

## Chapter 22.1

# Respiratory System Structures



# Path of Air Flow

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## Conducting Division

nasal cavity

pharynx

larynx

trachea

main bronchus (Rt & Lt)

lobar bronchus

segmental bronchus

**Bronchiole**

Terminal bronchiole

## Respiratory Division

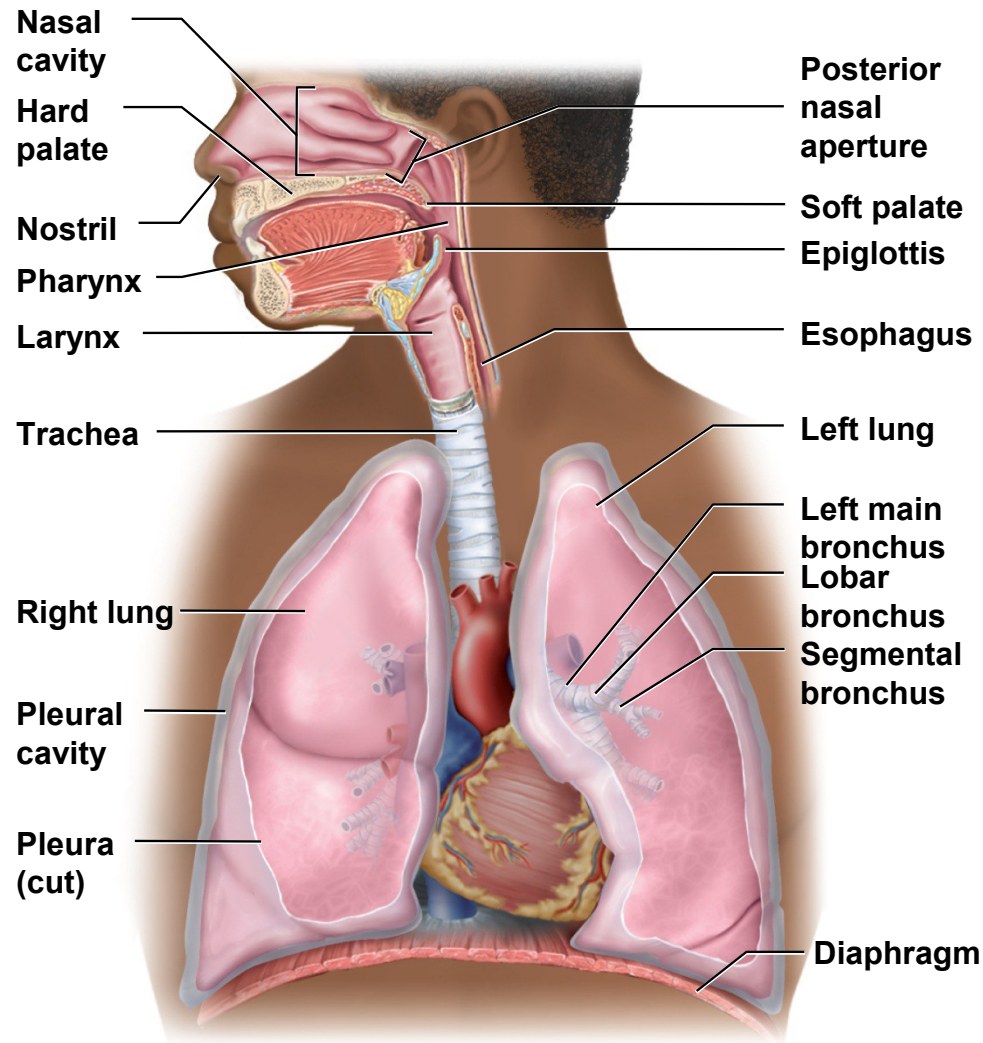
respiratory bronchiole

alveolar duct

atrium

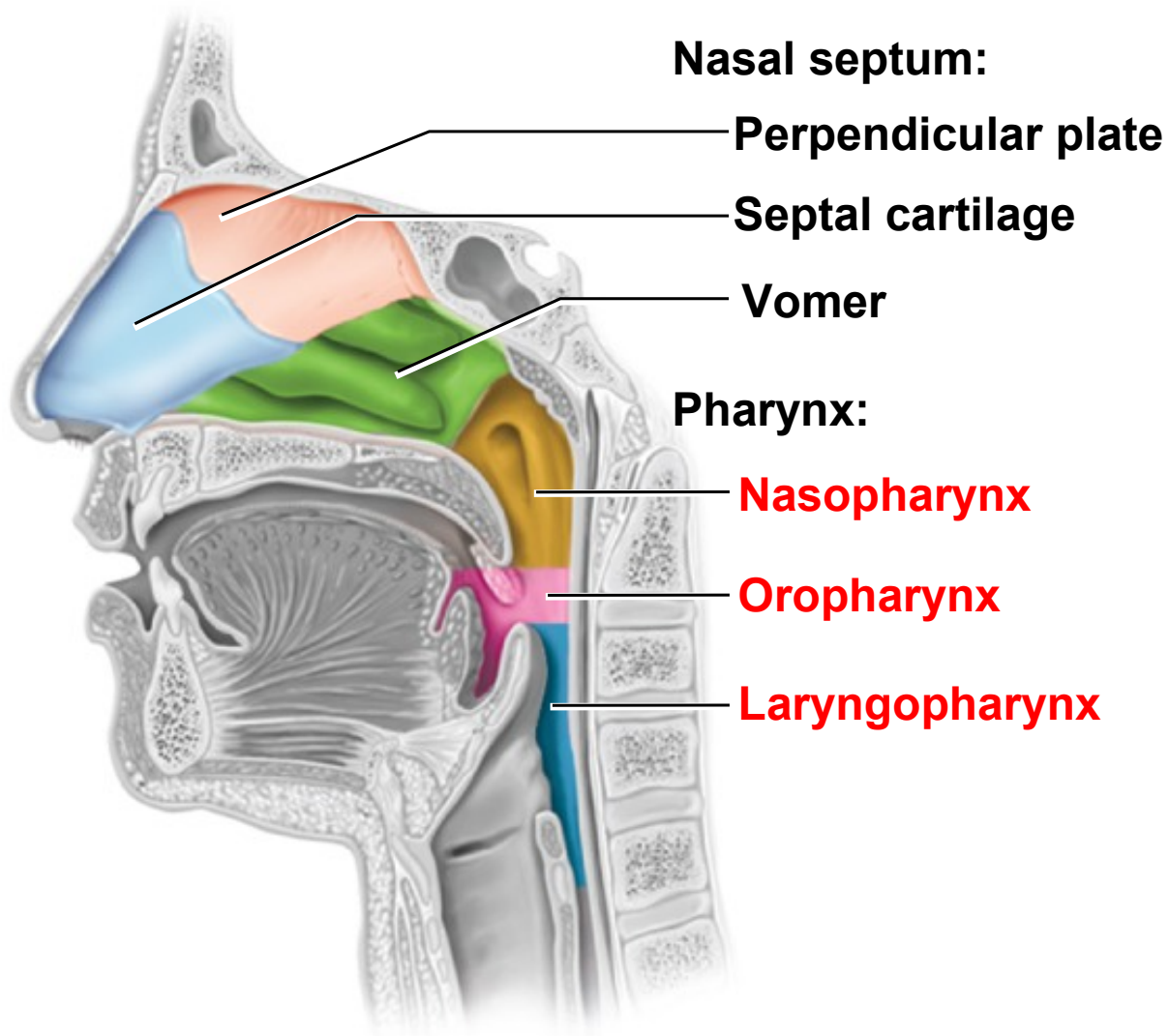
alveolus

# Organs of Respiratory System



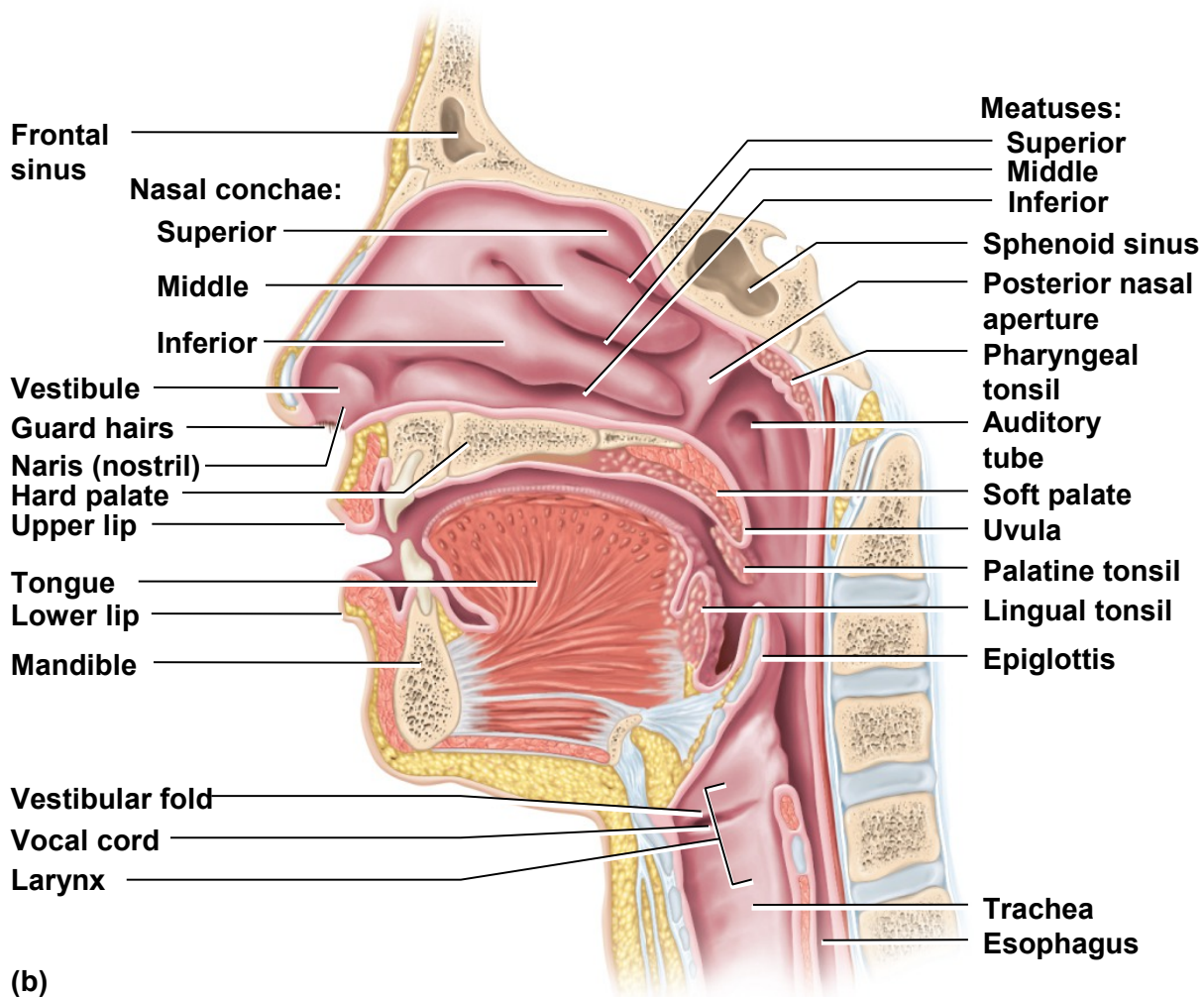
- nose, pharynx, larynx, trachea, bronchi, lungs

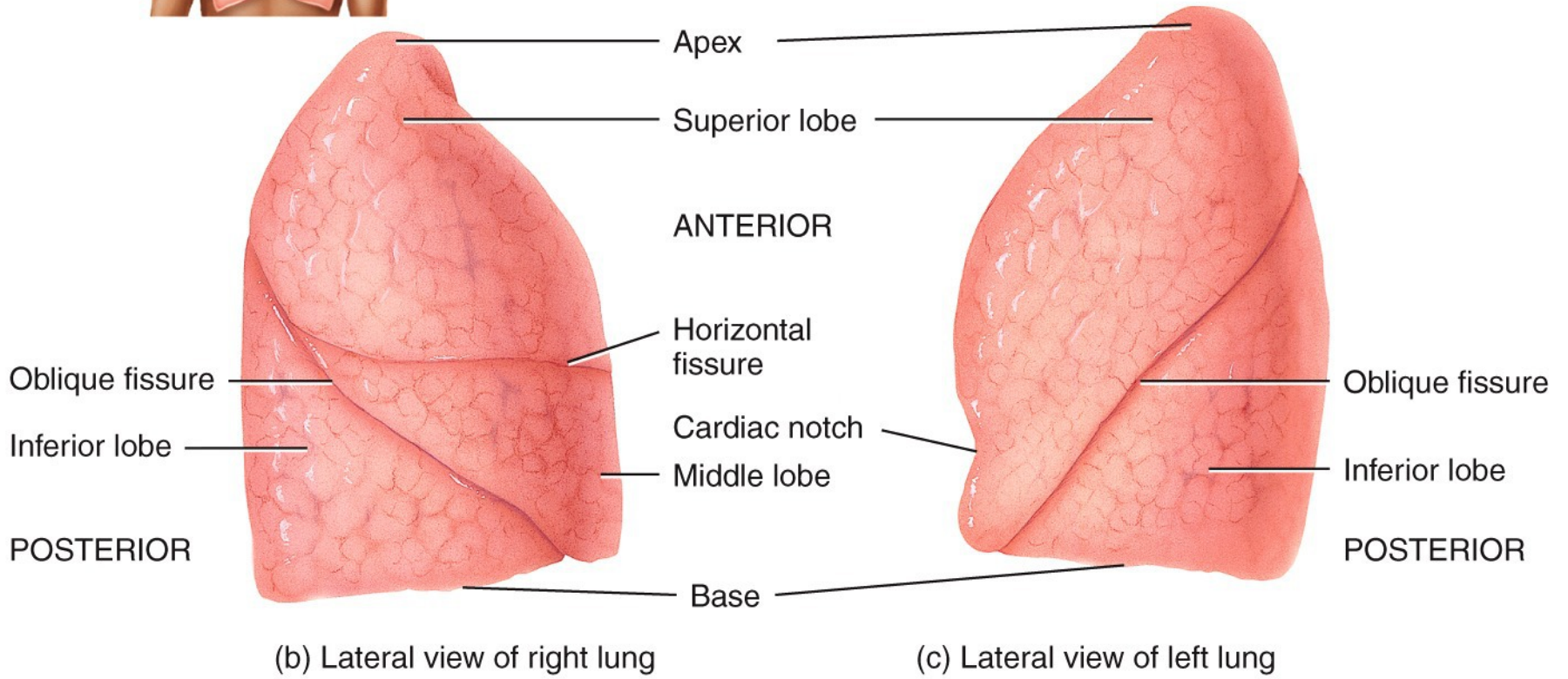
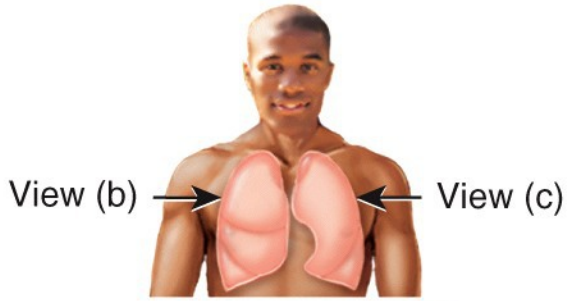
# Regions of Pharynx

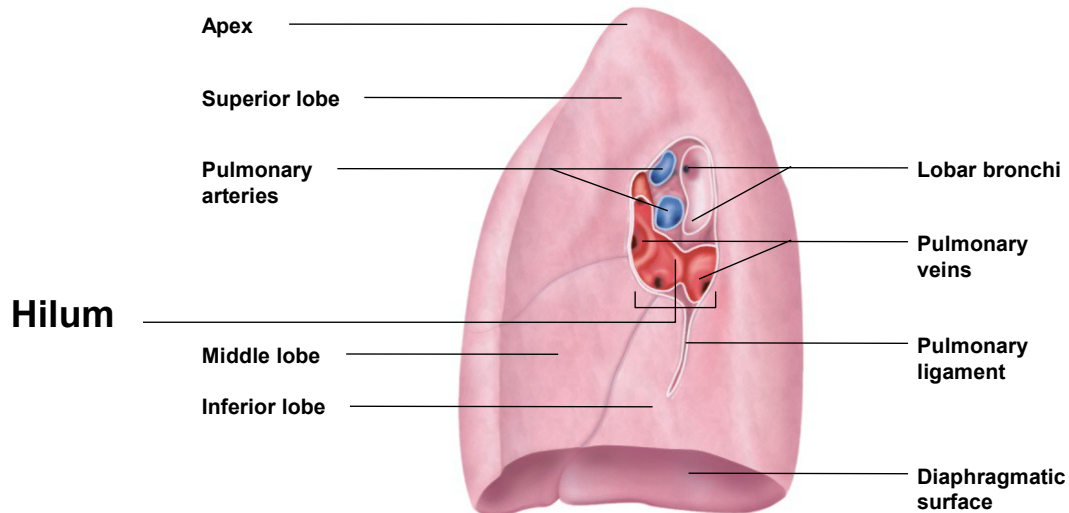
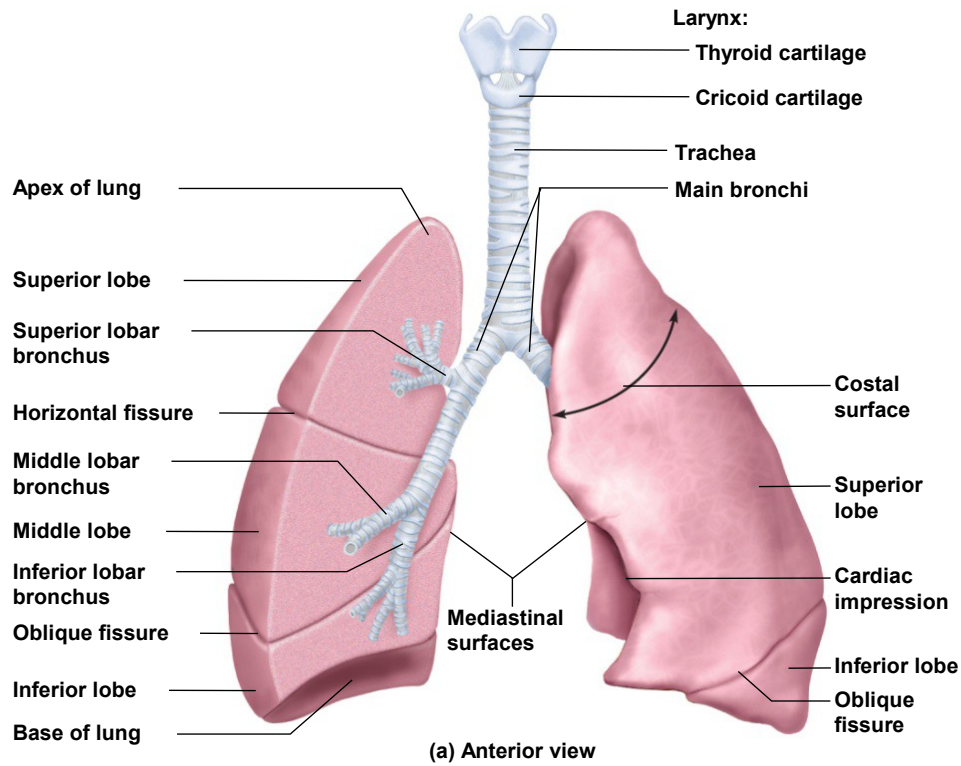


# Upper Respiratory Tract

(respiratory organs in the head and neck / stop at entrance to larynx)

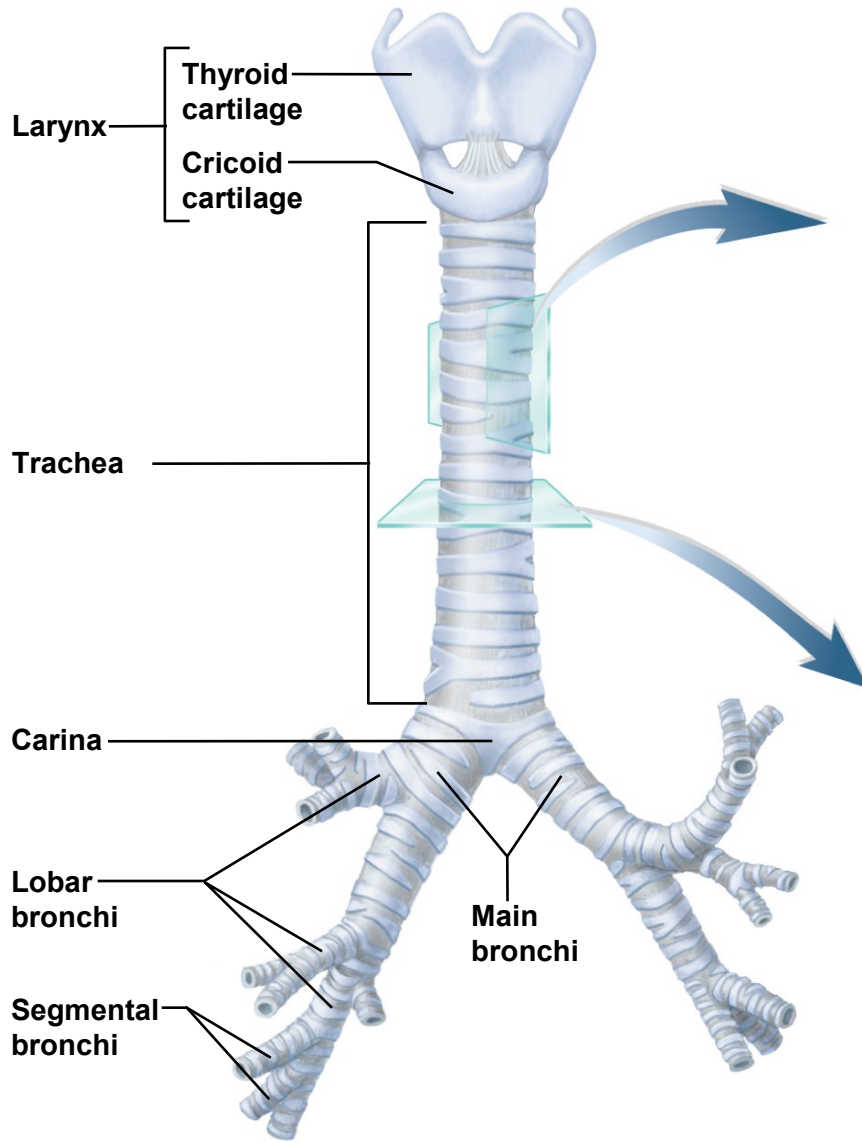




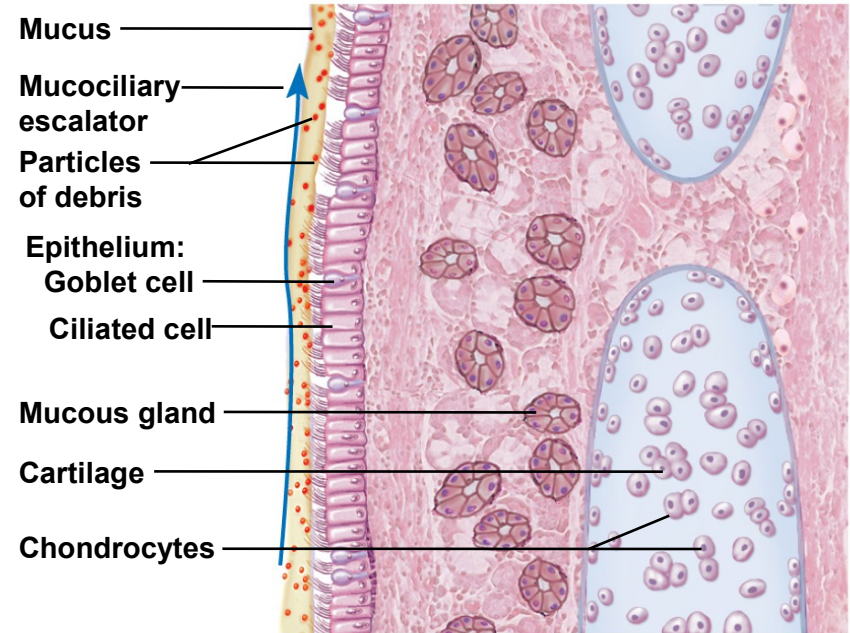


(b) Mediastinal surface, right lung

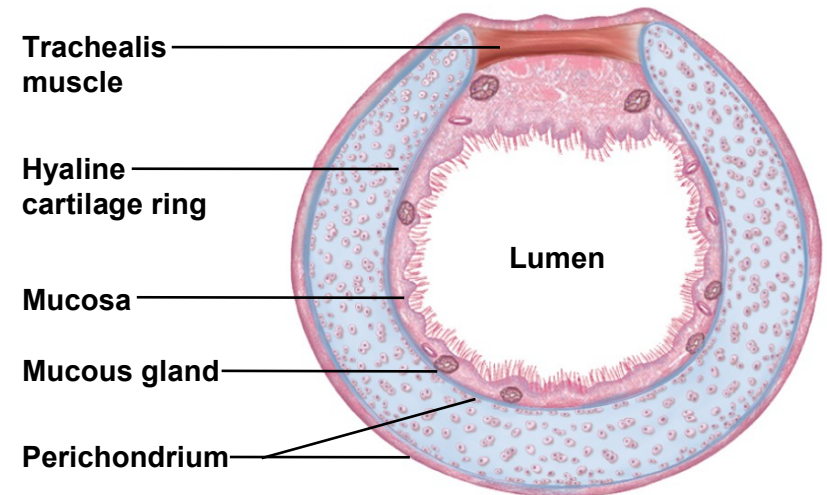
# Lower Respiratory Tract



(a)

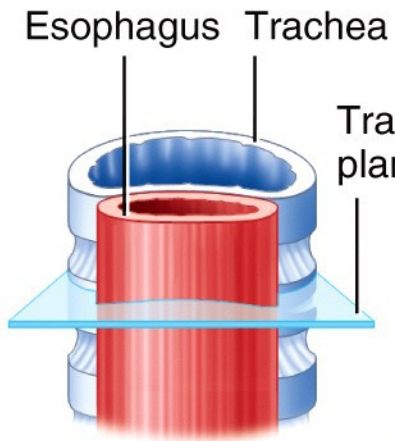


(b)



(c)





ANTERIOR

Left lateral lobe of thyroid gland

Tracheal cartilage

Right lateral lobe of thyroid gland

Trachealis muscle in fibromuscular membrane

Esophagus

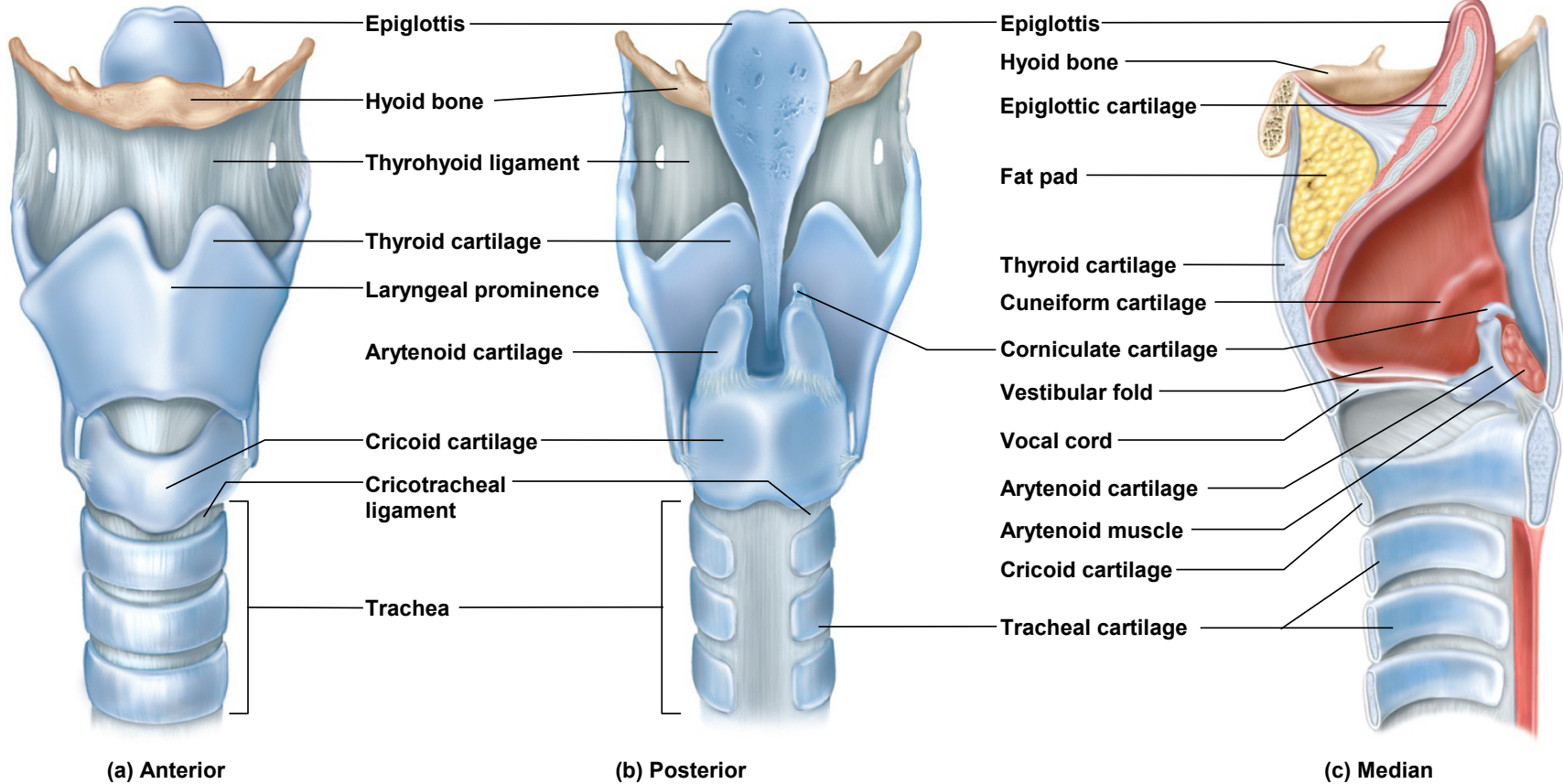
Dissection Shawn Miller,  
Photograph Mark Nielsen

POSTERIOR

Superior view of transverse section of thyroid gland, trachea, and esophagus

# Larynx

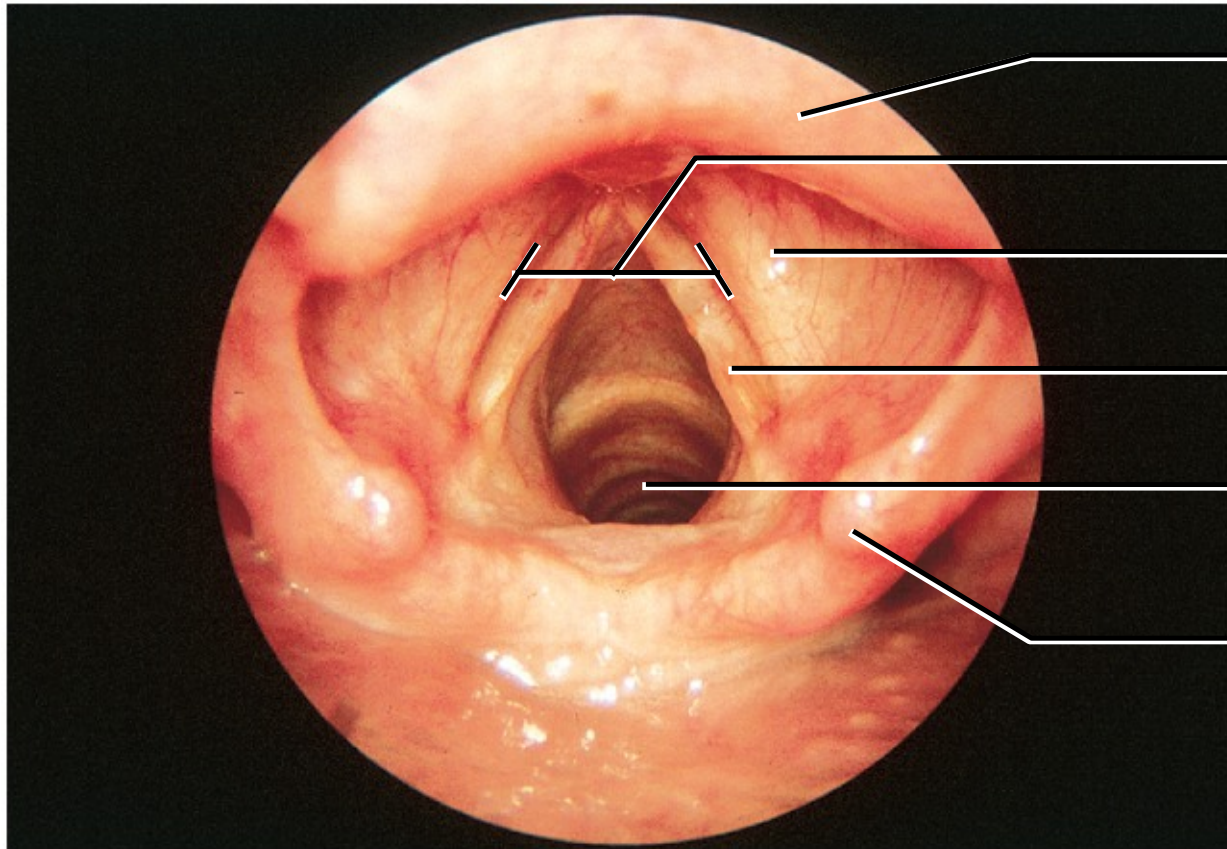
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# Endoscopic View of the Larynx

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**Anterior**



**Epiglottis**

**Glottis**

**Vestibular fold**

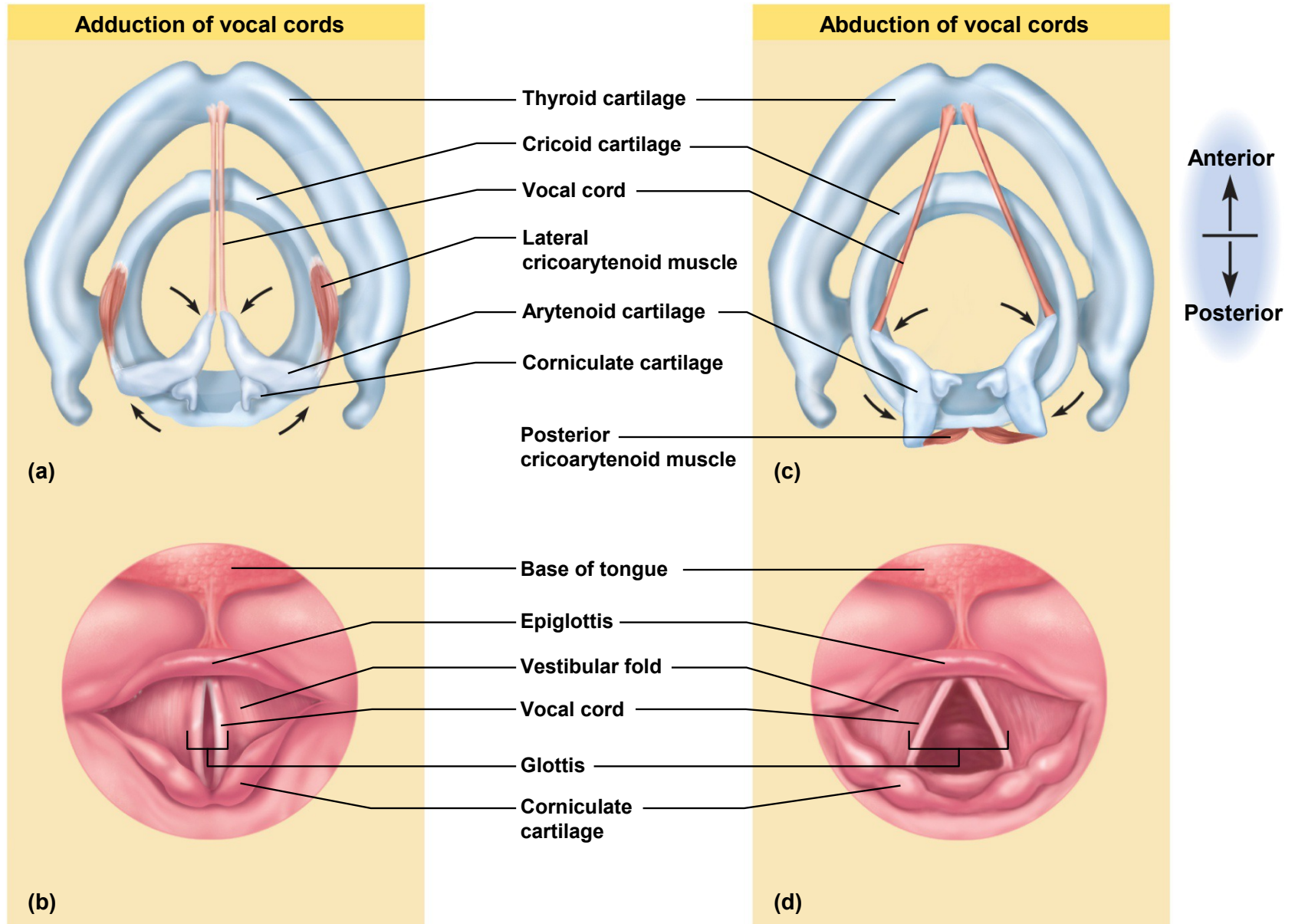
**Vocal cord**

**Trachea**

**Corniculate  
cartilage**

**Posterior**

# Action of Vocal Cords



# Bronchial Tree

(Main Bronchi / Lobar Bronchi / Segmental Bronchi)

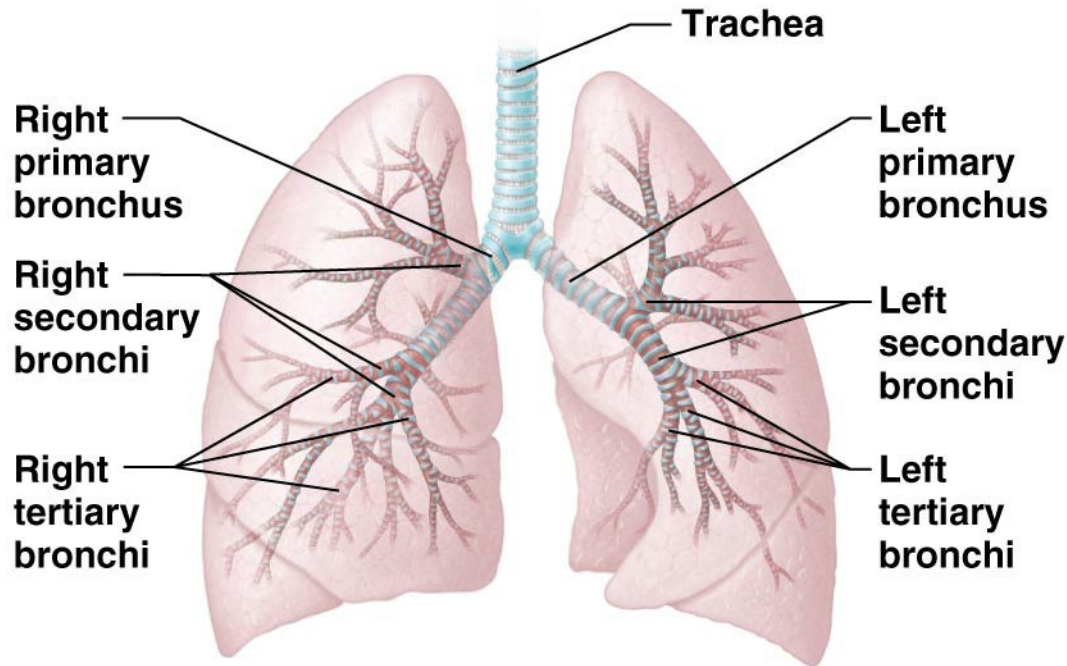


# Tracheal Epithelium

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## Branching pattern of the bronchial tree.



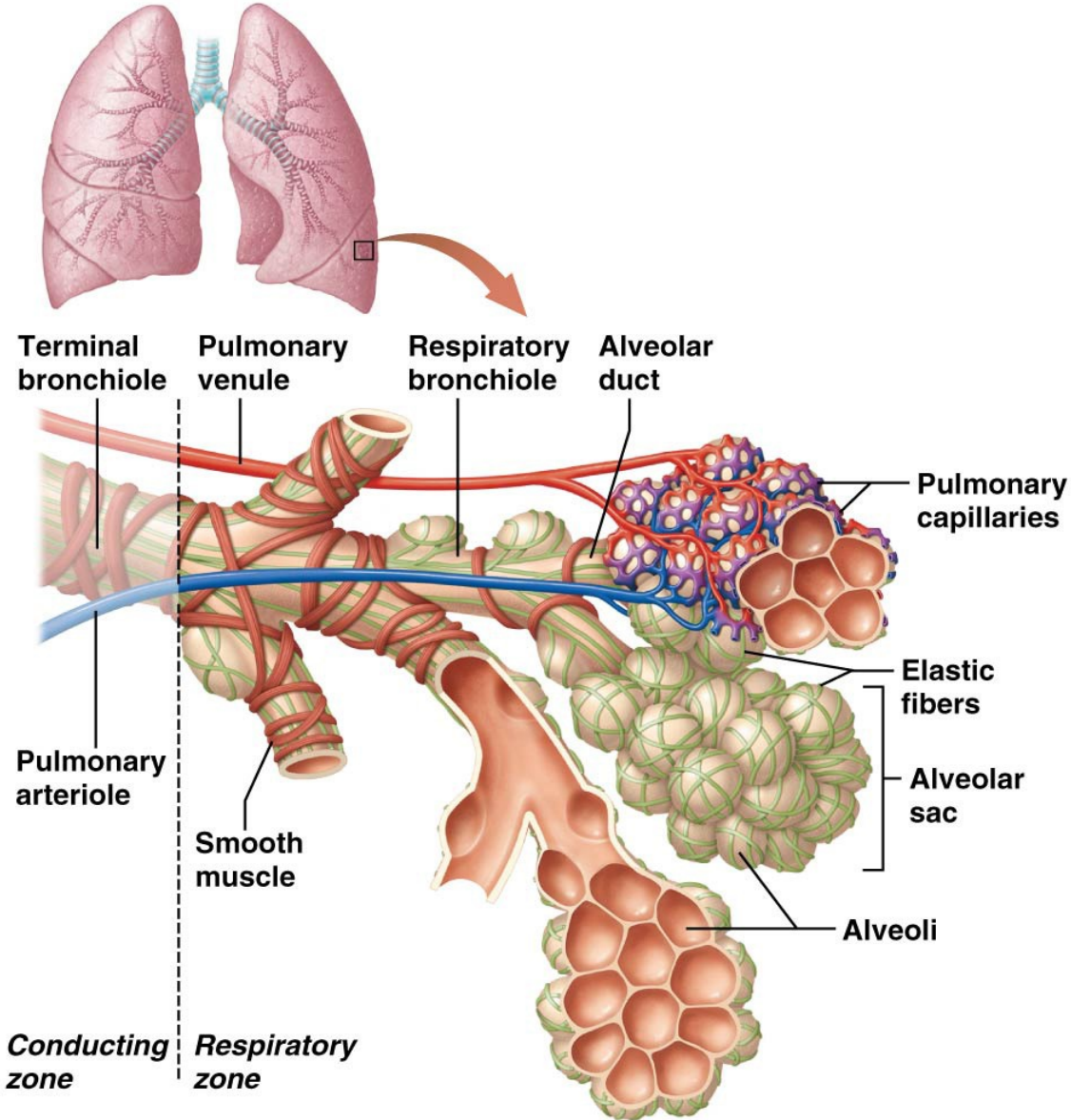
**(a) Conducting zone passages and bronchial tree**



**(b) Cast of bronchial tree**

Main Brochi = Primary Bronchi // Secondary = Lobar // Tertiary = Segmental

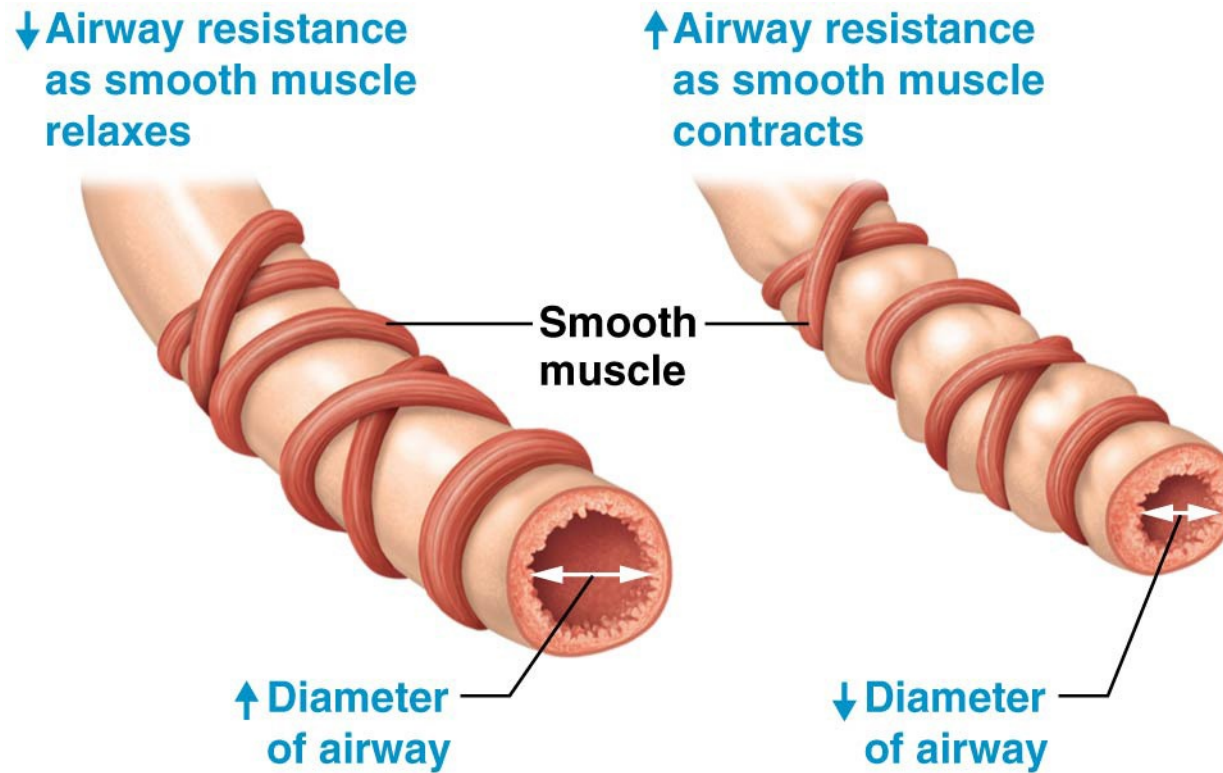
# Anatomy of the respiratory zone.



**(a) Structures of the respiratory zone**



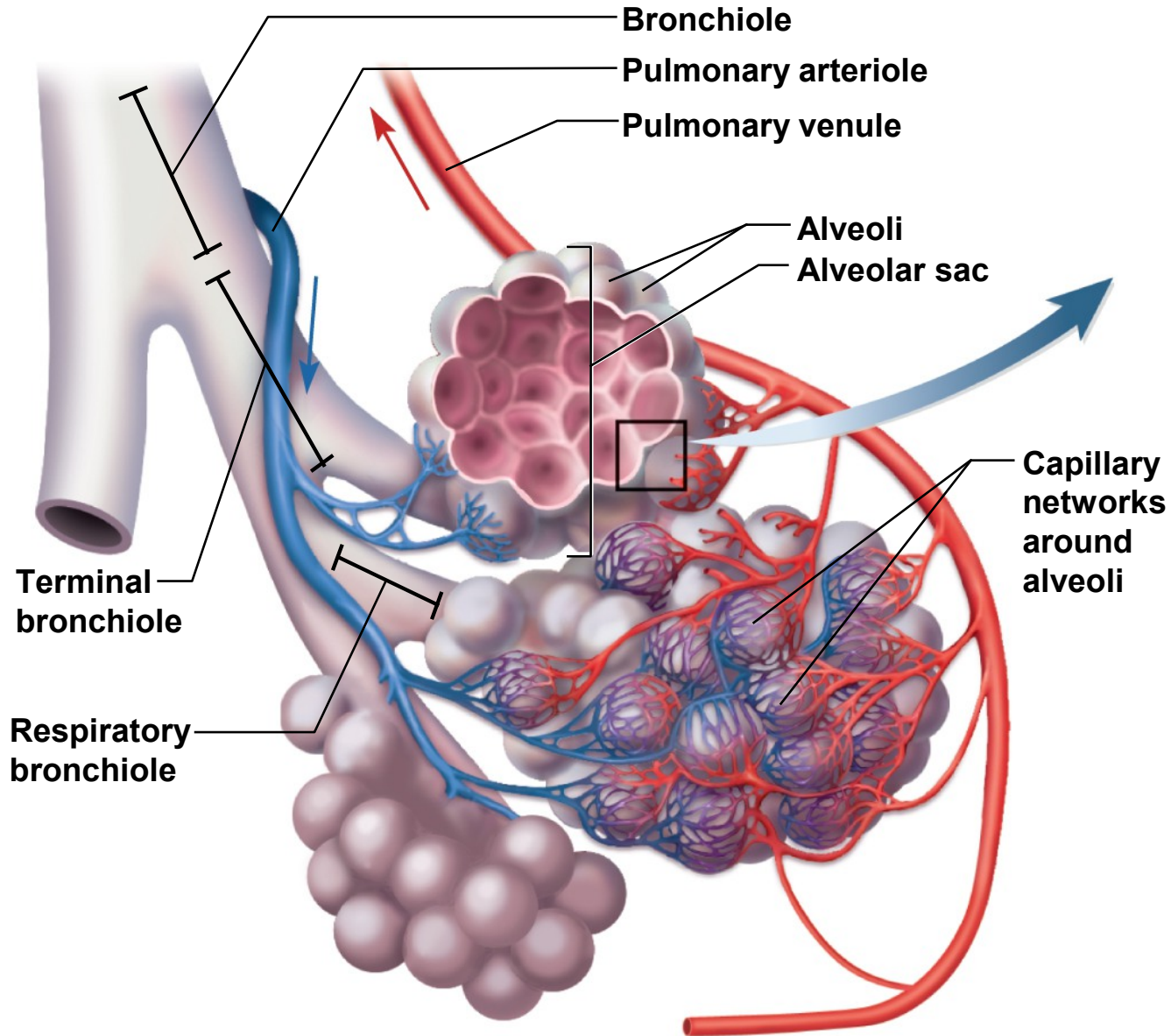
# Relationship between airway resistance and airway diameter.



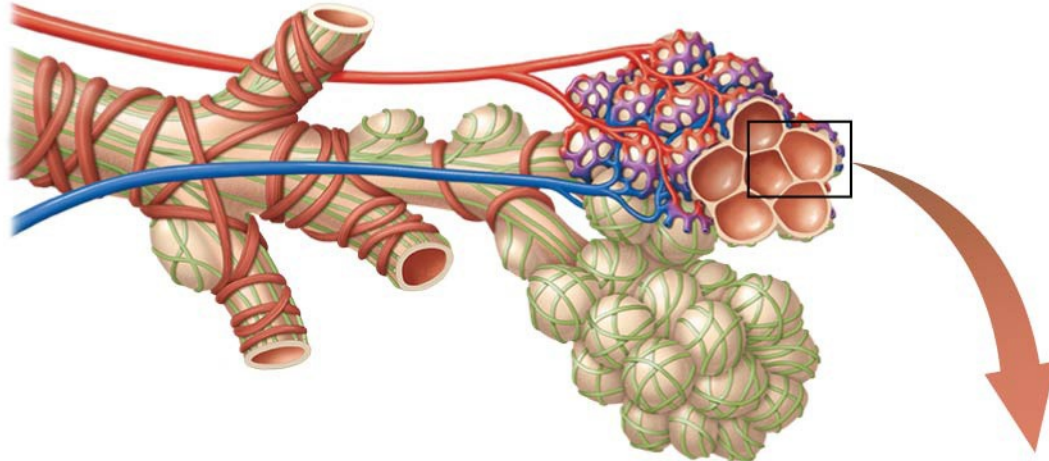
Histamine constricts bronchioles /// Epinephrine dilates bronchioles



# Blood Supply to the Alveolar Sacs



# Three Alveolar Cell Types

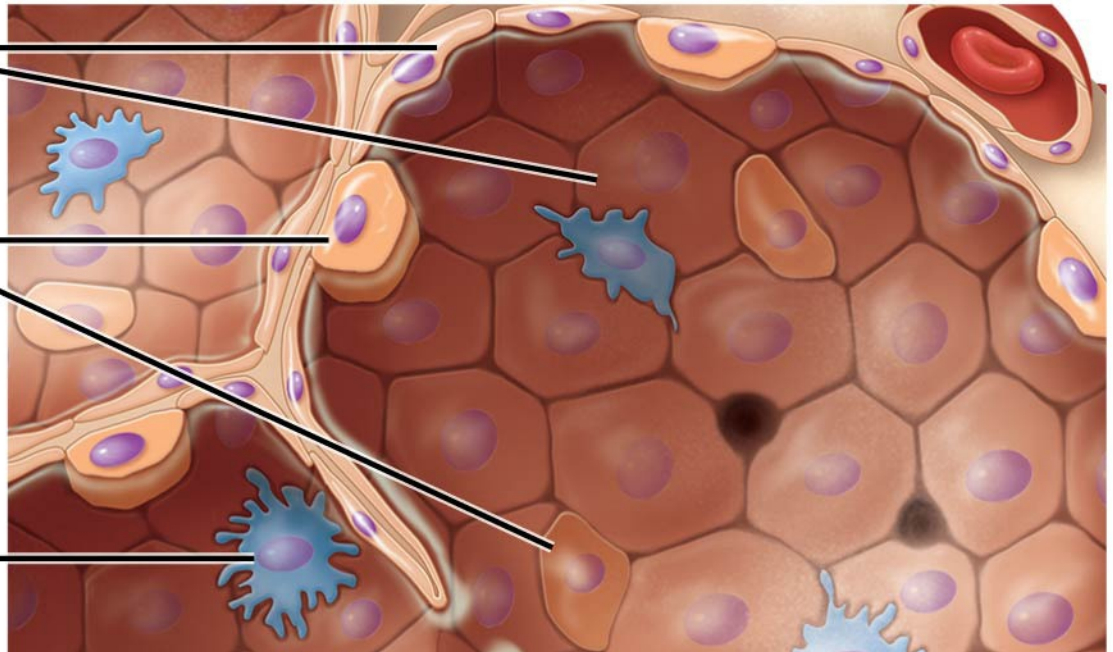


Know the function of each cell type.

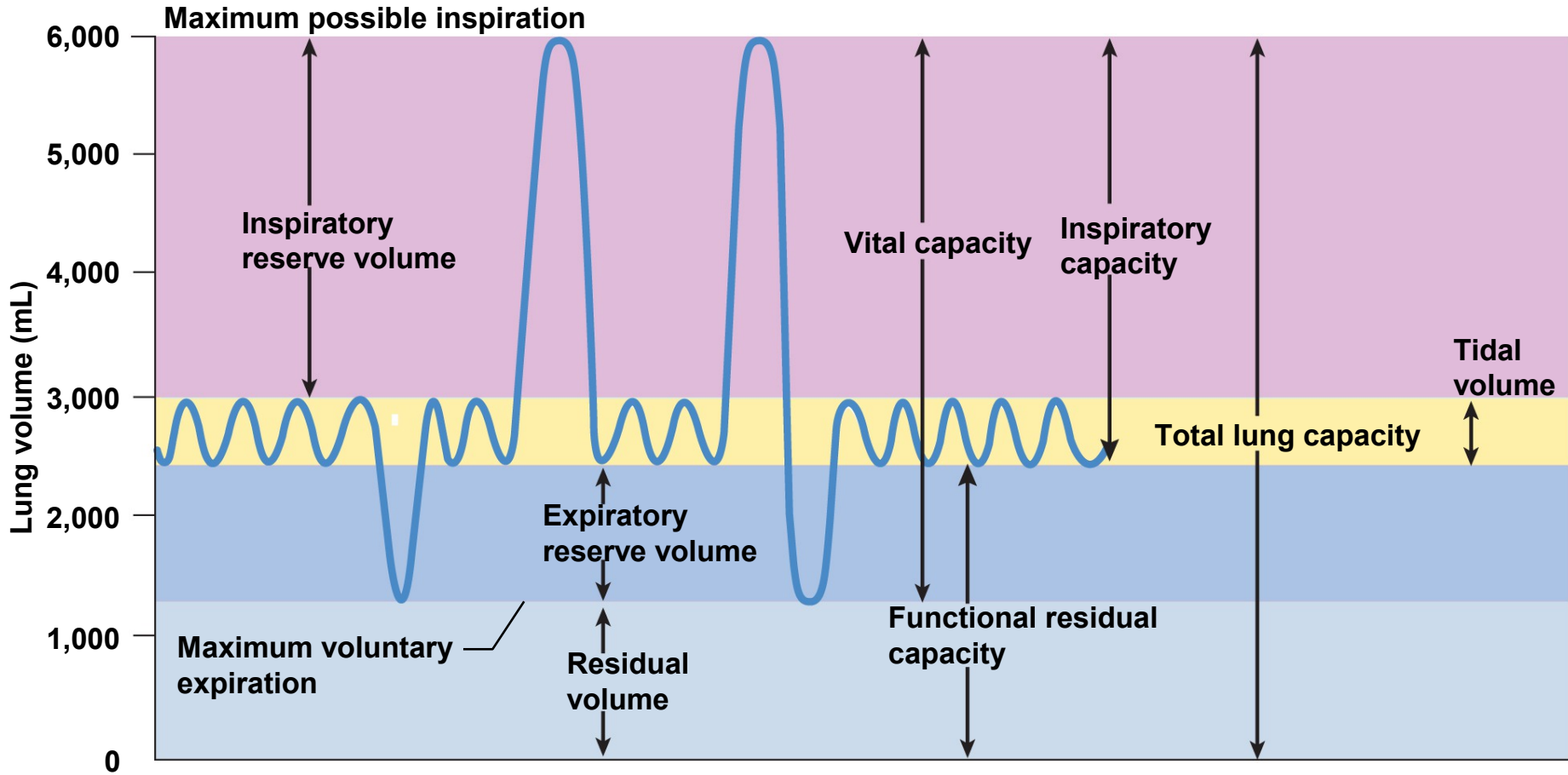
**Type I**  
alveolar  
cells

**Type II**  
alveolar  
cells

**Alveolar**  
macrophage



# Lung Volumes and Capacities



# Graph of pulmonary volumes and capacities.

