

# How Does the Respiratory System Work in the Human Body?

What is the function of the respiratory system?



# What is the function of the respiratory system?

- To get oxygen from the environment into the body
- To remove carbon dioxide and other waste products from your body

How do the gasses get to and  
leave the cells?

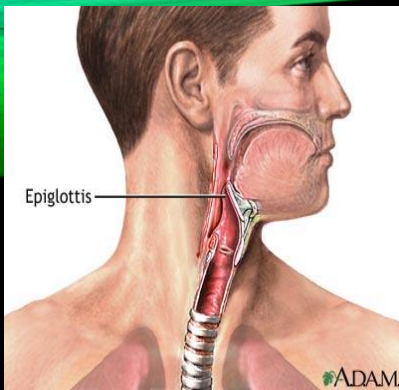


# How do the gasses get to and leave the cells?

- Oxygen enters your body when you inhale
- Transported to the cells by red blood cells
- Cells use oxygen and glucose to release energy
- $\text{CO}_2$  is the waste product and high levels can damage cells
- The blood takes  $\text{CO}_2$  back to the lungs

What are the organs of the  
respiratory system?





# What are the organs of the respiratory system?

## 1. Nose and Mouth

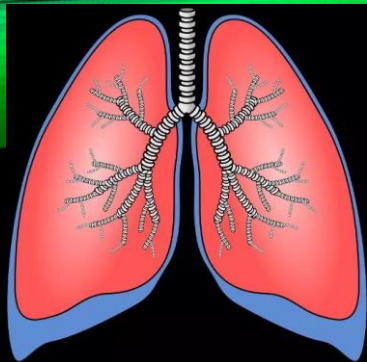
- Air enters and is filtered by the cilia (tiny hairs)
- Mucus (sticky liquid) traps particles
- Nasal cavity warms air

## 2. Trachea

- Windpipe, tube like structure where air passes through

## 3. Epiglottis

- Keeps air from entering stomach and food from entering the lungs



# What are the organs of the respiratory system?

## 4. Lungs

- Large organs located on either side of your heart

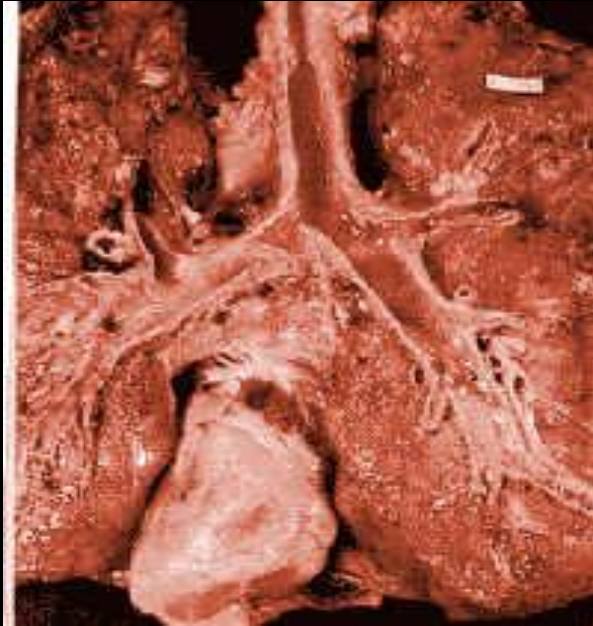
## 5. Bronchial Tubes

- Moves air into the lungs
- Branches through the lungs into smaller tubes
- Moves air into alveoli

## 6. Alveoli

- Tiny air sacs with walls only one cell thick
- Air passes and diffuses into the blood
- CO<sub>2</sub> waste passes from blood into alveoli





**Healthy Lung**



**Unhealthy Lung**

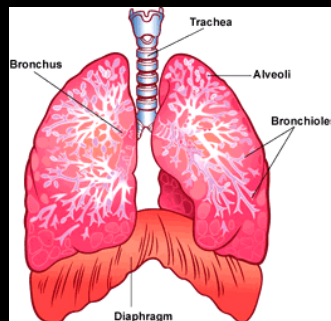
# What are the organs of the respiratory system?

## 4. Rib Cage

- Encloses a space called the thoracic cavity
- Ribs are connected by cartilage allowing it to expand

## 5. Diaphragm

- Large muscle that contracts (pulls downward) when you inhale and pulls in air



# SPEECH AND THE RESPIRATORY SYSTEM

1. **Air** from lungs is forced between vocal cords
2. **Vocal cords** vibrate
3. **Sound waves** generated
4. **Sound waves** are shaped to form specific sounds.
5. Sound waves travel through air and become **speech**

# OTHER MOVEMENTS OF THE RESPIRATORY SYSTEM

- Coughing
- Sneezing
- Sighing
- Yawning
- Laughing
- Hiccupping
- Etc.





Respiratory  
Video from  
Kids Health