

# Pulmonary System

Pulmonary Ventilation

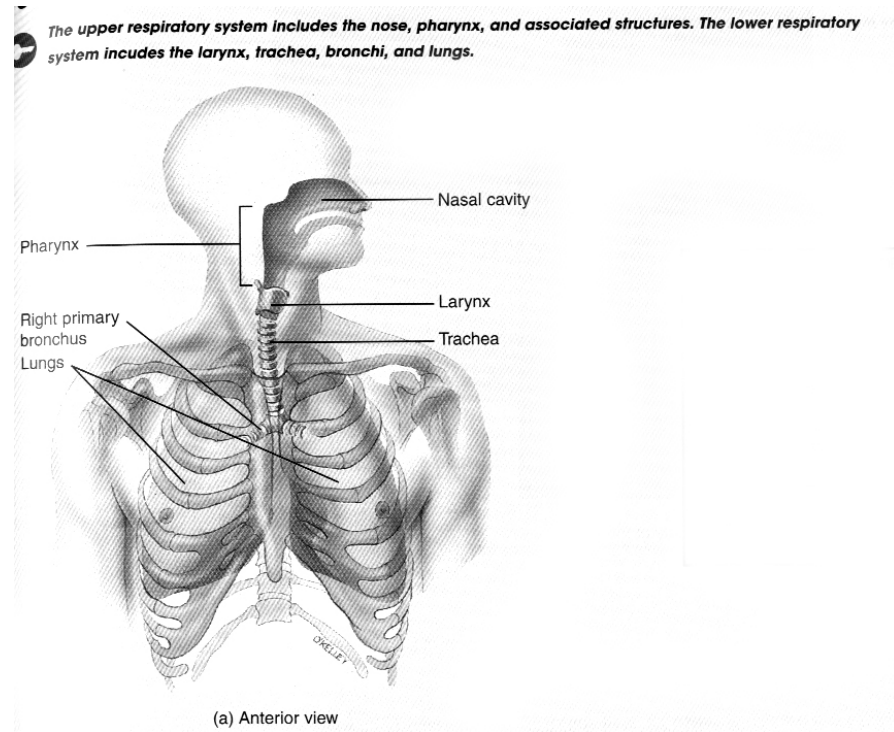
External Respiration

Internal Respiration

# Structure of Respiratory System

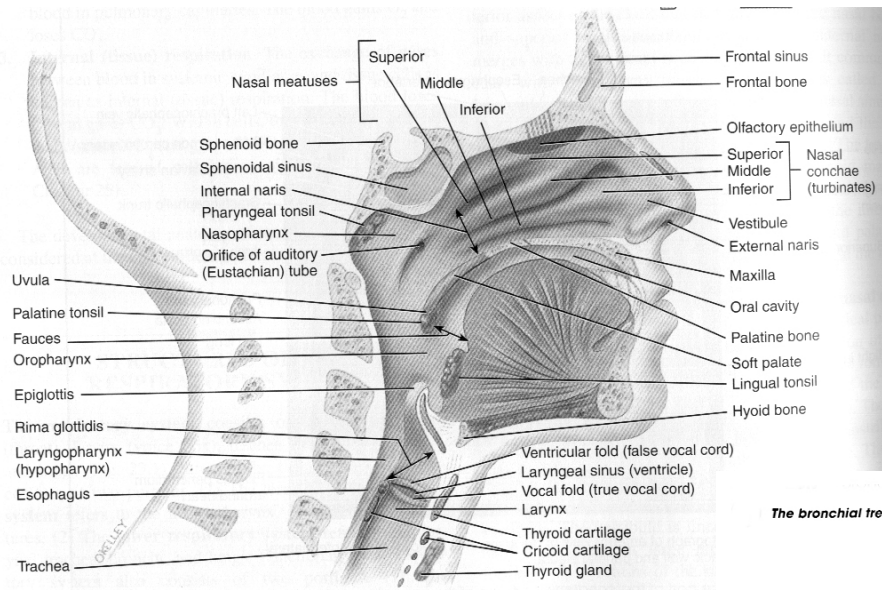
Upper Respiratory System

Lower Respiratory System



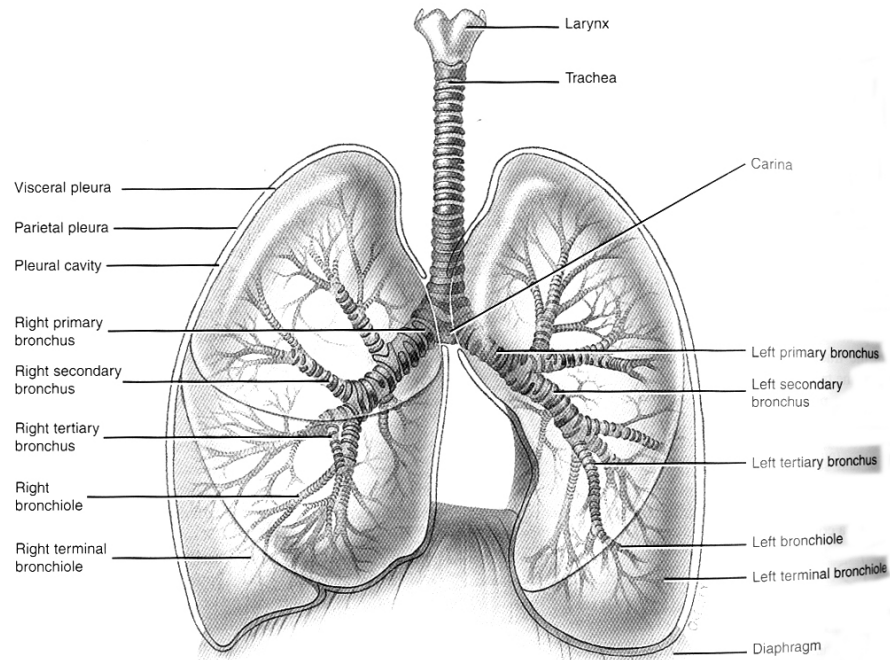
Upper Respiratory System

Lower Respiratory System



(b) Diagram of sagittal section of the left side of the head and neck

*The bronchial tree begins at the trachea and ends at the terminal bronchioles.*



## Cellular level organization of Respiratory System within lungs

Breathing

## Ventilation/Perfusion and Nuclear Medicine

Indications for Ventilation/Perfusion (V/Q) Imaging

What is PE and its treatment options

## Radiopharmaceuticals

Tc99m MAA:

Xe-133:

Kr-81m:

Tc99m DTPA:

## Ventilation Imaging - Xenon

## Ventilation Imaging- Krypton

Ventilation imaging - aerosols

Perfusion Imaging

MAA:

Patient Prep:

Injection Criteria

Method of Injection

Camera Setup and Procedure:

Proper Sequence of ventilation and perfusion studies:

Importance of X-ray of chest

Findings:

Normal

Abnormal:

Mismatching defect

Match defect

Quantitative V/Q studies

Indication

Technique

Camera Setup

Calculation