

ANATOMY & PHYSIOLOGY

The Air Pathway to the Alveoli

An anatomical journey through the human
respiratory system.

Intake & Conditioning

01

External Nostrils

Openings located above the upper lips where atmospheric air first enters.



02

Nasal Chamber

The internal cavity where air moves through the nasal passage.



03

Pharynx

The critical junction point at the back of the throat.

ANATOMICAL CROSSROAD: The pharynx is a unique structural junction, serving as a common passage for both food and air.

The Larynx & The Gatekeeper

SOUND PRODUCTION

Larynx

A cartilaginous box connecting the pharynx to the trachea. It helps in sound production, earning it the name 'sound box'.

PROTECTION MECHANISM

Epiglottis

A thin, elastic cartilaginous flap.

During swallowing, the glottis is covered by the epiglottis to prevent the entry of food into the larynx and airway.



**You've Learned the Theory.
Let's Test Them Now.**

$$E=mc^2$$



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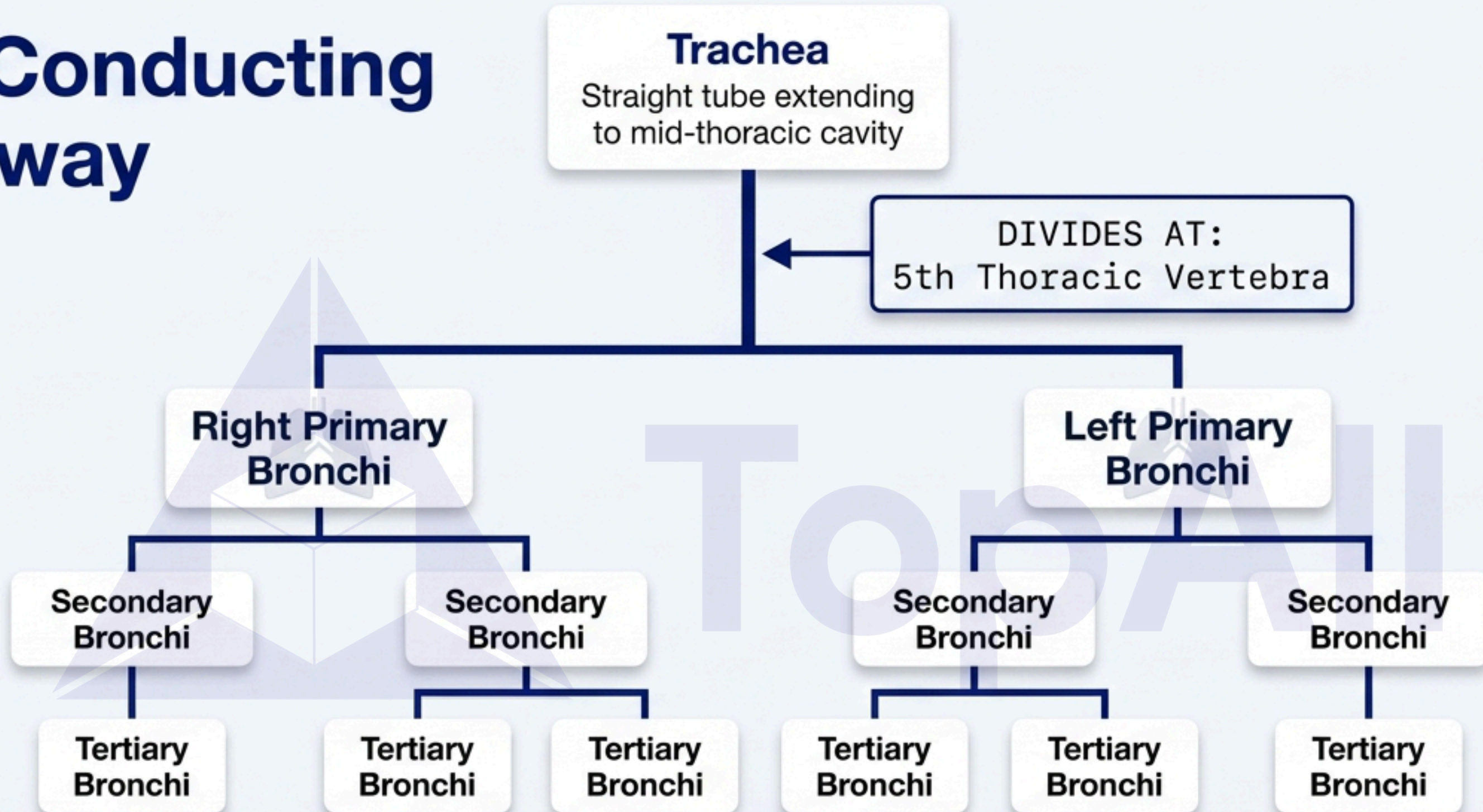
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Key Highlights

- » Free Study Material, Videos & Infographics
- » Push Your Limits with Level-Based Challenges
- » Climb the Leaderboard Among Fellow Aspirants
- » Practice Unlimited MCQs for NEET & JEE
- » Get Clear Explanations, Not Just Marks
- » Track Your Performance Smarter



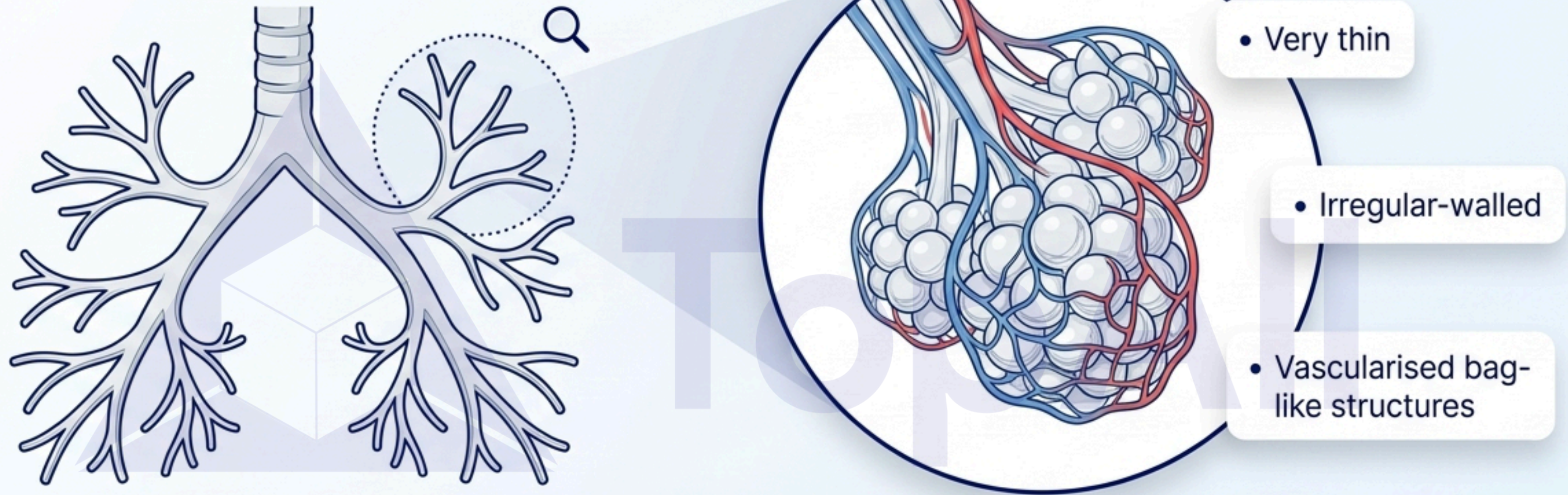
The Conducting Highway



STRUCTURAL SUPPORT:

The trachea, primary, secondary, and tertiary bronchi, along with initial bronchioles, are supported by incomplete cartilaginous rings to prevent collapse.

The Exchange Terminal



Conducting Part	Exchange Part
Path: Nostrils → Terminal Bronchioles Function: Transports atmospheric air, clears foreign particles, humidifies, and brings air to body temperature.	Path: Alveoli & Ducts Function: The actual site of O₂ and CO₂ diffusion between blood and atmospheric air.

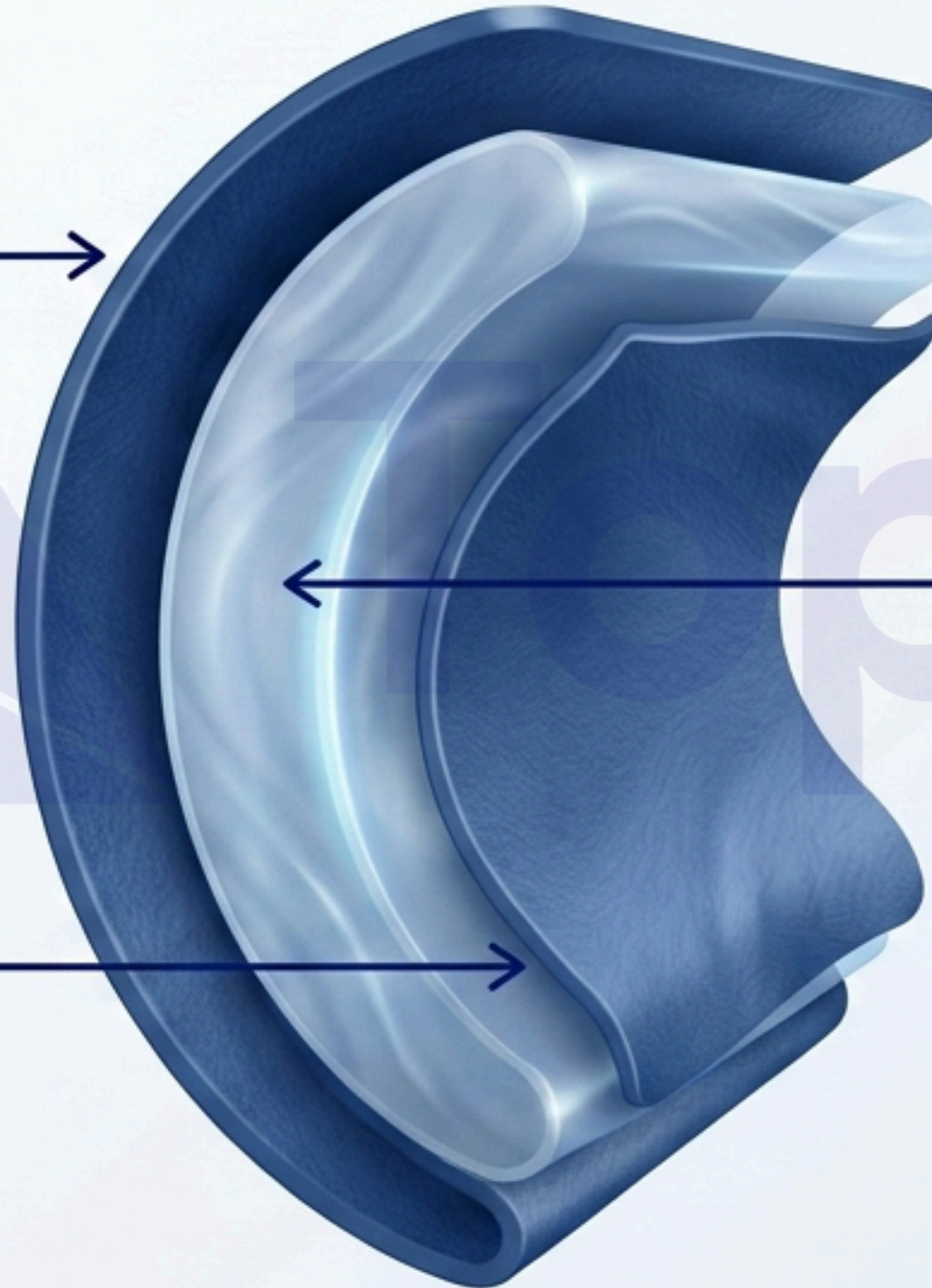
Protecting the Lungs

Outer Pleural Membrane

In close contact with the thoracic lining.

Inner Pleural Membrane

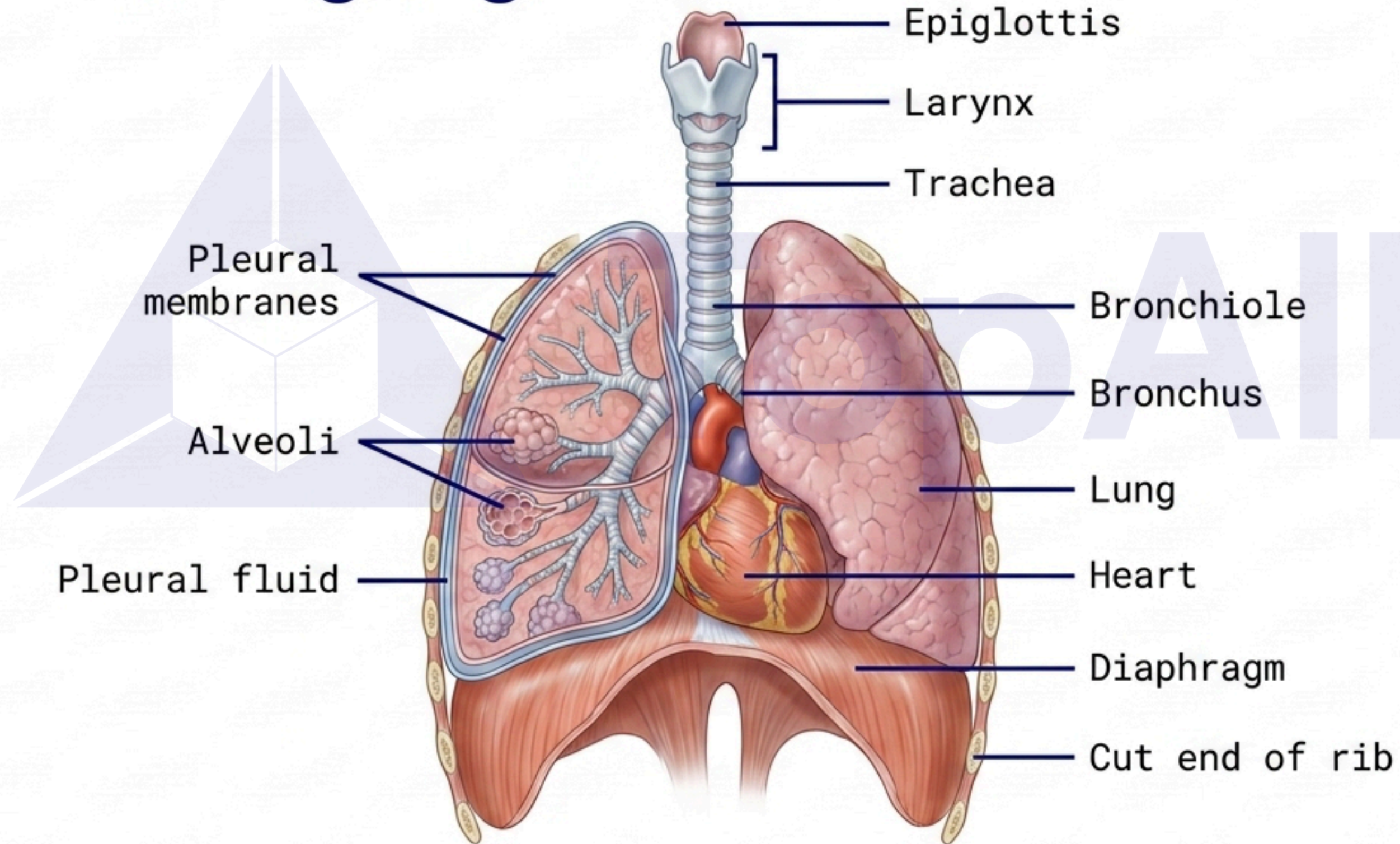
In direct contact with the lung surface.



Pleural Fluid

Reduces friction on the lung-surface during respiration.

The Complete Human Respiratory System



Physiological Masterpiece



The human respiratory system is an intricate, anatomically air-tight chamber designed to perfectly bridge the outside atmosphere with the microscopic bloodstream. By mechanically altering the thoracic volume via the diaphragm and ribs, it regulates pressure to pull in air, conditions it, and delivers it to the vascularised alveoli for critical gas exchange.

Thoracic volume changes directly dictate pulmonary volume changes—making breathing possible.



You've Learned the Theory.

Now Let's Test It.

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