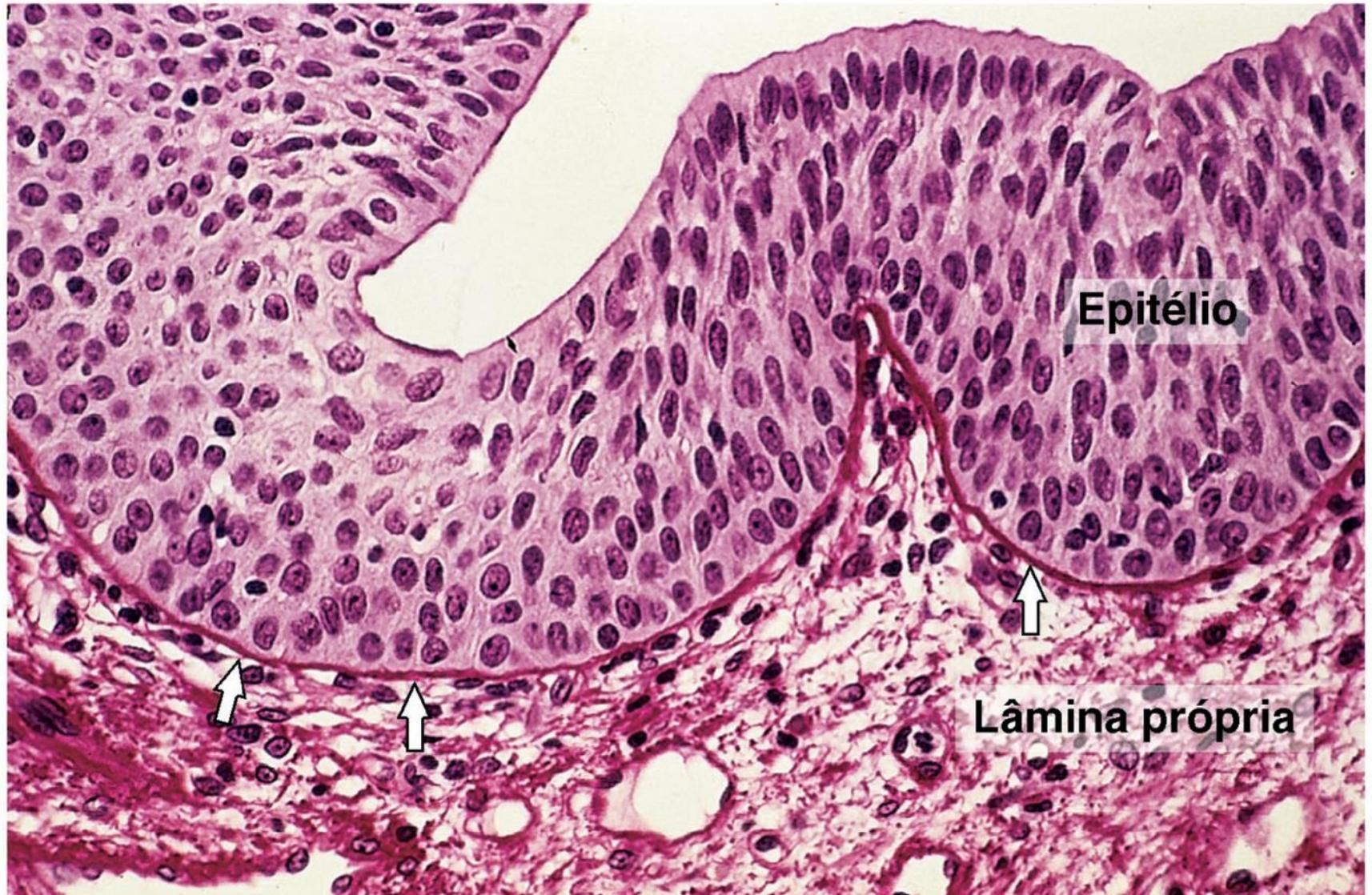
# Características do Tecido Epitelial



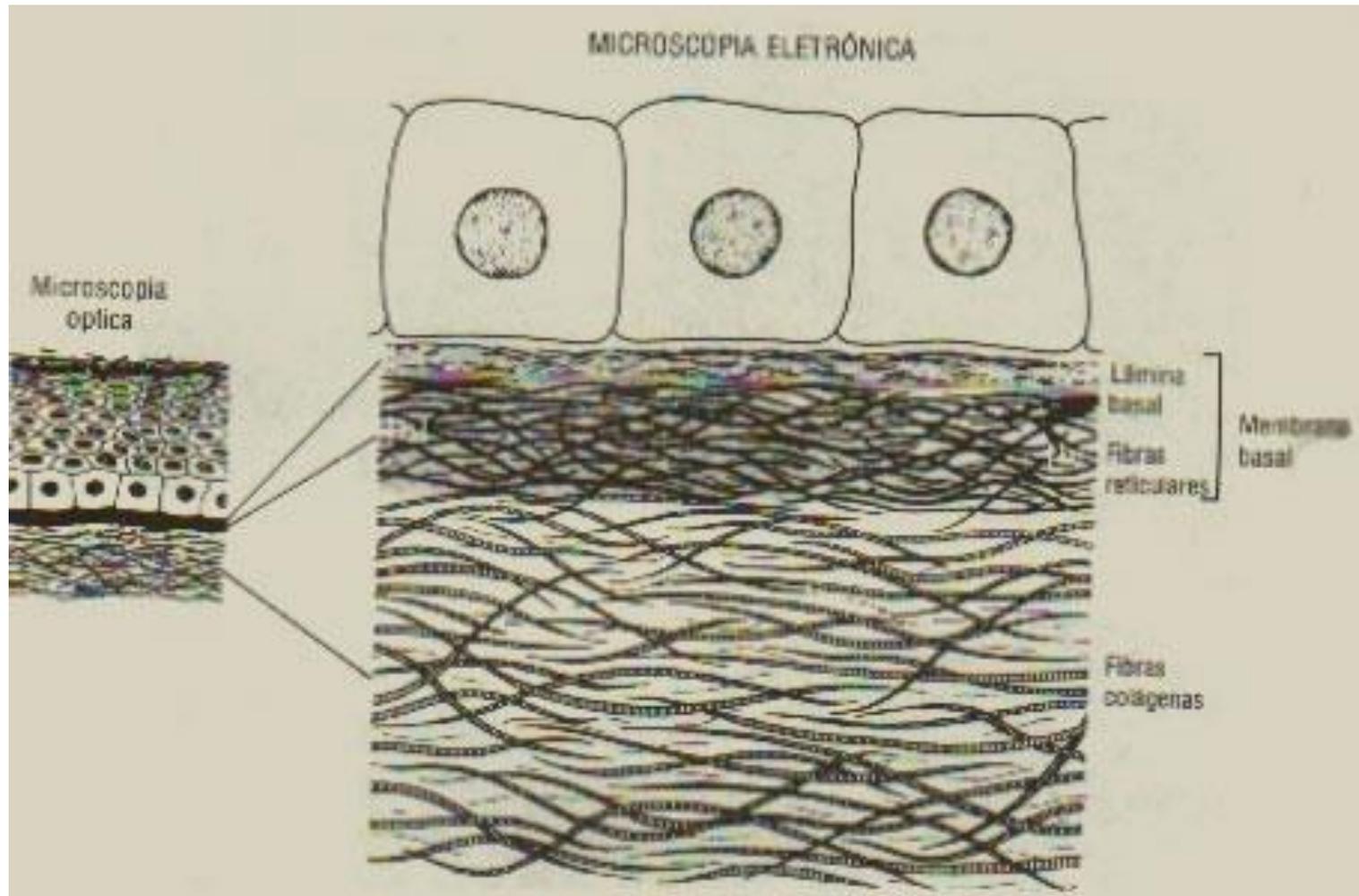
Células justapostas



# Os epitélios são avasculares

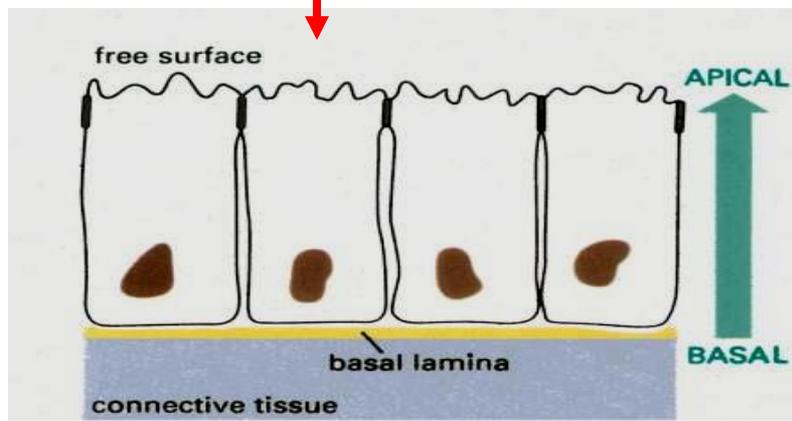
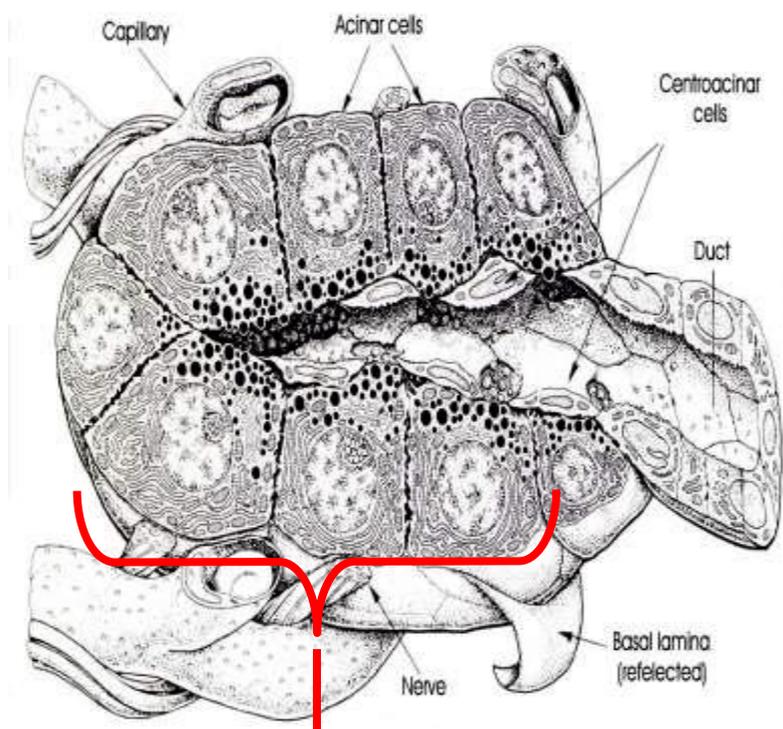
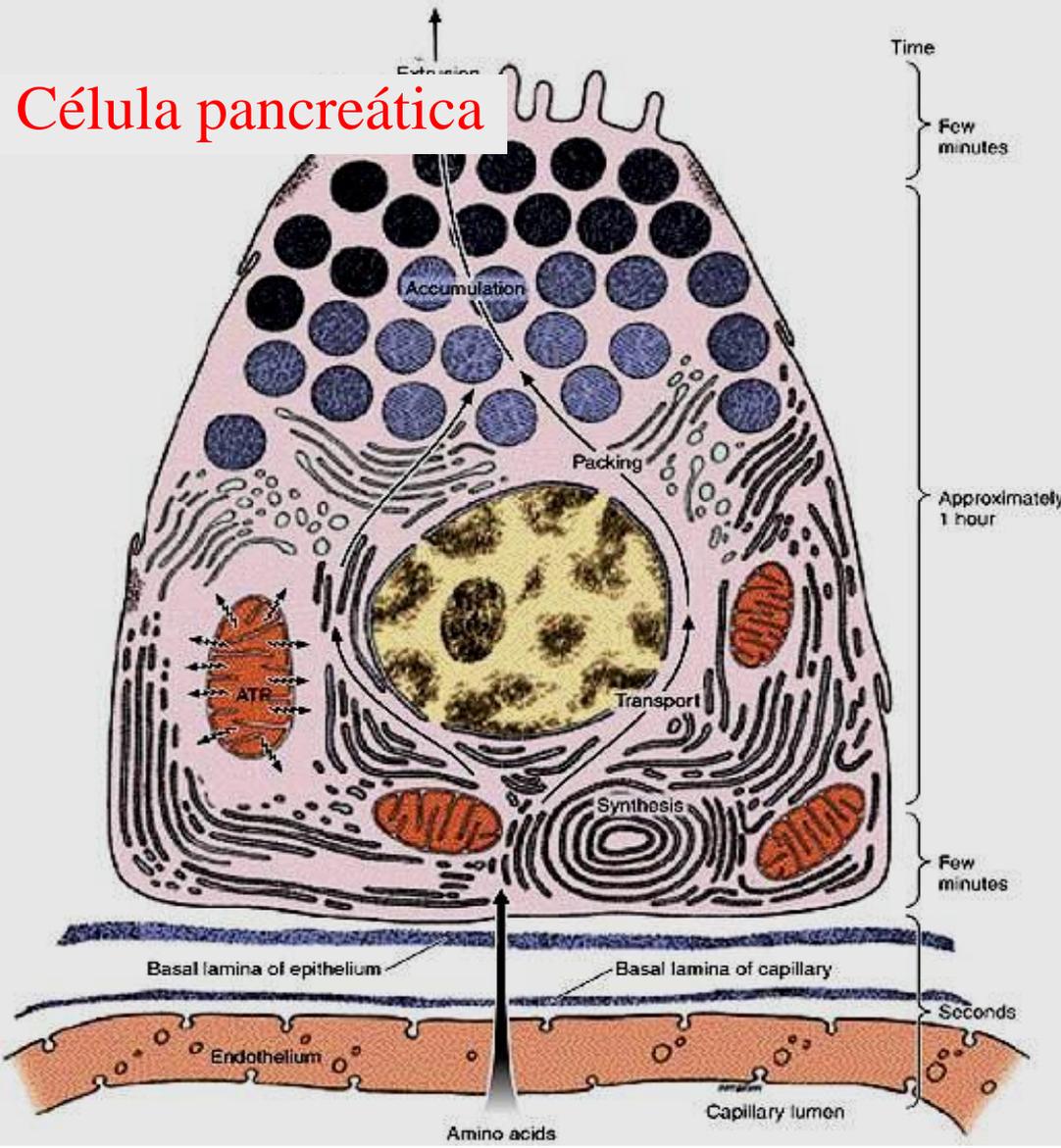


# Lâmina basal e Membrana basal

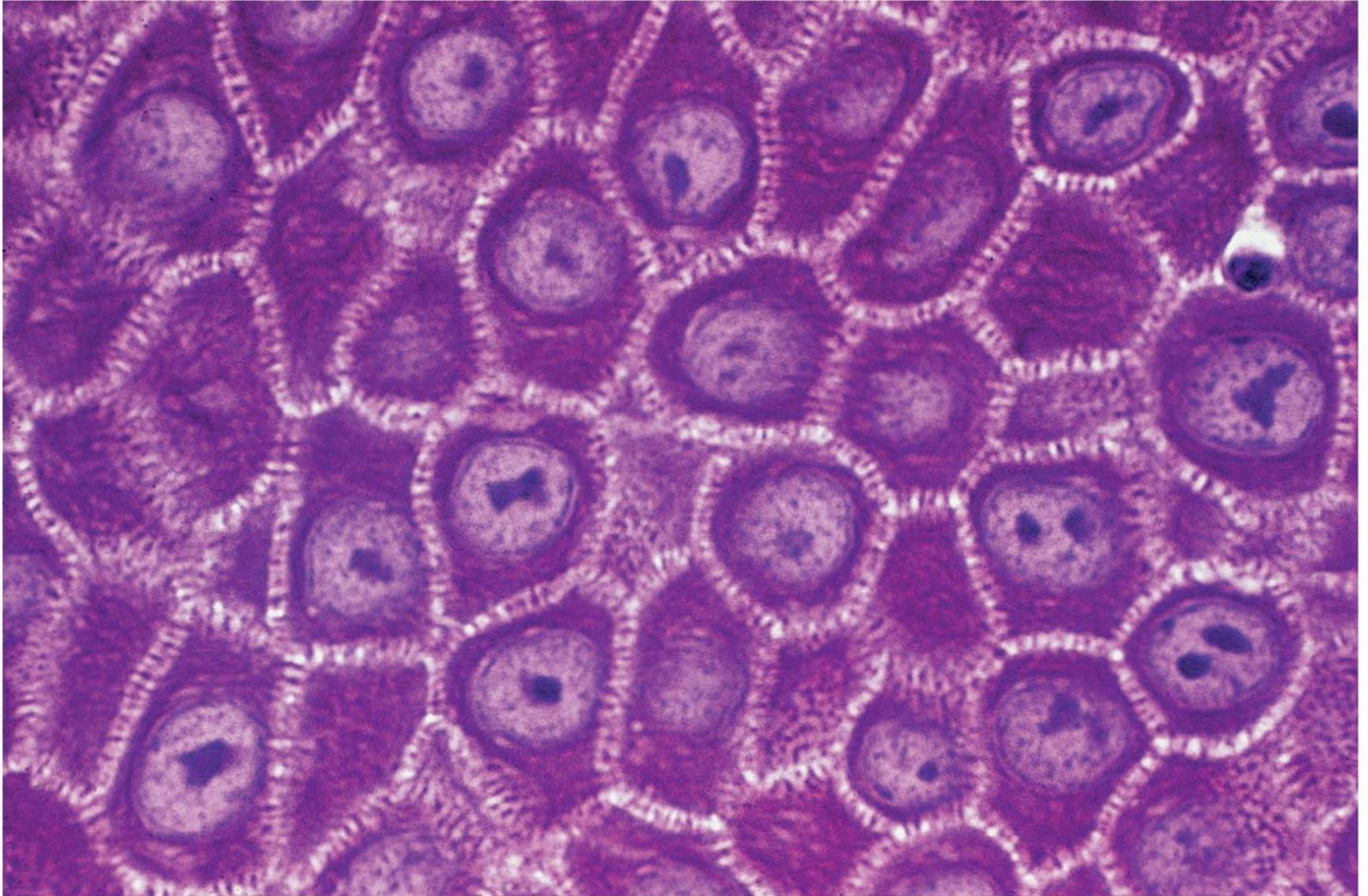


# **Polarização celular**

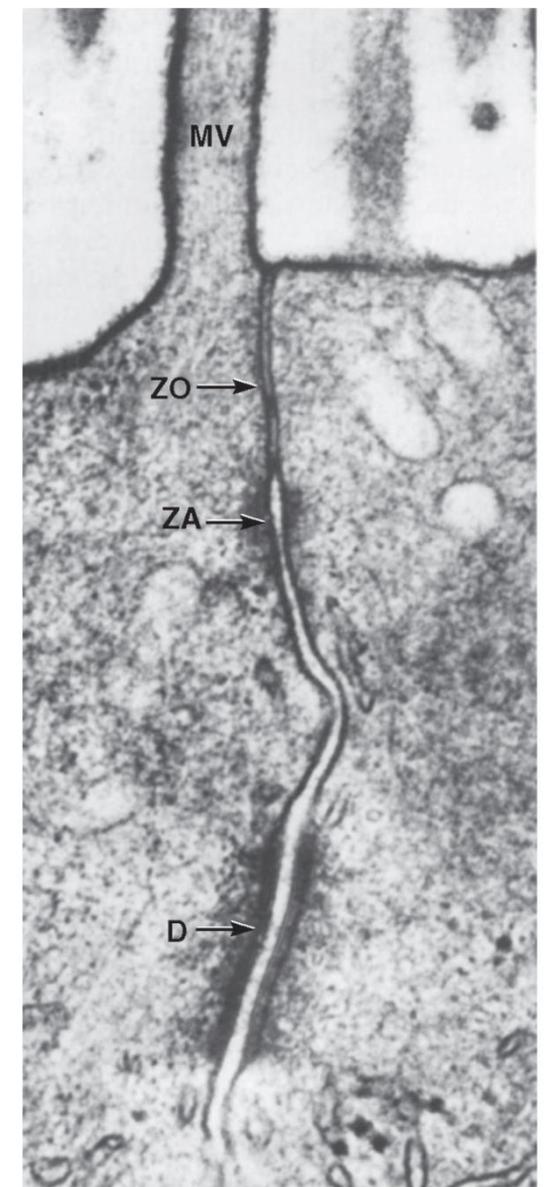
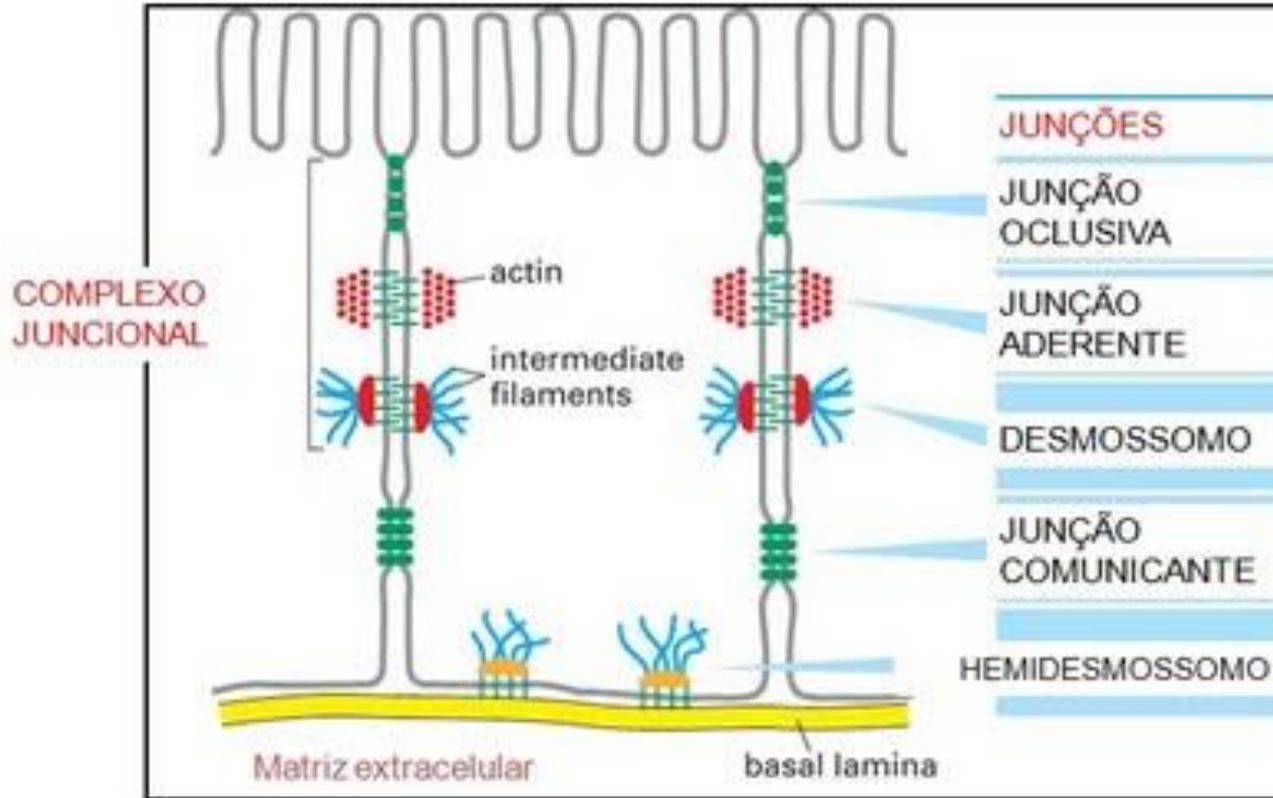
# Célula pancreática



# Junções celulares

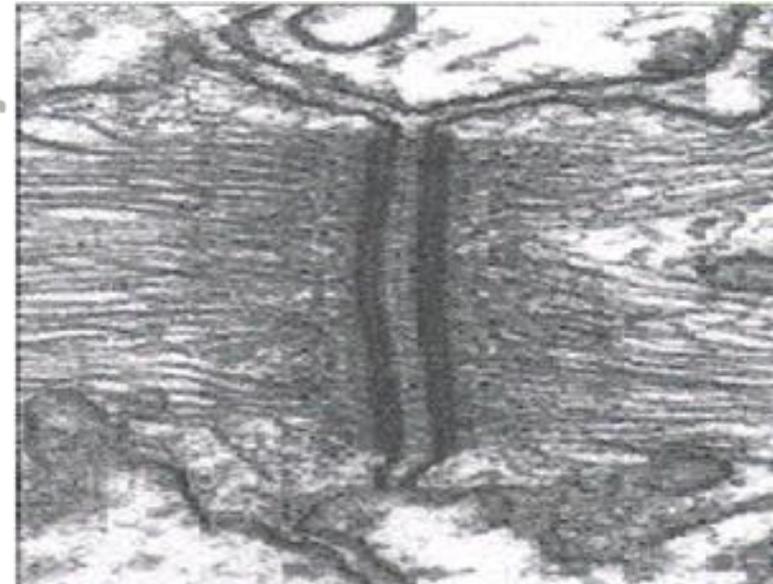
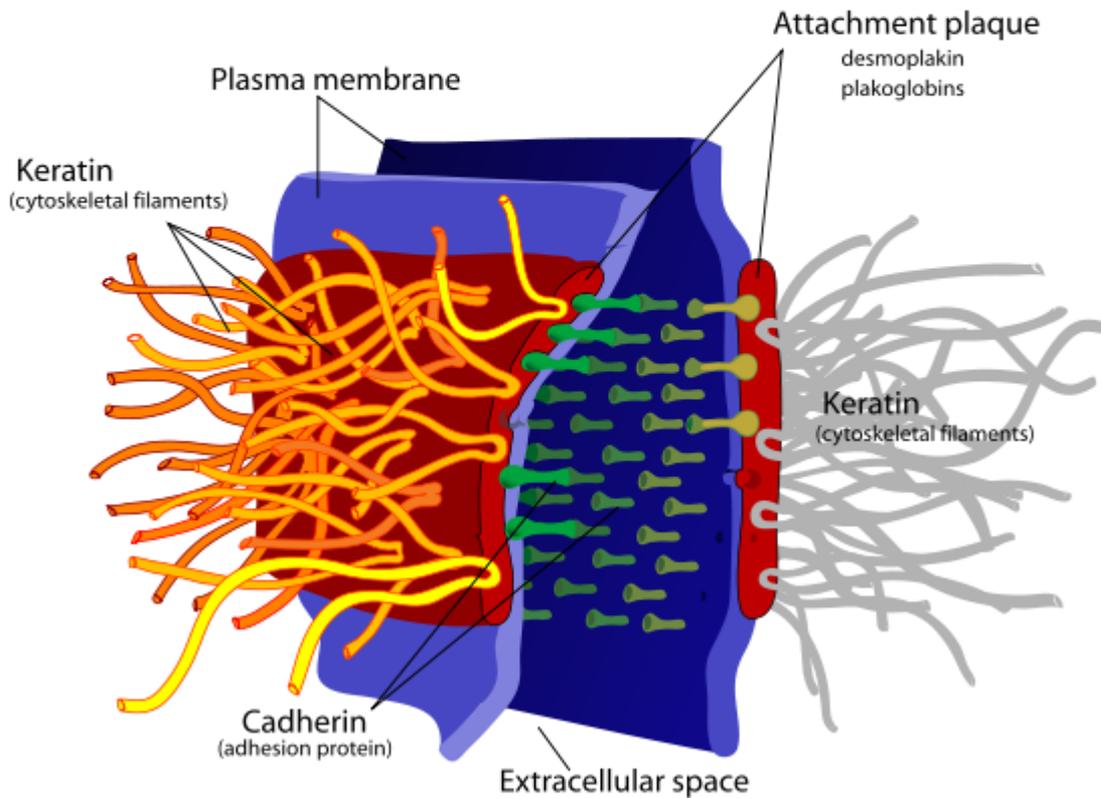
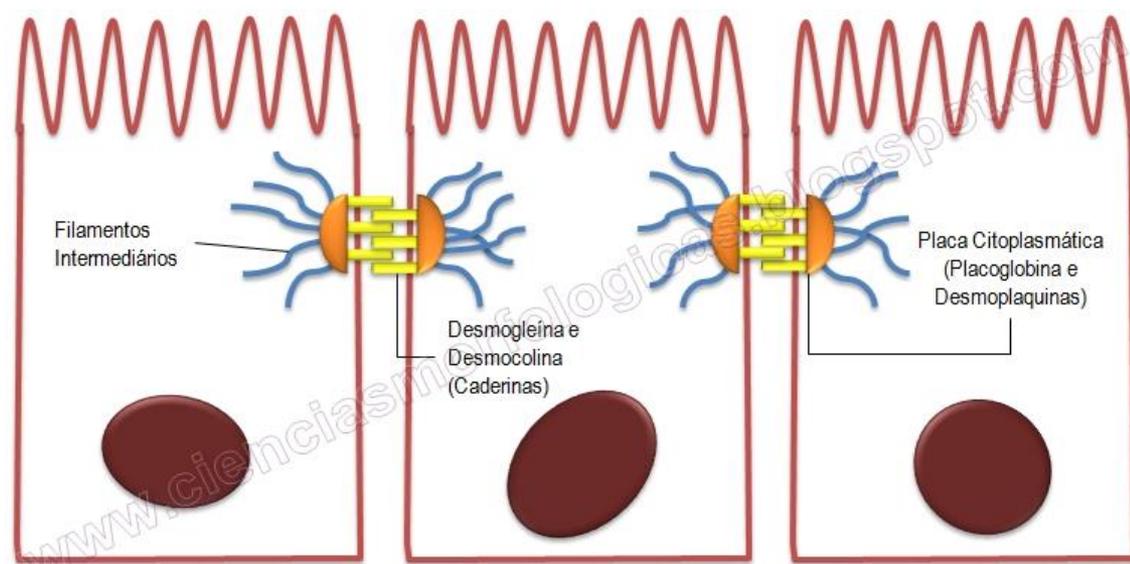
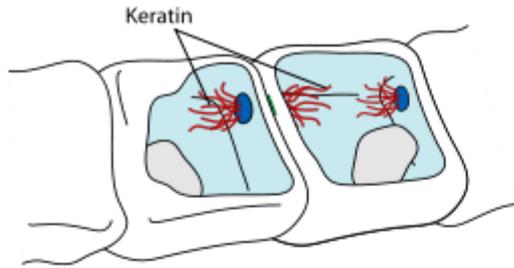


# Junções celulares

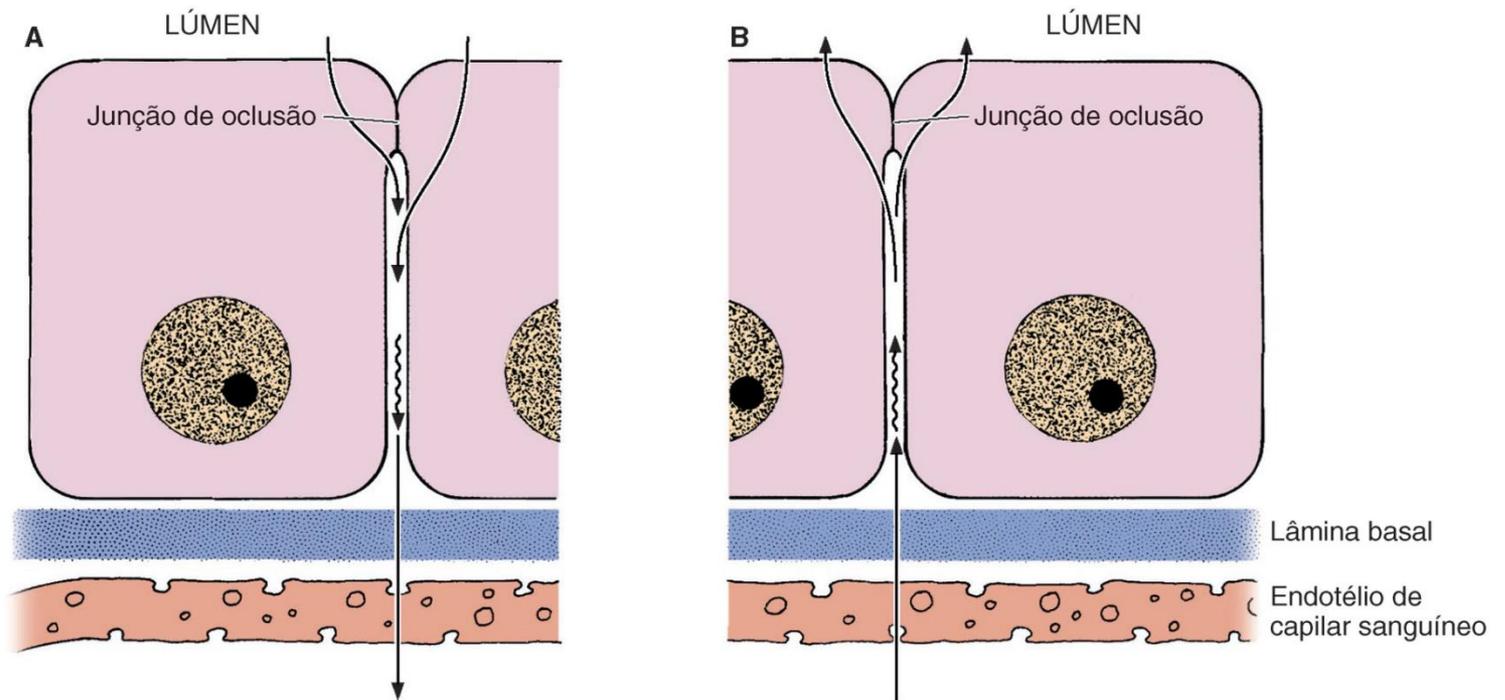


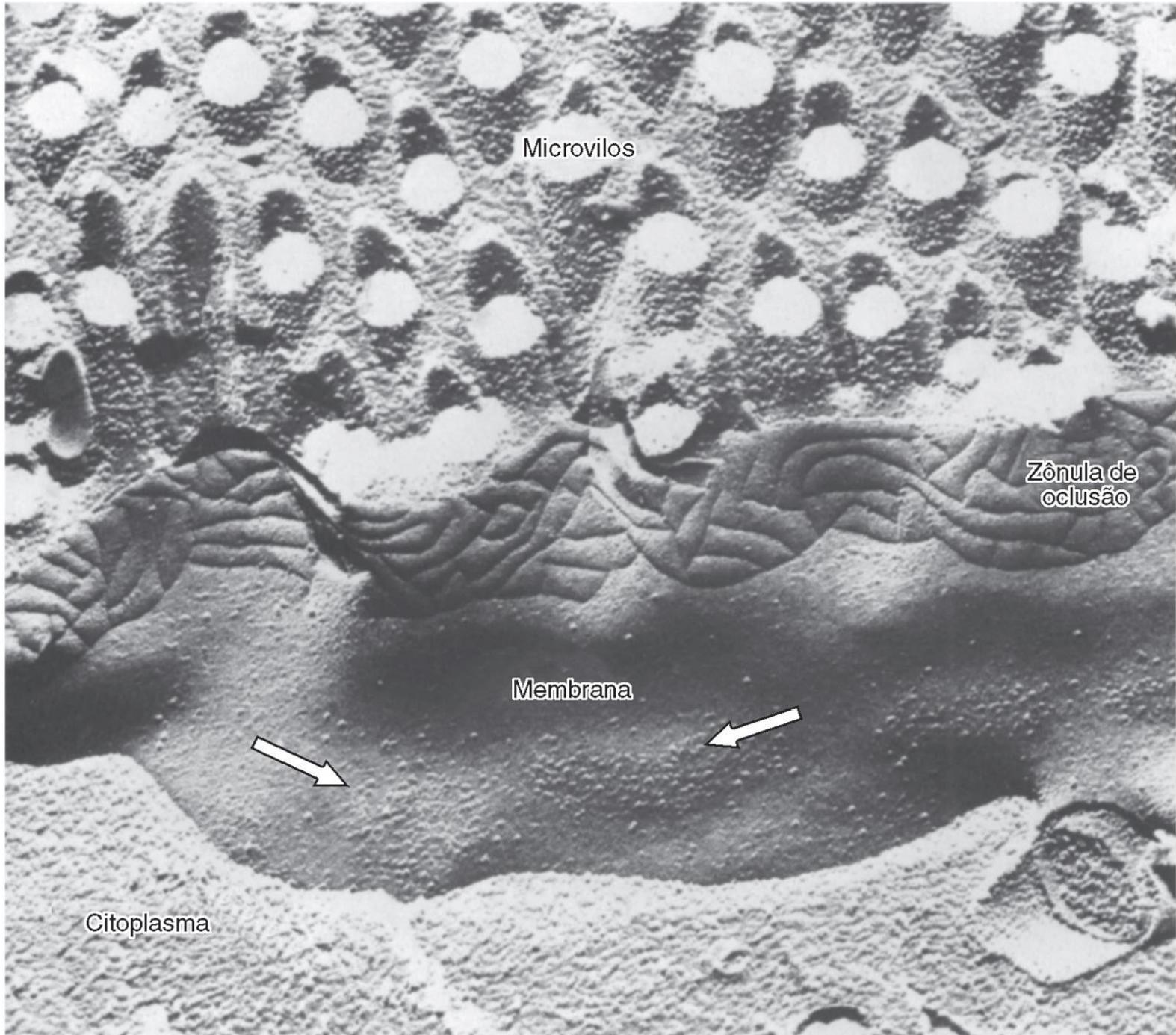
Complexo juncional

# Desmosossomos



# Oclusão





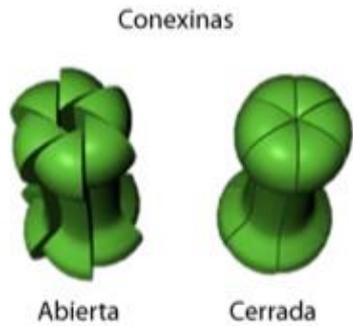
Microvilos

Zônula de oclusão

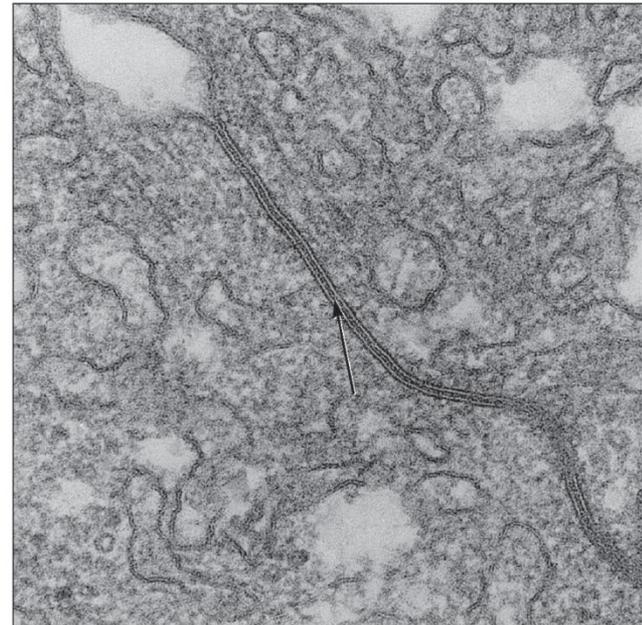
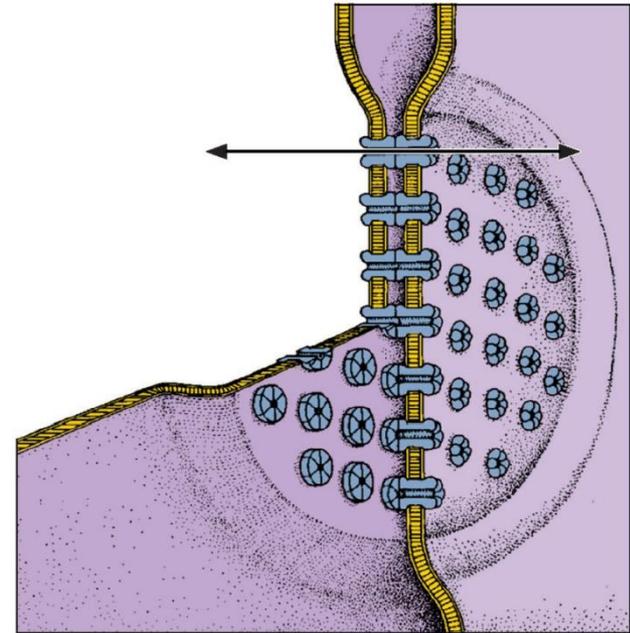
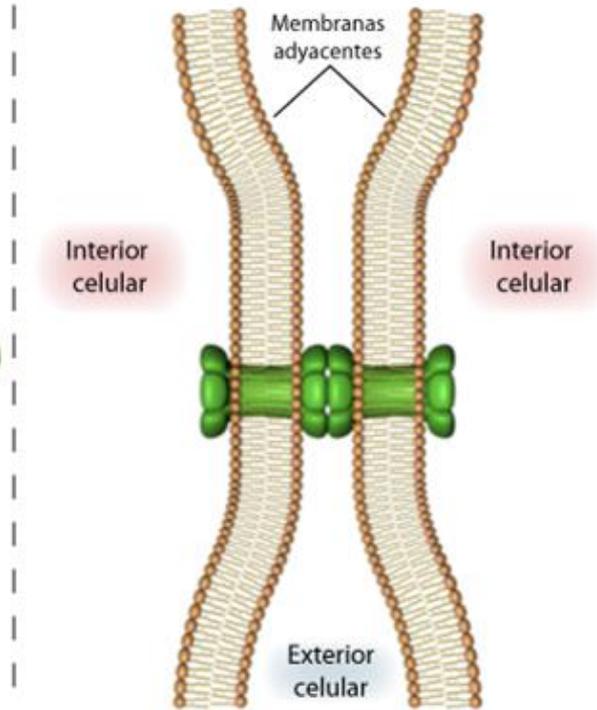
Membrana

Citoplasma

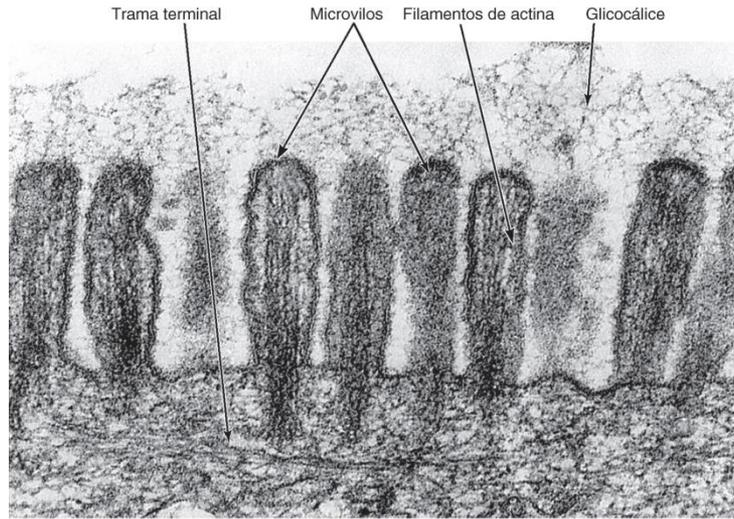
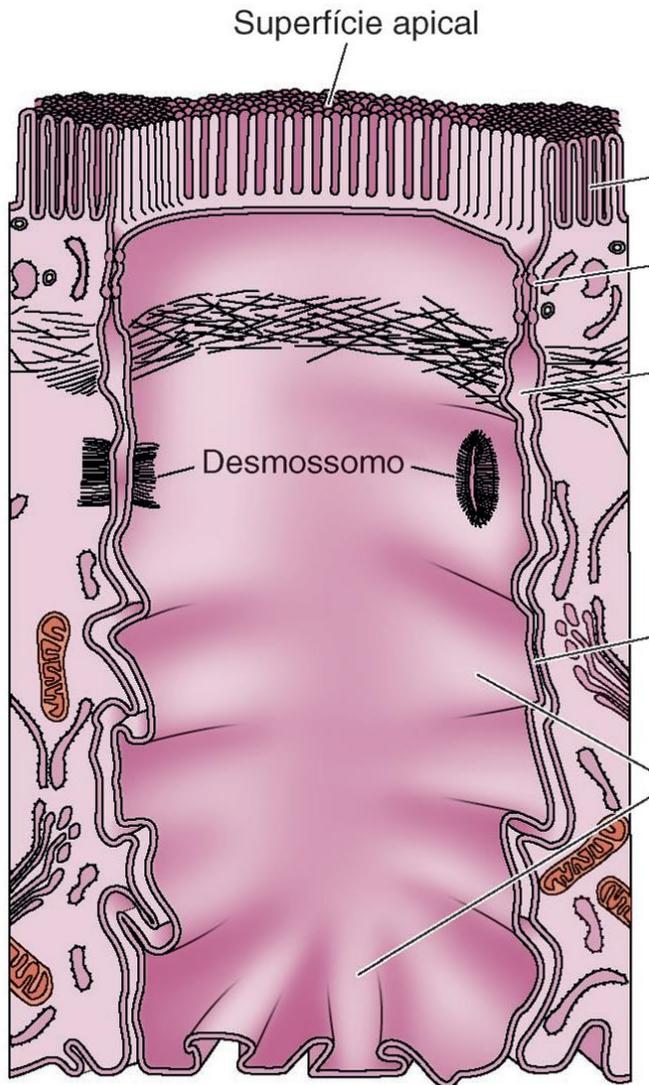
# Conexinas



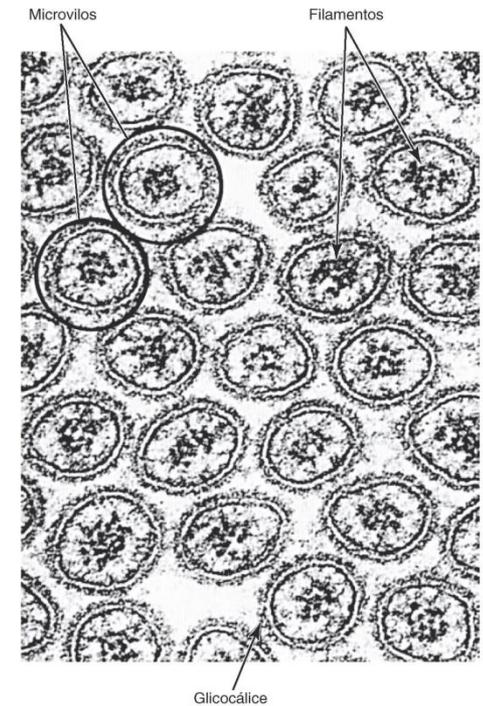
# Junções comunicantes



# Especializações do domínio apical

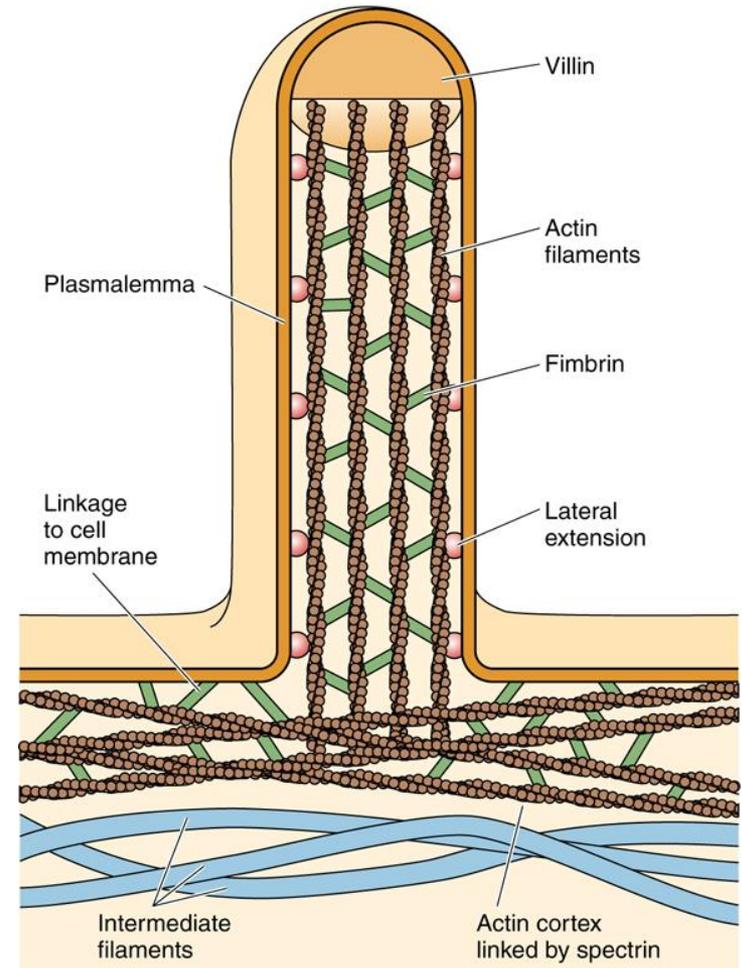
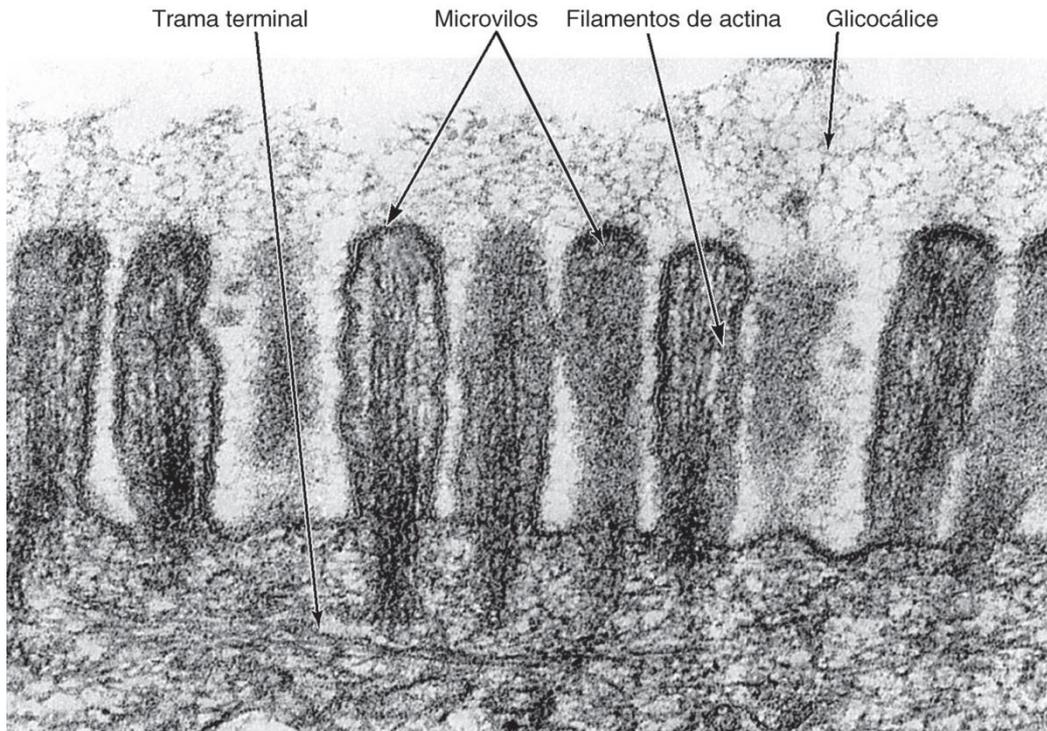


## Microvilos



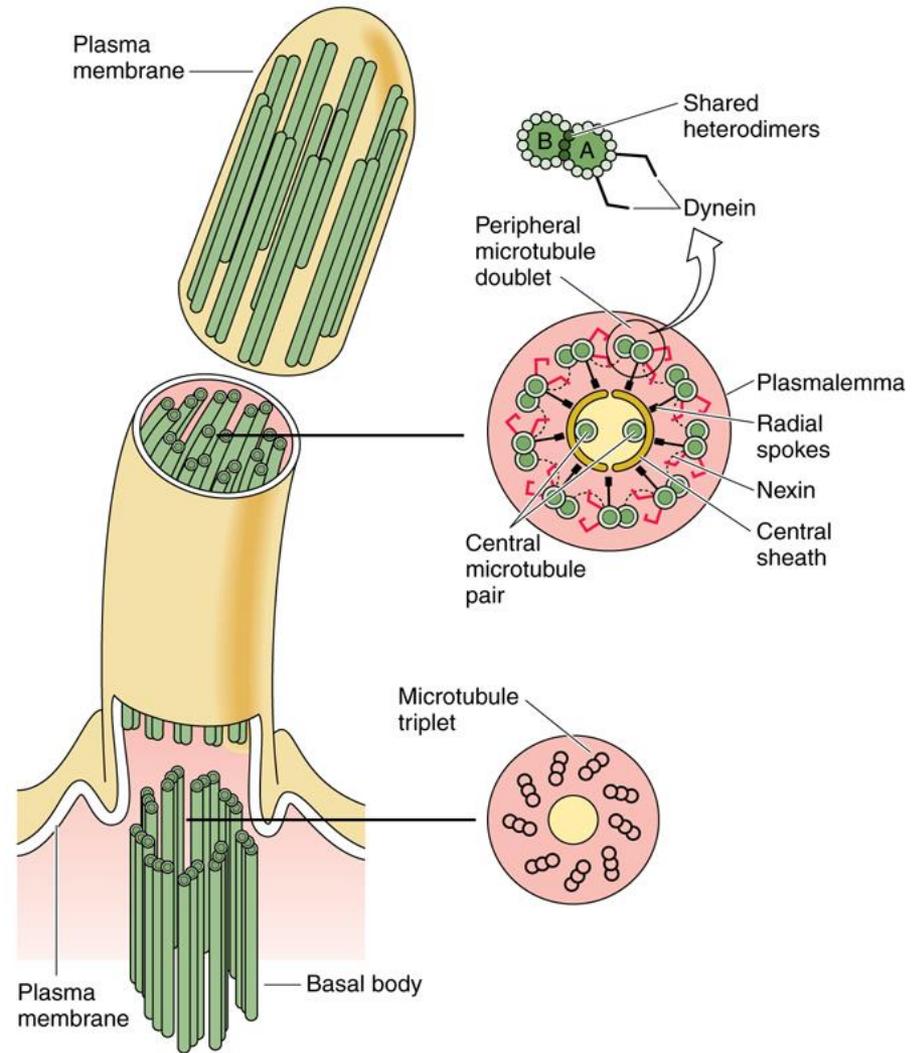
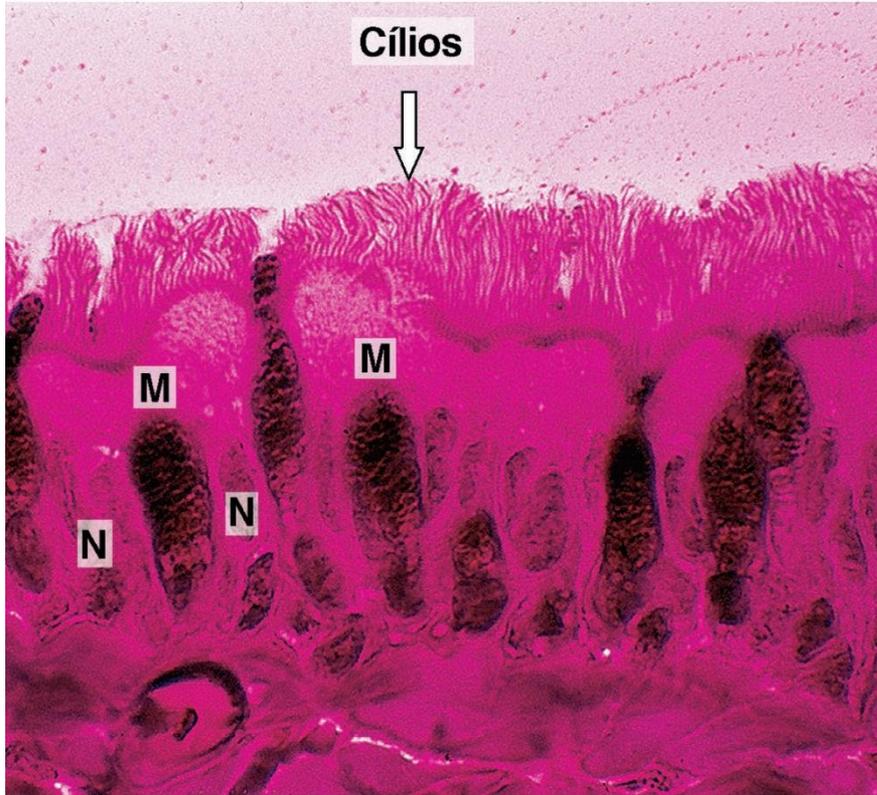
# Especializações do domínio apical

## Microvilos

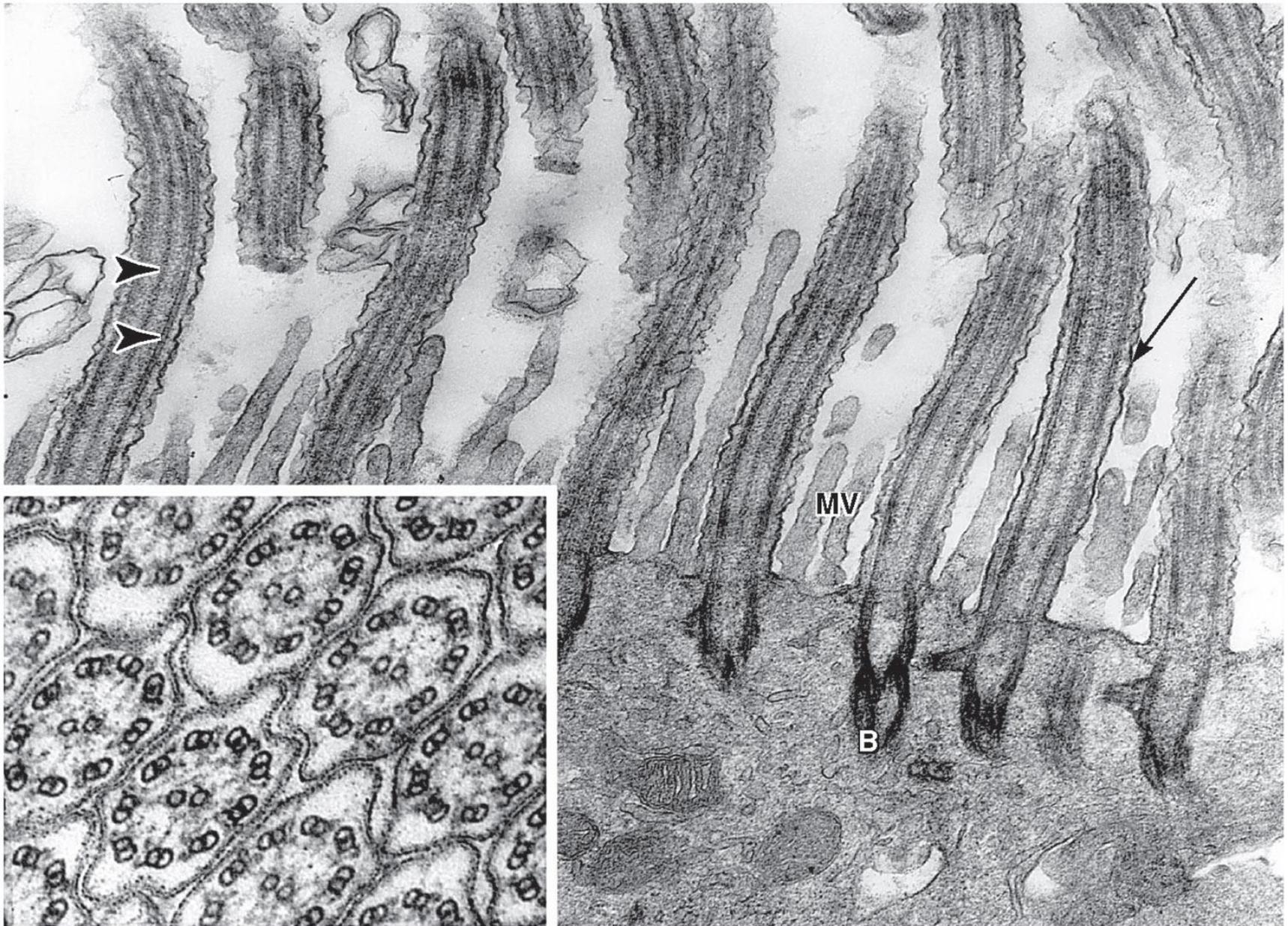


**Aumenta a superfície de absorção**

# Especializações do domínio apical



# Especializações do domínio apical (cílios)

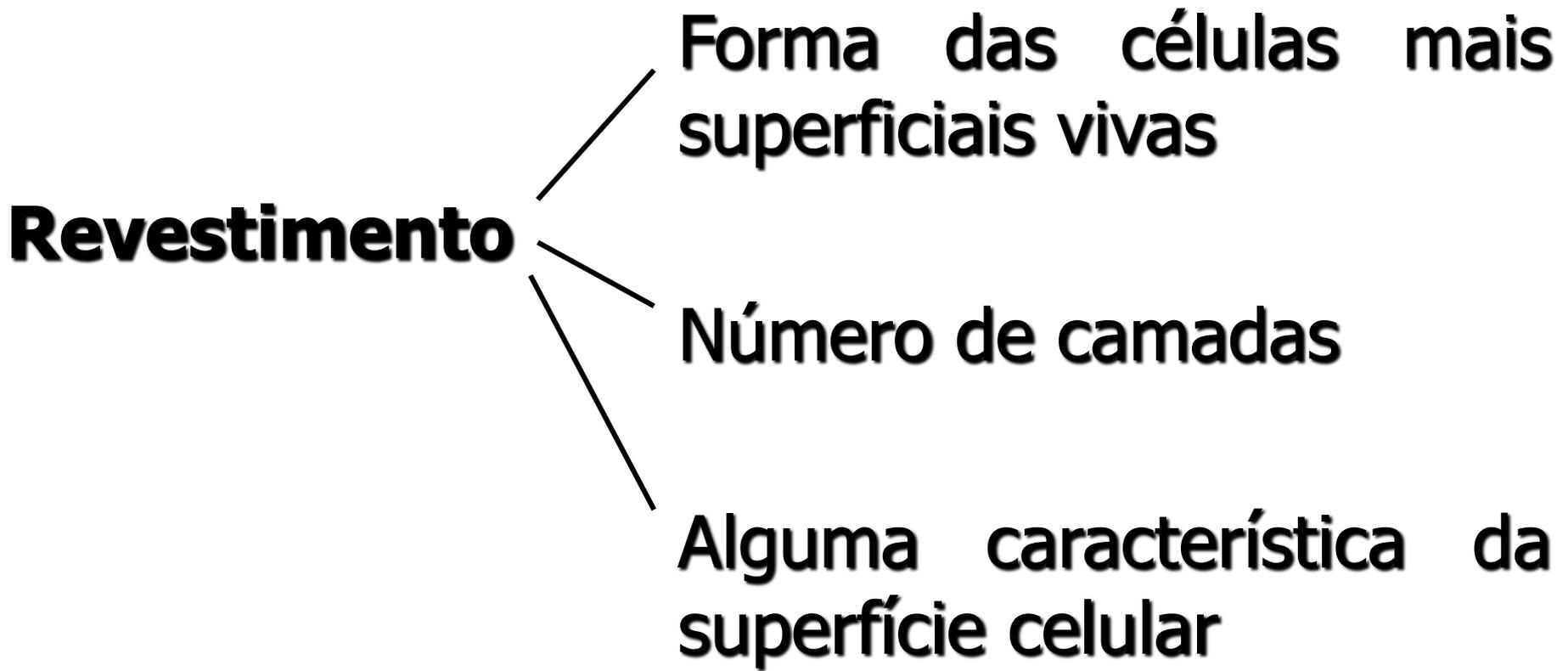


# **Tipos de Tecido Epitelial**

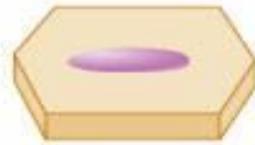
**Revestimento**

**Glandular**

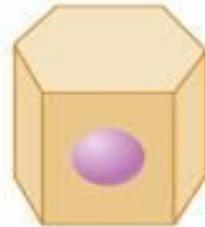
# Classificação dos epitélios de revestimento



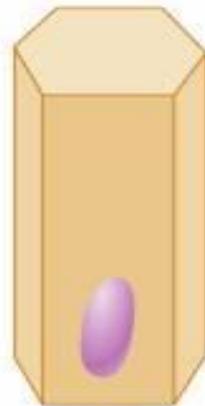
# Forma das células



Pavimentosa ou escamosa

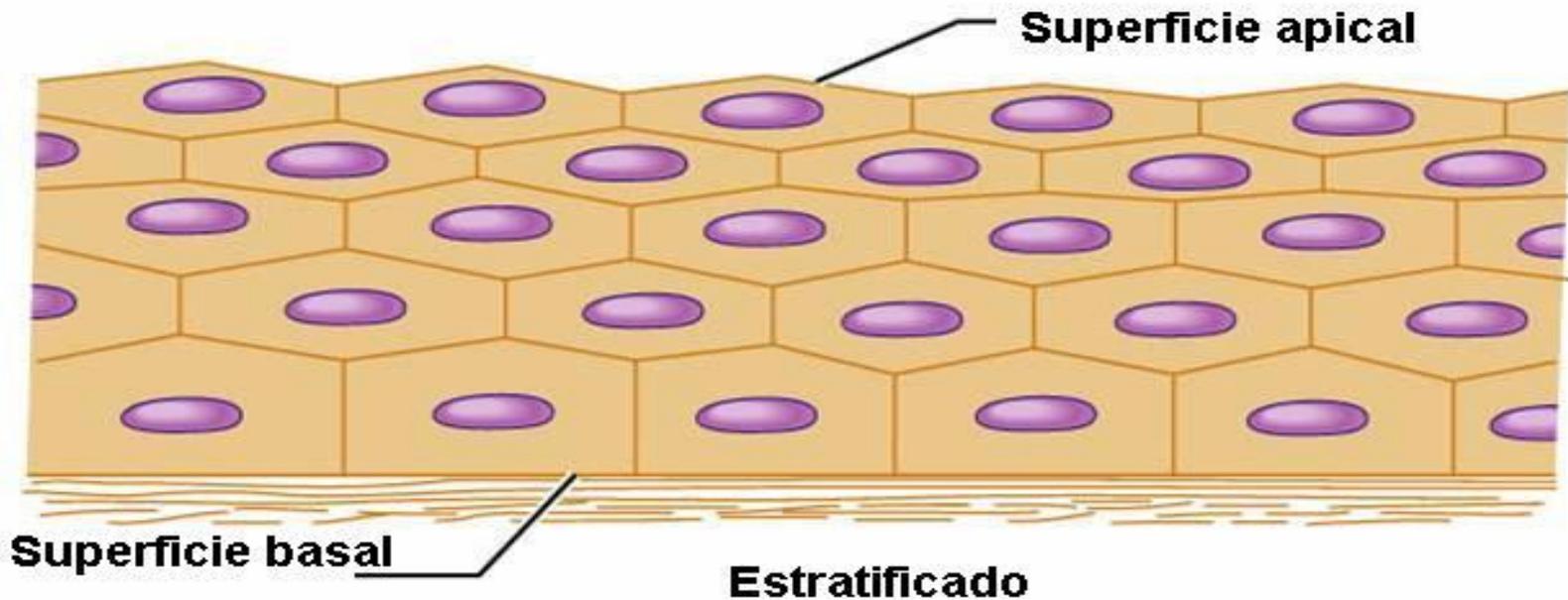
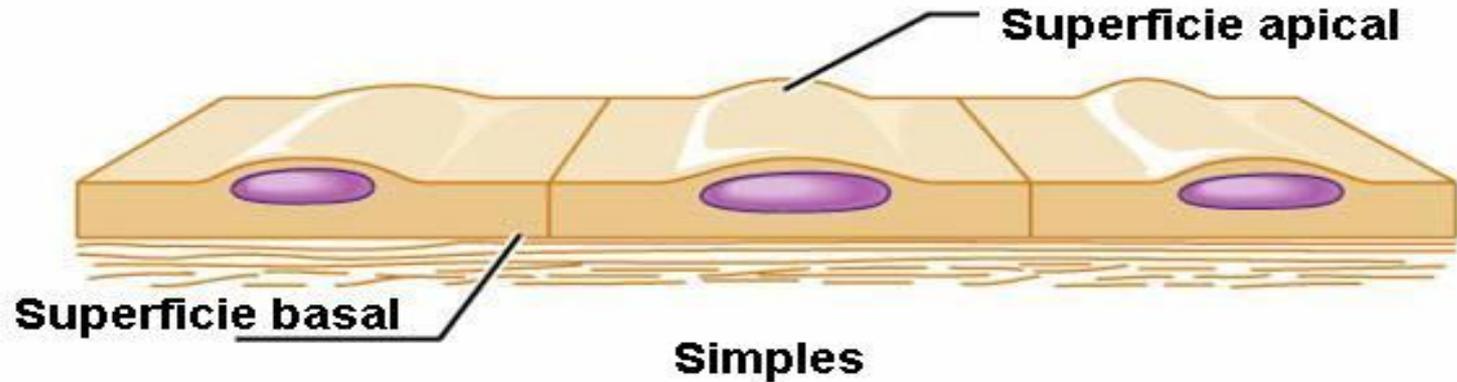


Cúbica



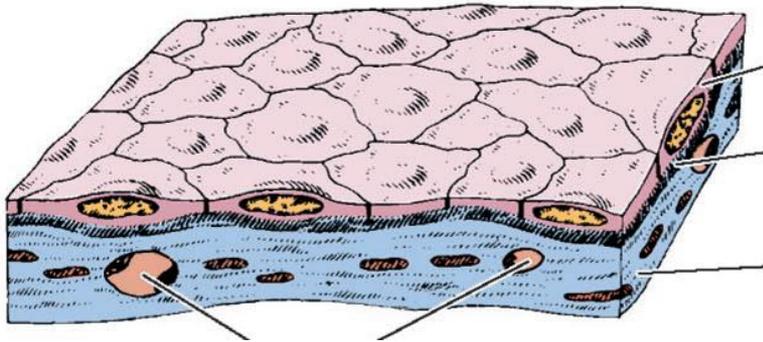
Colunar ou prismática

# Número de camadas

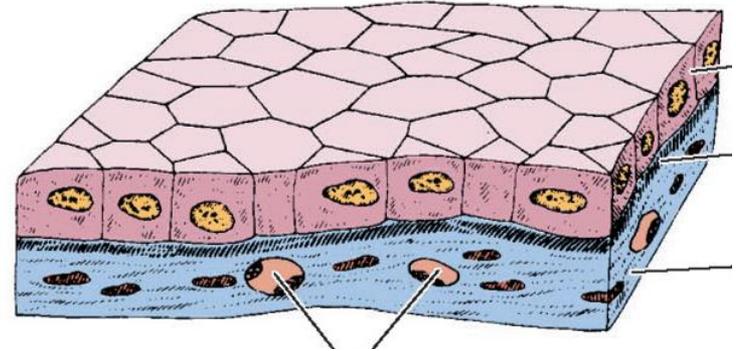


# Tipos de epitélio simples

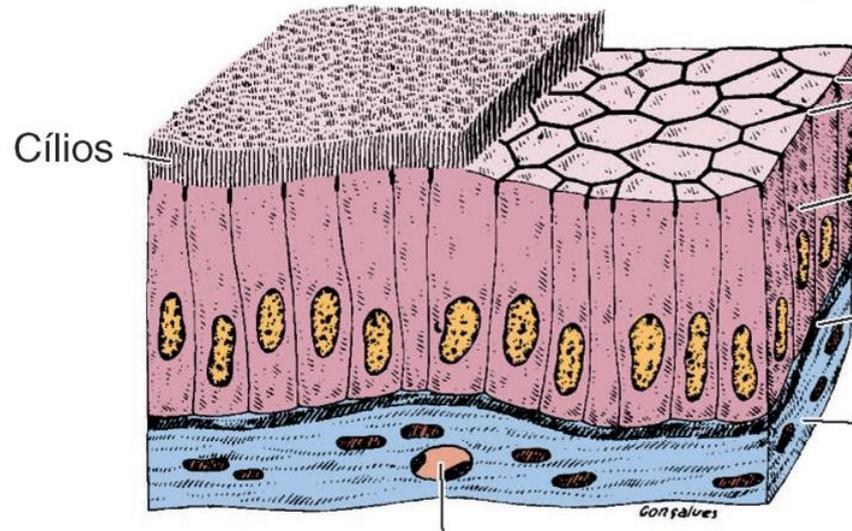
A Epitélio simples pavimentoso



B Epitélio simples cúbico



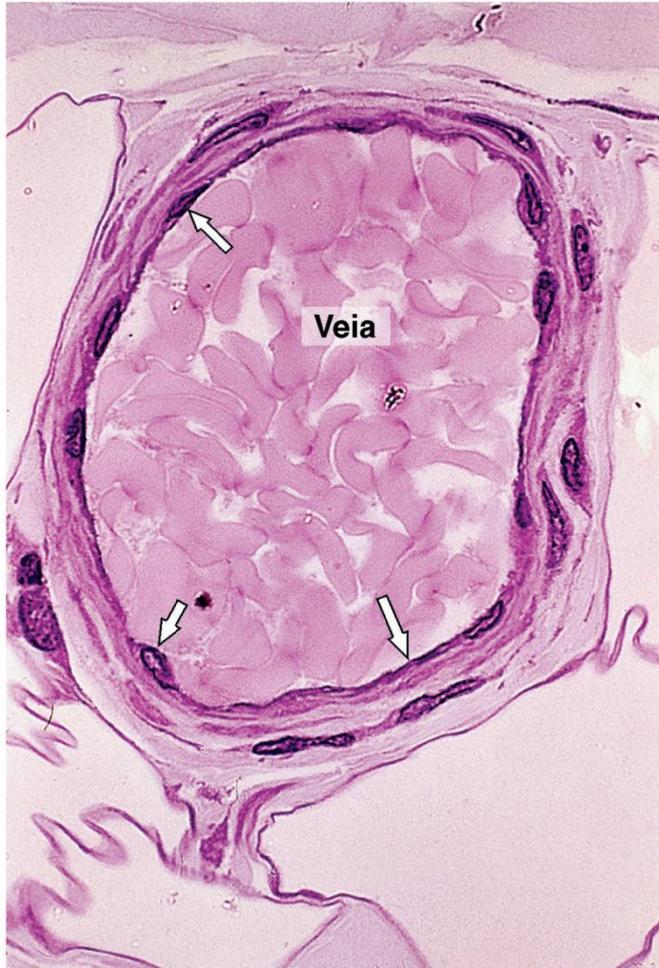
C Epitélio simples colunar ciliado



# **Epitélio pavimentoso simples**

- **Estrutura**
  - Uma simples camada de células achatadas
- **Função**
  - Absorção, filtração.
- **Localização**
  - Revestimento do aparelho circulatório
  - Parede de capilares, alvéolos
  - Peritônio, pleura, pericárdio

# Epitélio pavimentoso simples



**endotélio**



**mesotélio**

# Epitélio pavimentoso simples

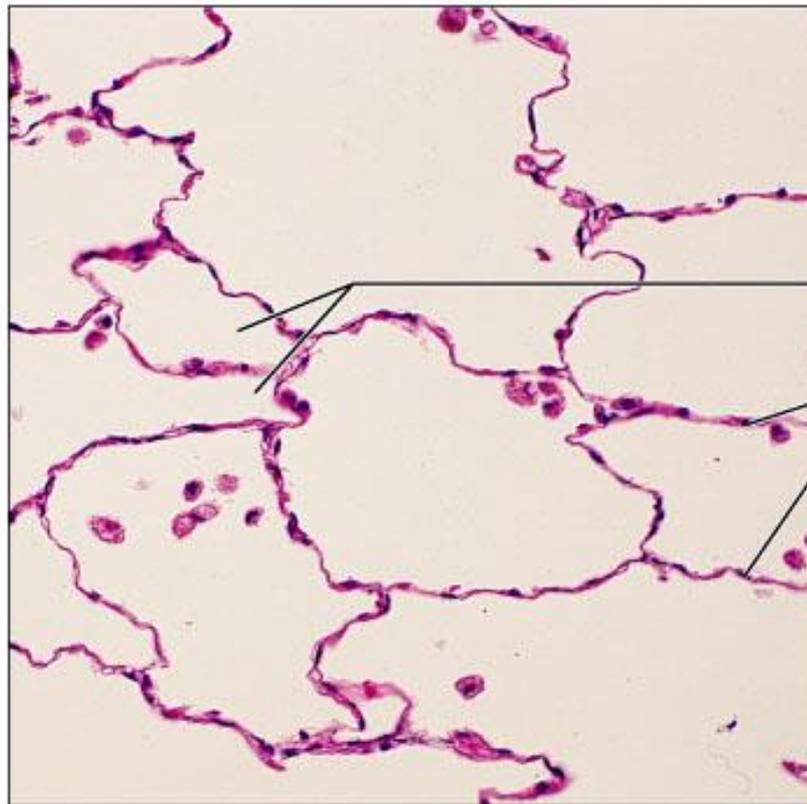
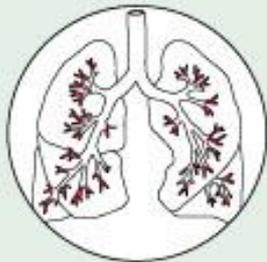
## (a) Simple squamous epithelium

**Description:** Single layer of flattened cells with disc-shaped central nuclei and sparse cytoplasm; the simplest of the epithelia.



**Function:** Allows passage of materials by diffusion and filtration in sites where protection is not important; secretes lubricating substances in serosae.

**Location:** Kidney glomeruli; air sacs of lungs; lining of heart, blood vessels, and lymphatic vessels; lining of ventral body cavity (serosae).



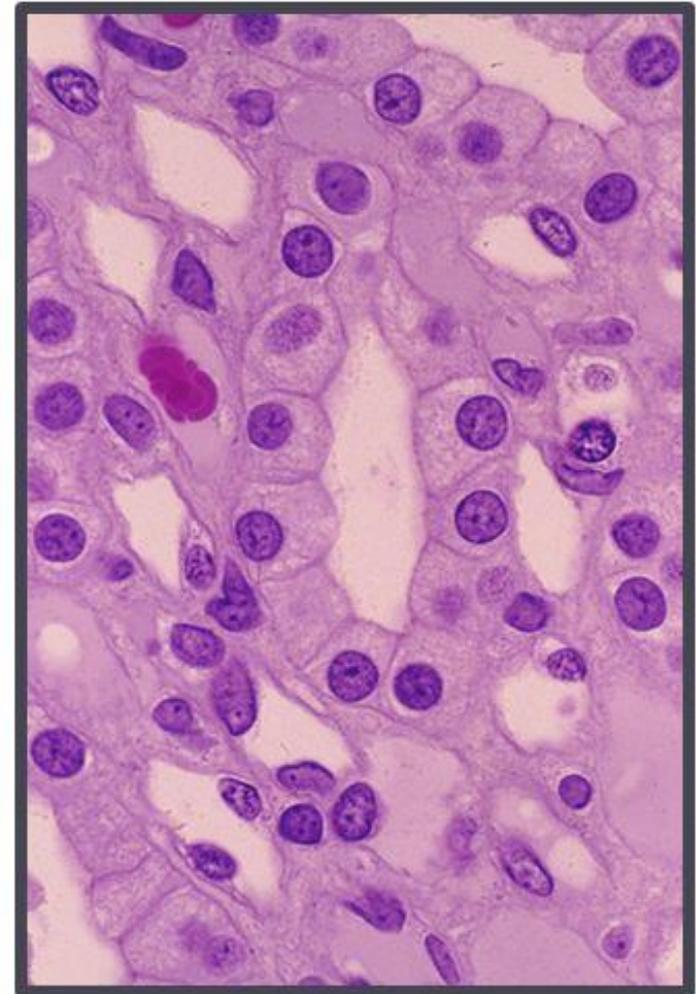
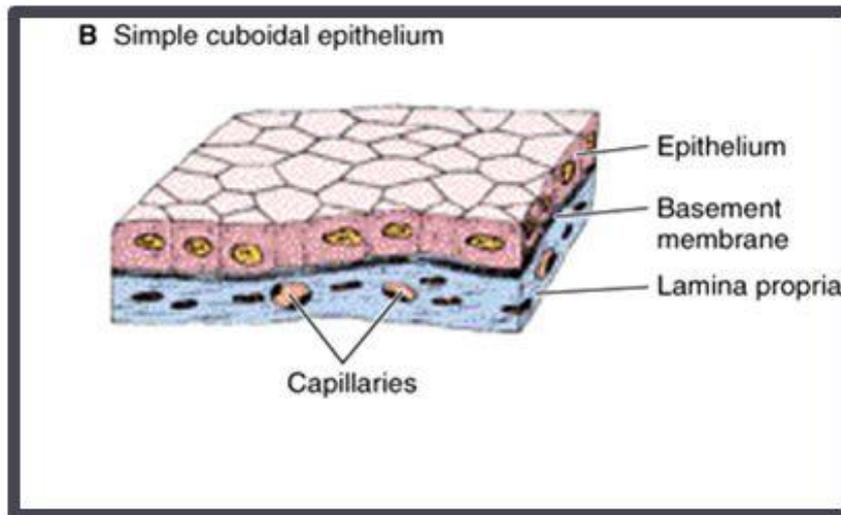
Air sacs of lung tissue

Nuclei of squamous epithelial cells

**Photomicrograph:** Simple squamous epithelium forming part of the alveolar (air sac) walls (400 $\times$ ).

# Tecido Epitelial Simples Cúbico

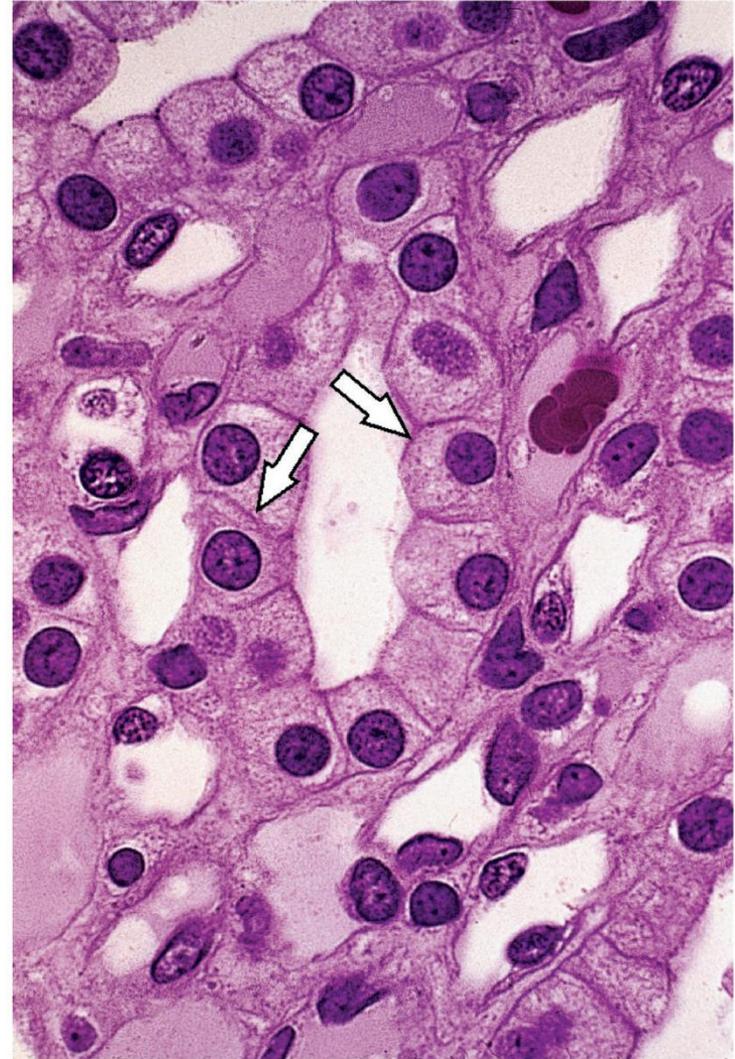
## Túbulos coletores do rim



- ▶ Função: Secreção e transporte nas glândulas, filtração

# Epitélio Cúbico simples

- **Função**
  - Secreção e transporte nas glândulas, filtração
- **Localização**
  - Glândulas e ductos (pâncreas, salivares, tireóide), túbulos renais, revestimento do ovário



**Túbulos renais**

# Epitélio cúbico simples

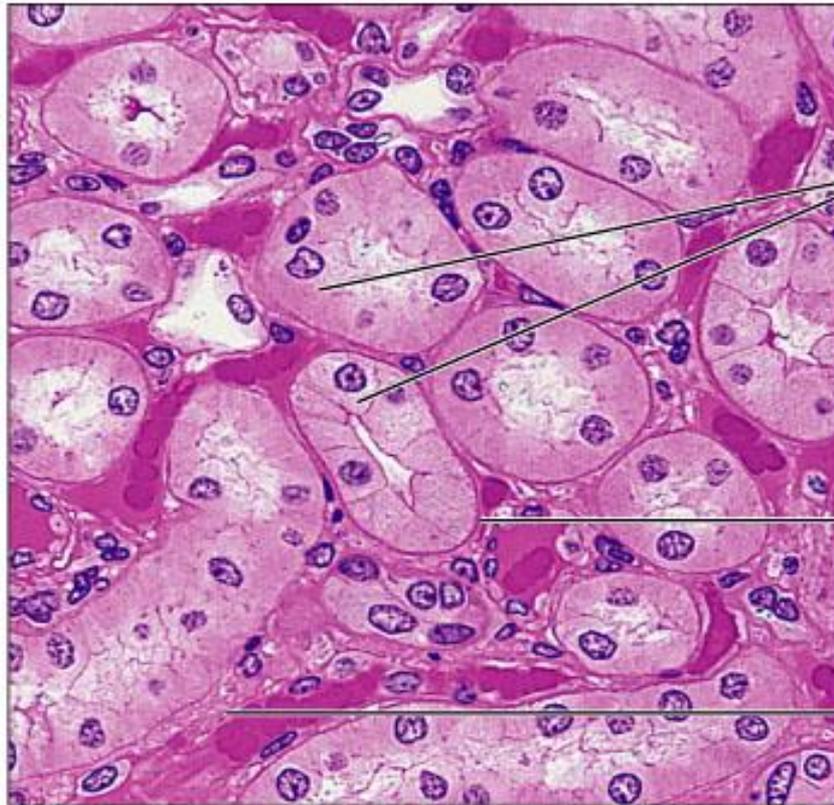
## (b) Simple cuboidal epithelium

**Description:** Single layer of cubelike cells with large, spherical central nuclei.



**Function:** Secretion and absorption.

**Location:** Kidney tubules; ducts and secretory portions of small glands; ovary surface.



Simple cuboidal epithelial cells

Basement membrane

Connective tissue

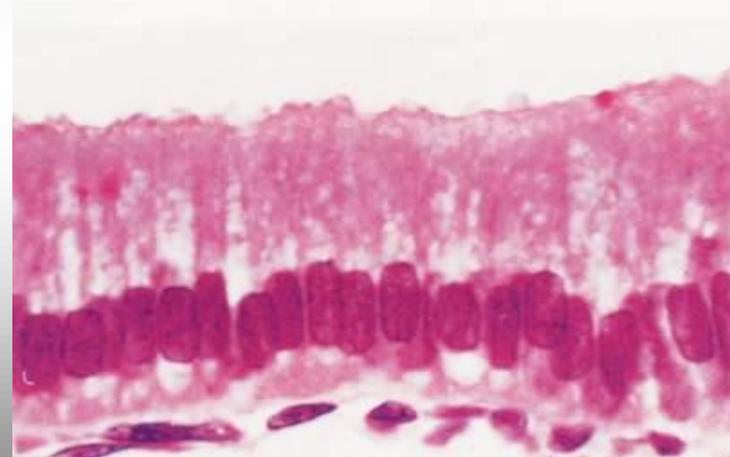
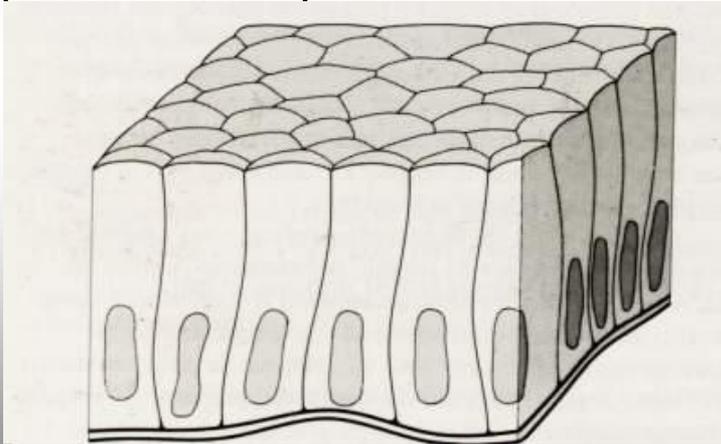
**Photomicrograph:** Simple cuboidal epithelium in kidney tubules (400 $\times$ ).

# Epitélio Simples Prismático

(Número) (Forma)

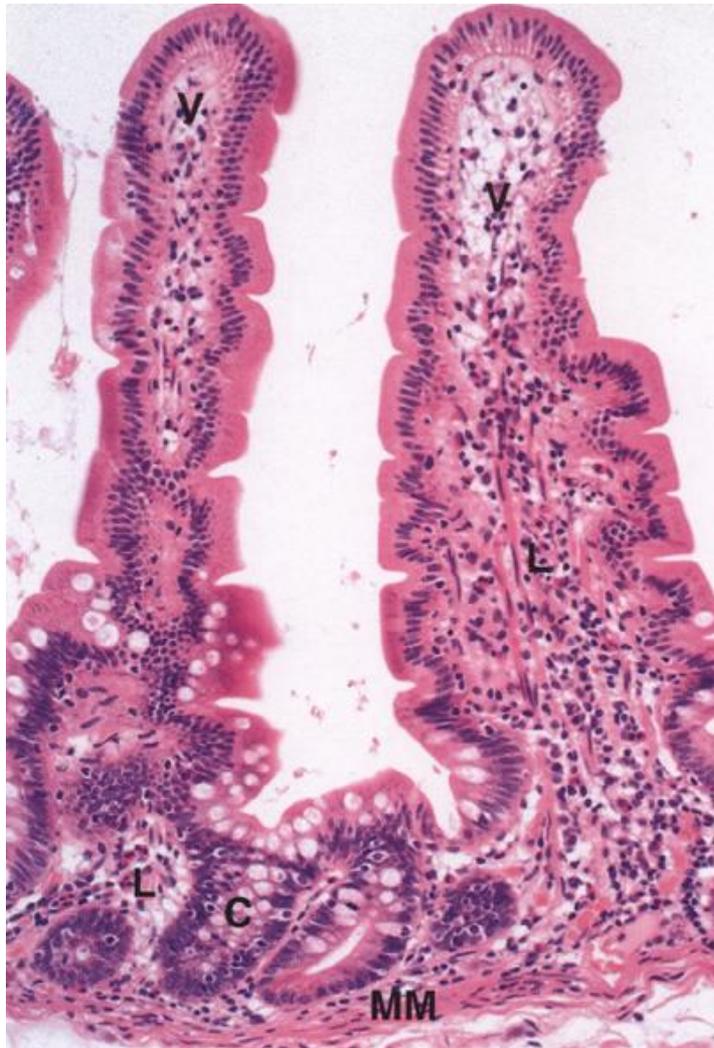
\* Núcleos alongados e polarizados

(intestino)



Função: Absorção, Proteção, secreção

# Vilosidade intestinal



**Epitélio cilíndrico  
simples ou colunar  
simples**



Intestino delgado

Intestino grosso →  
Com células caliciformes

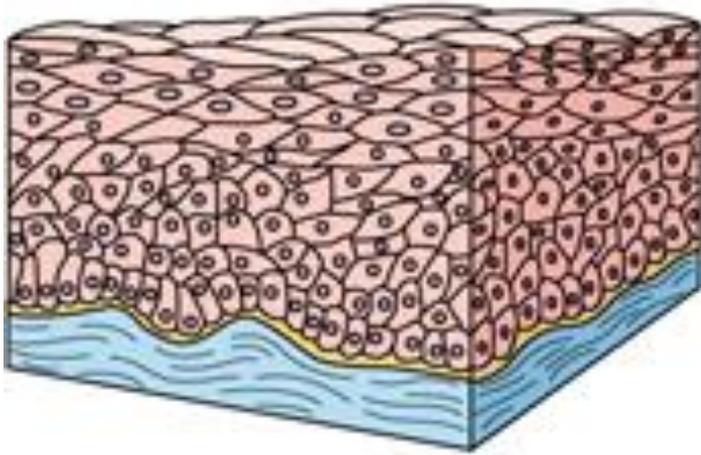
Epitélio cilíndrico ou prismático simples



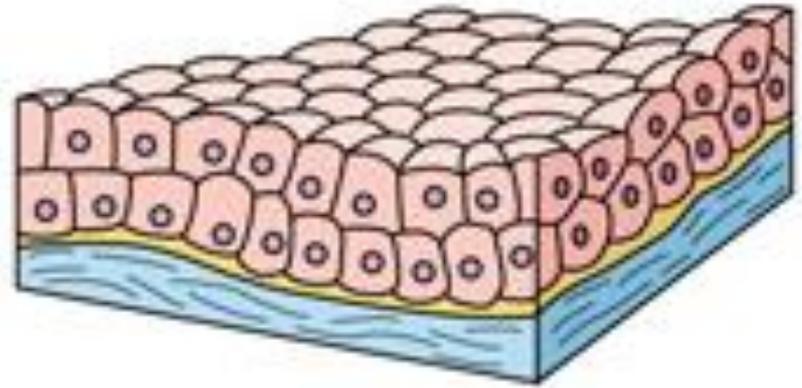
# **Epitélio Estratificado**

**mais de uma camada de  
células**

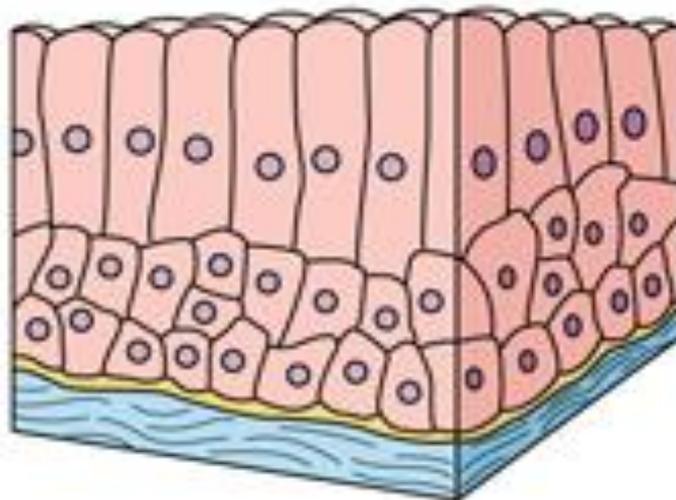
**Estratificado pavimentoso**



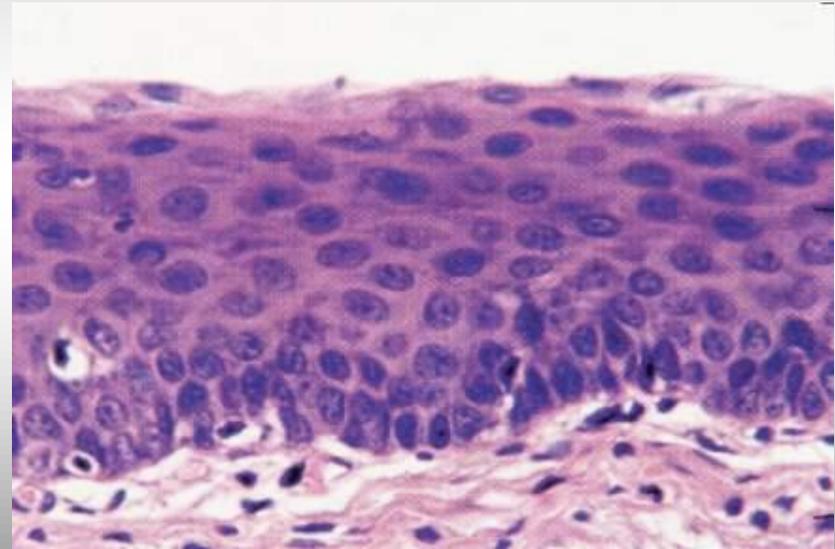
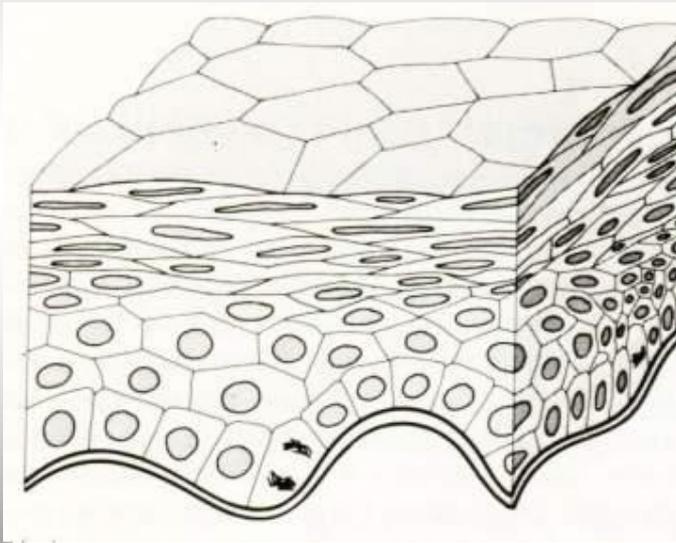
**Estratificado cúbico**



**Estratificado colunar**

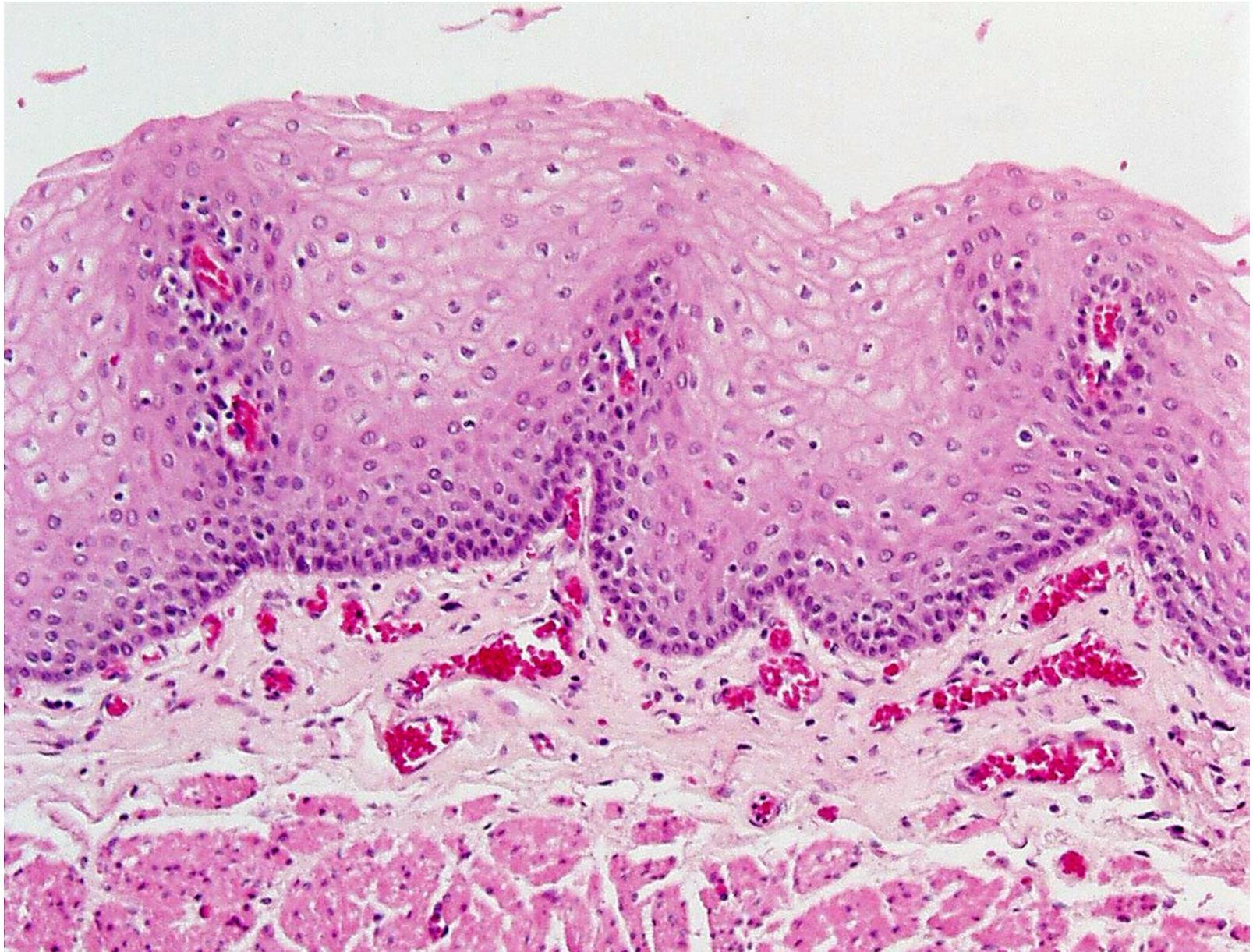


# Epitélio Estratificado Pavimentoso não queratinizado (cavidade bucal, esôfago)



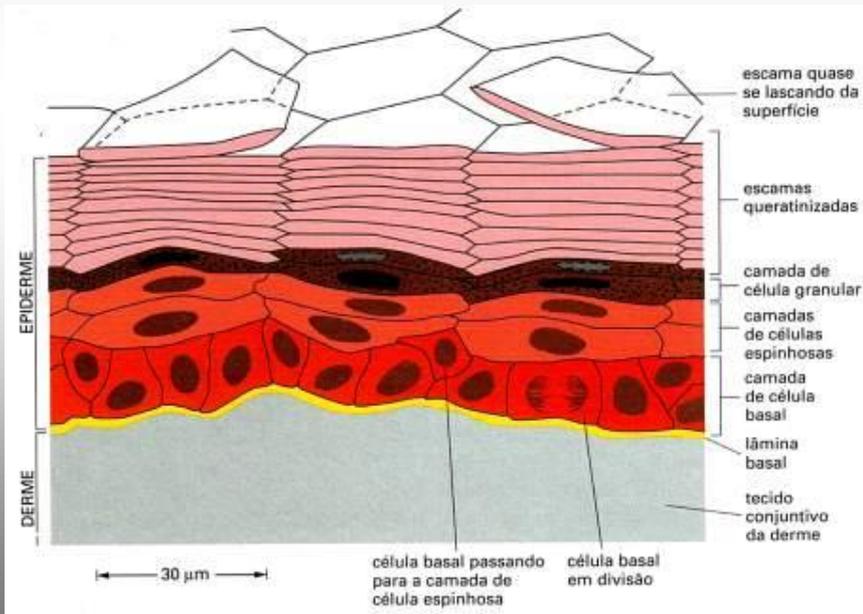
**Função:** Barreira, proteção

# Epitélio estratificado não queratinizado



# Epitélio Estratificado Pavimentoso Queratinizado (pele)

\* Queratinização ocorre somente em epitélio estratificado

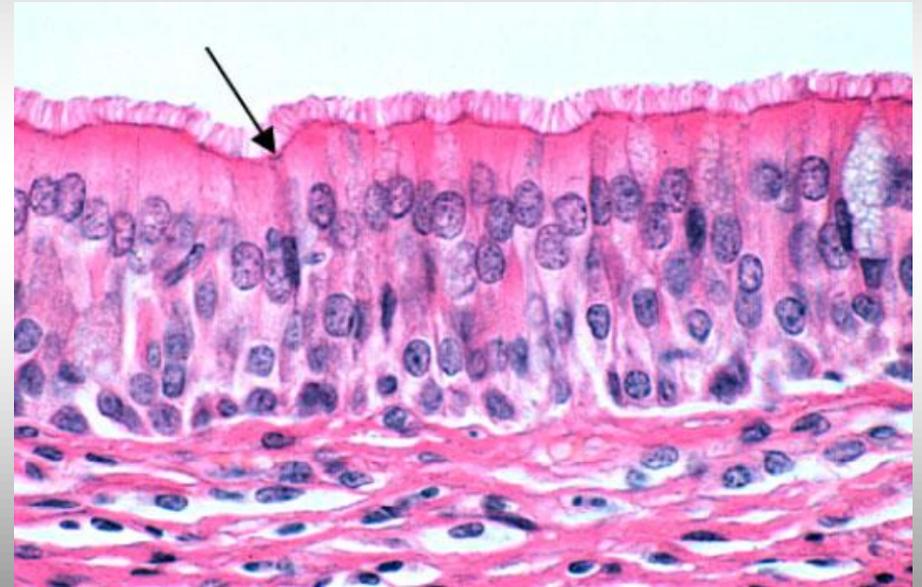
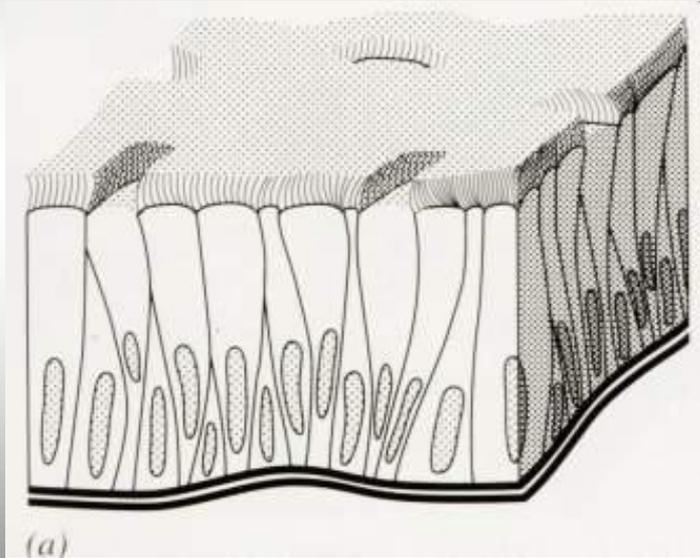


# **TIPOS ESPECIAIS DE EPITÉLIOS DE REVESTIMENTO**

- 1 - Pseudoestratificado**
- 2 - Urinário ou de Transição**
- 3 - Germinativo**

# Epitélio Pseudoestratificado Cilíndrico Ciliado

(via respiratória) – (na realidade ele é simples)

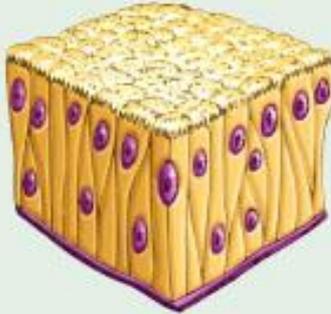


**Função:** Absorção e Secreção  
Células caliciformes (muco)  
Cílios (desloca o muco)

# Epitélio pseudoestratificado cilíndrico ciliado

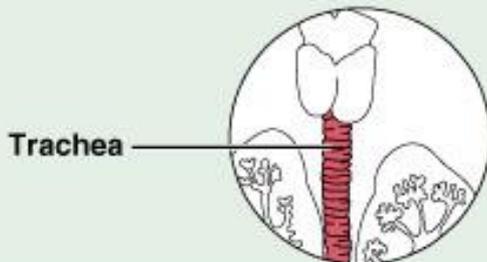
## (d) Pseudostratified columnar epithelium

**Description:** Single layer of cells of differing heights, some not reaching the free surface; nuclei seen at different levels; may contain goblet cells and bear cilia.



**Function:** Secretion, particularly of mucus; propulsion of mucus by ciliary action.

**Location:** Nonciliated type in male's sperm-carrying ducts and ducts of large glands; ciliated variety lines the trachea, most of the upper respiratory tract.

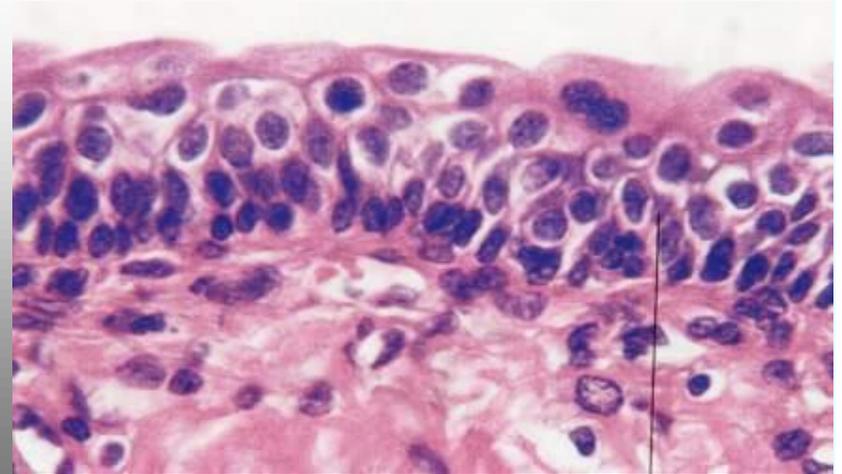
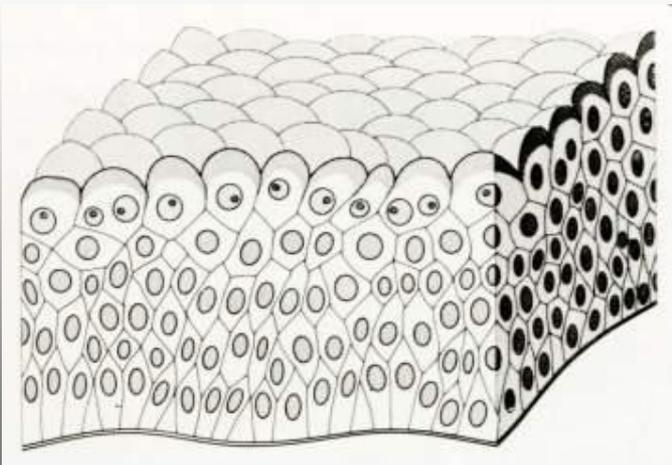


**Photomicrograph:** Pseudostratified ciliated columnar epithelium lining the human trachea (400 $\times$ ).

# Epitélio de Transição

## (bexiga)

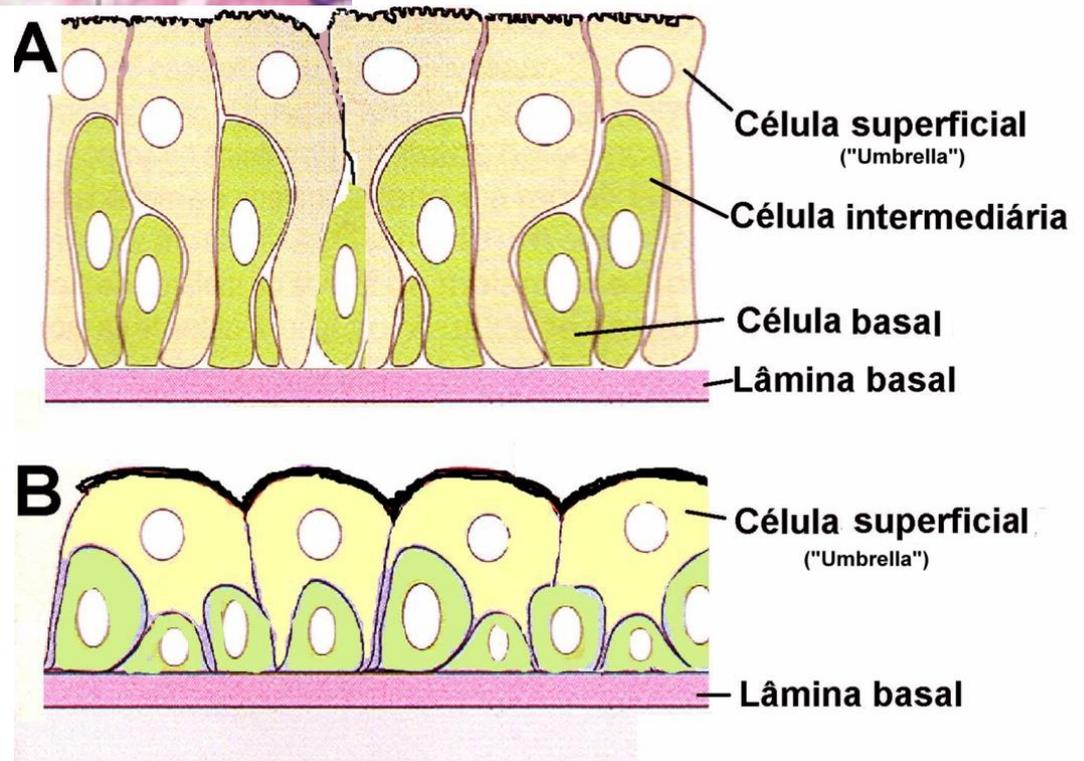
- Parece ser um epitélio estratificado (na realidade ele é simples)
- \*Células superficiais grandes, globosas, com contornos arredondados e núcleos redondos
- \* Faixa de citoplasma superficial mais corada



**Função:** Barreira, propriedade distensível

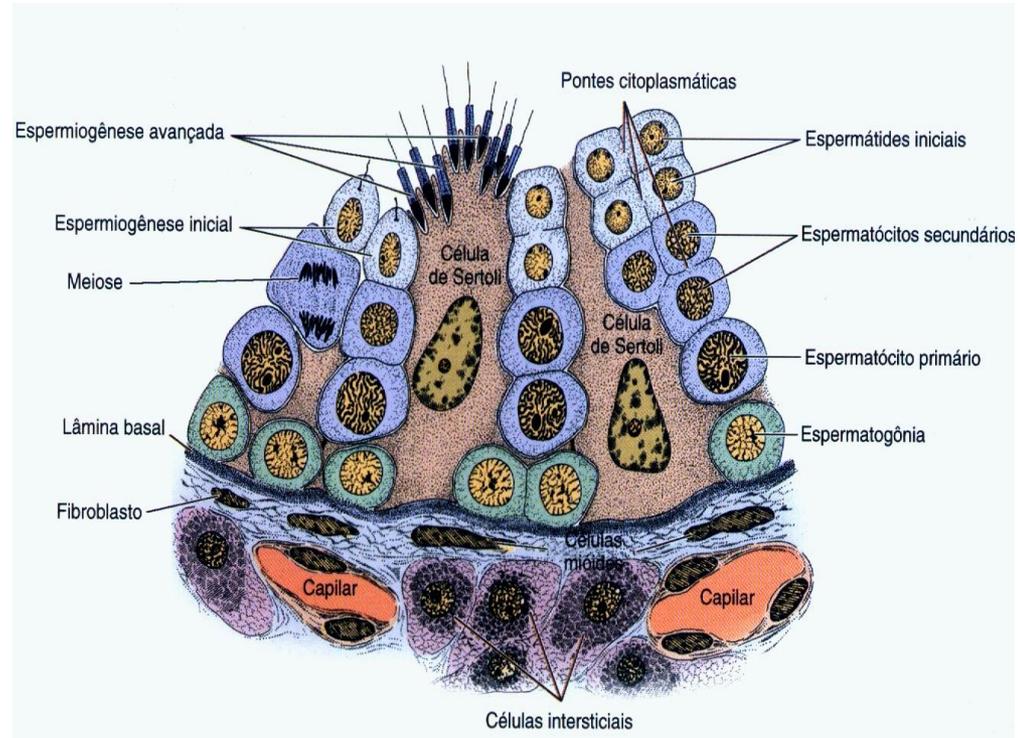
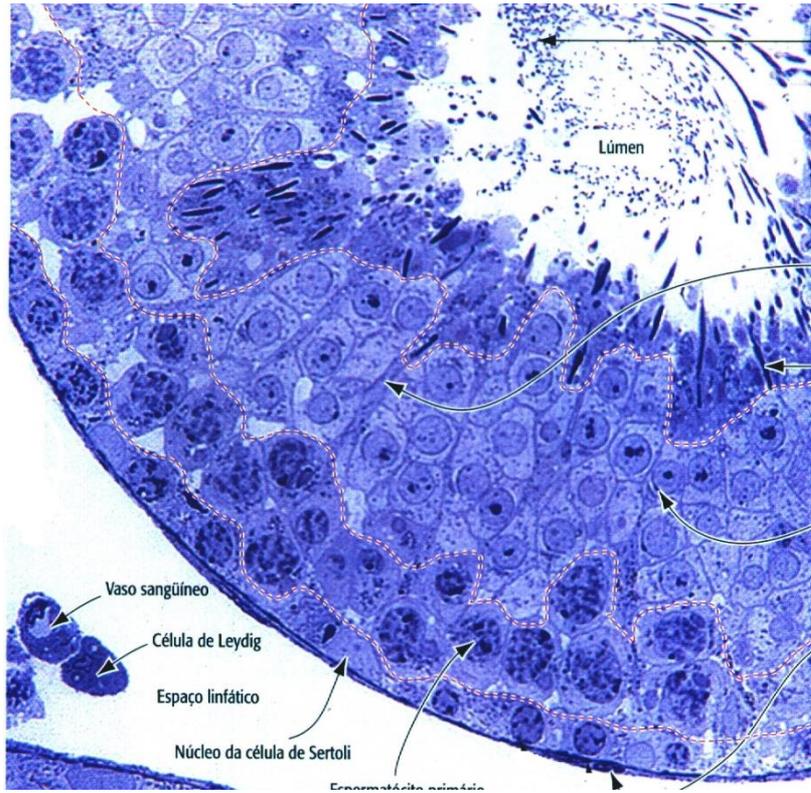
# Transição ou urinário

Todas as células estão apoiadas na lâmina basal



# Epitélio Germinativo

## Túbulos seminíferos (testículos)



## Referências Bibliográficas

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ATLAS OF HUMAN BIOLOGY – CRONOLAB (Inglês) -<Http://www.embryo.chronolab.com/fertilization.htm>