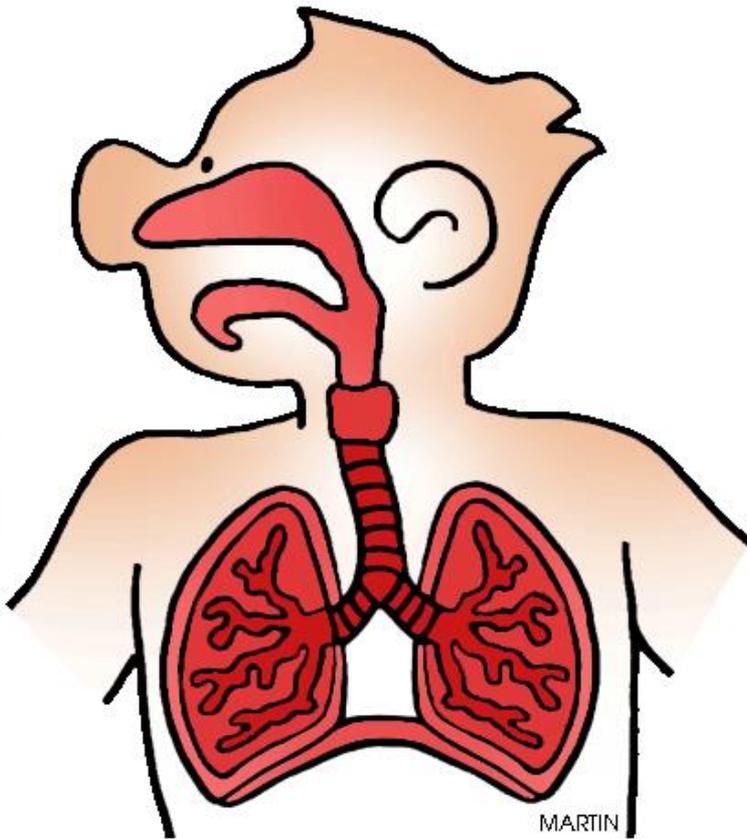


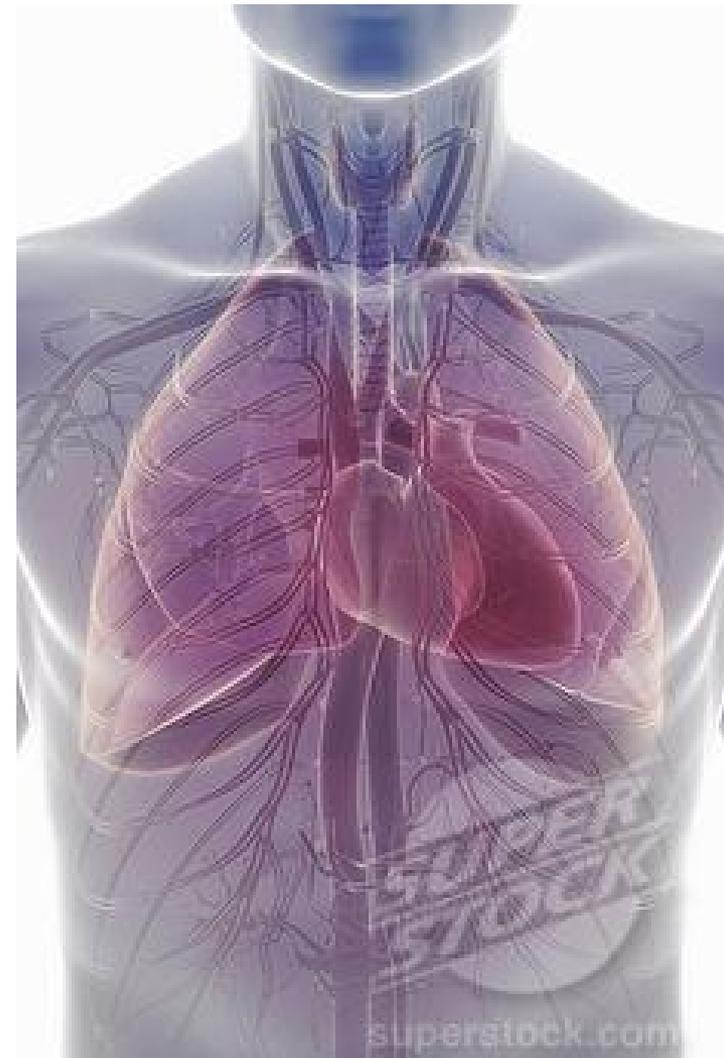
# THE RESPIRATORY SYSTEM



MARTIN

# Functions

- ❧ Provides oxygen to the body and removes carbon dioxide from the body
- ❧ Works closely with the circulatory system

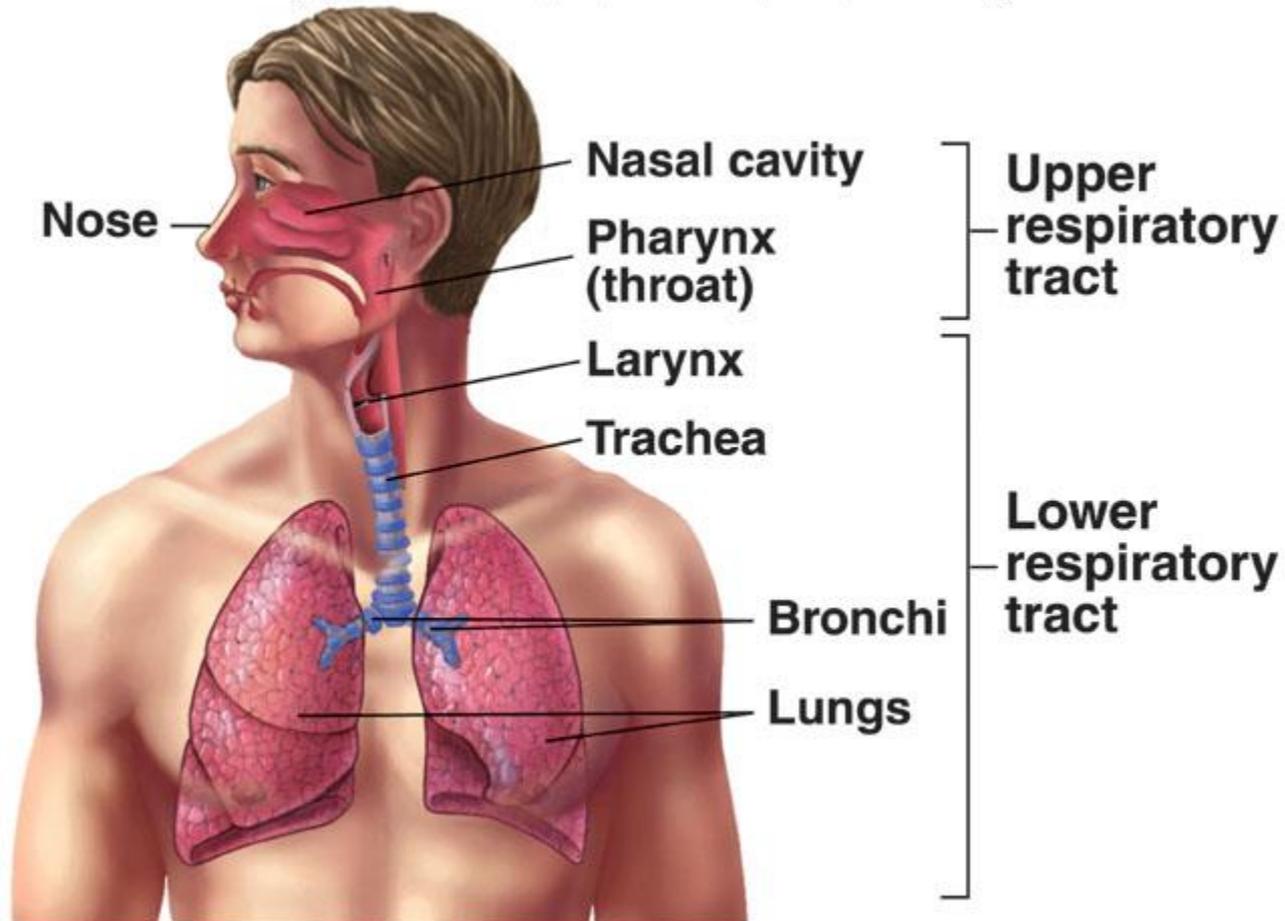


# components

- ✧ The respiratory system is made up of the following:
  - ✧ Nasal cavity
  - ✧ Mouth
  - ✧ Pharynx
  - ✧ Trachea
  - ✧ Bronchi
  - ✧ Lungs
  - ✧ Diaphragm

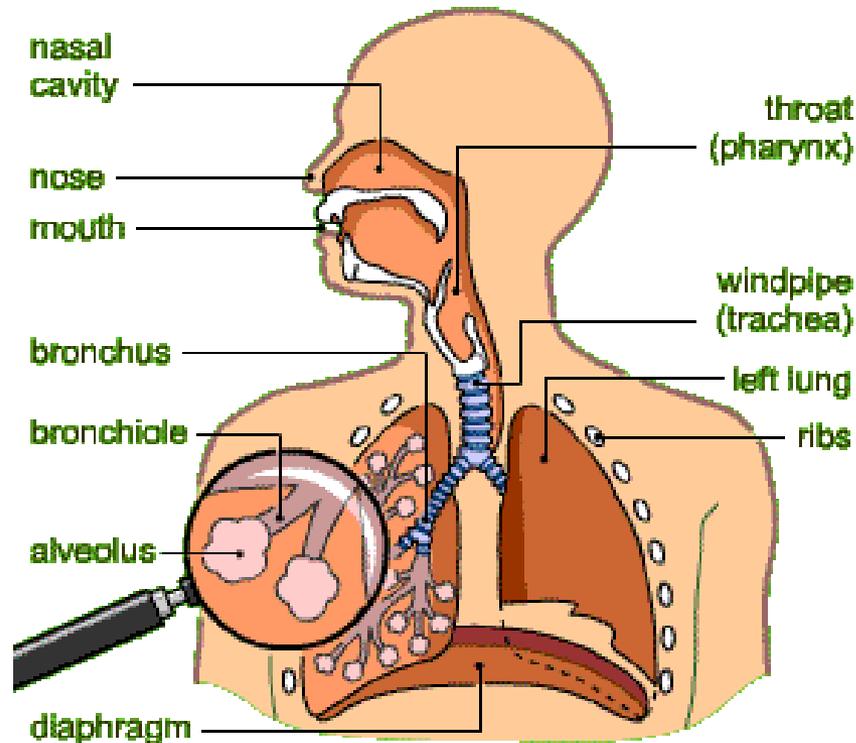
# Respiratory system

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# Pathway of air

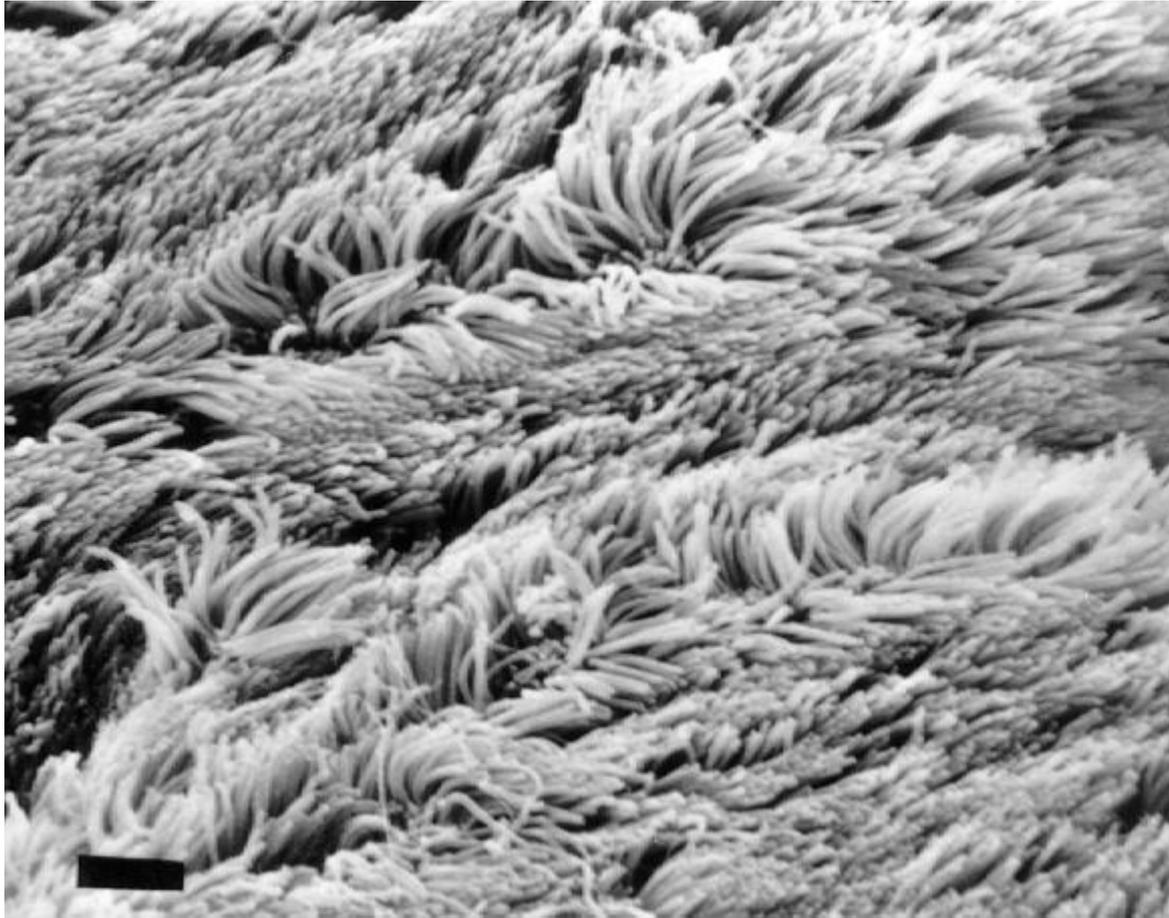
∞ Mouth/Nose → Pharynx (Throat) → Trachea (Windpipe) → Bronchi → Lungs



# Trachea

- ✧ Also known as the windpipe
- ✧ Supported by cartilage rings
  - ✧ Keeps trachea open and allows air to flow freely
- ✧ Contains epithelial cells that have hair-like projections called cilia
- ✧ Cilia help filter out and remove foreign materials (such as dust) that can possibly enter the bronchial tubes and lungs

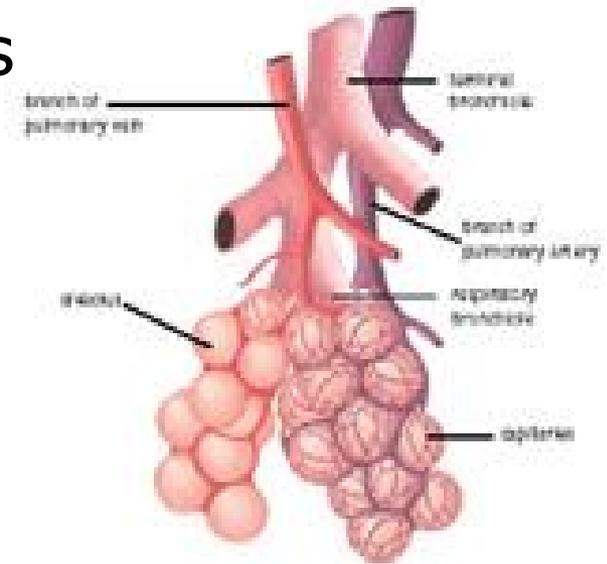
cilia



# Alveoli

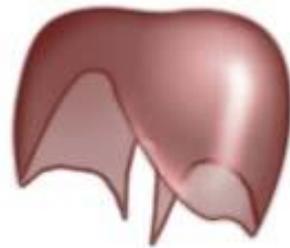
## (Singular: Alveolus)

- ❧ Tiny air sacs
- ❧ Each alveolus is surrounded by a capillary network allowing gas exchange to occur
- ❧ Site of gas exchange
  - ❧ Oxygen diffuses from the alveoli into the blood
  - ❧ Carbon dioxide diffuses from the blood into the alveoli



# Diaphragm

- ❧ Thin dome-shaped muscular sheet that lies underneath the ribs



The diaphragm  
is shaped  
like a parachute



**BREATHING**

# Breathing

- ❧ Involuntary reaction
- ❧ Controlled by a part of the brain that detects the concentration of carbon dioxide in the blood
- ❧ Increased carbon dioxide levels in the blood causes an increase in breathing rate

# inhalation

☞ Taking air into lungs

	<b>Inhalation</b>
Diaphragm	Contracts
Intercostal Muscles (Rib muscles)	Contracts
Chest cavity	Up and Out
Volume	Increases
Pressure	Decreases
Air moves...	In

# Exhalation

↻ Pushing air out of lungs

	Inhalation
Diaphragm	Relaxes
Intercostal Muscles (Rib muscles)	Relaxes
Chest cavity	In and down
Volume	Decreases
Pressure	Increases
Air moves...	Out



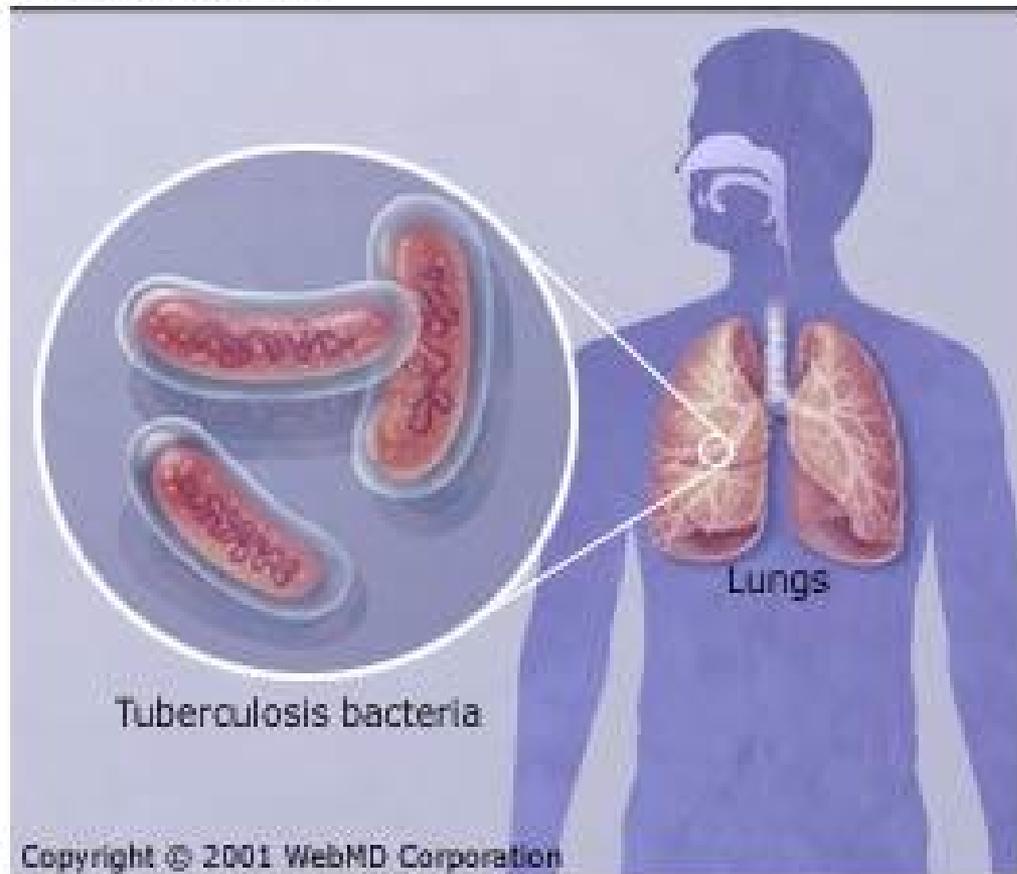
# **DISEASES OF THE RESPIRATORY SYSTEM**

# Tuberculosis (TB)

- ❧ Infectious disease
- ❧ Caused by bacteria that enter your body when you breathe
- ❧ Bacteria grows in your lungs
- ❧ Symptoms: fever, cough, weight loss, tiredness, chest pain
- ❧ Treatment: medicine, hospitalization

# Tuberculosis (TB)

## Tuberculosis



# cancer

