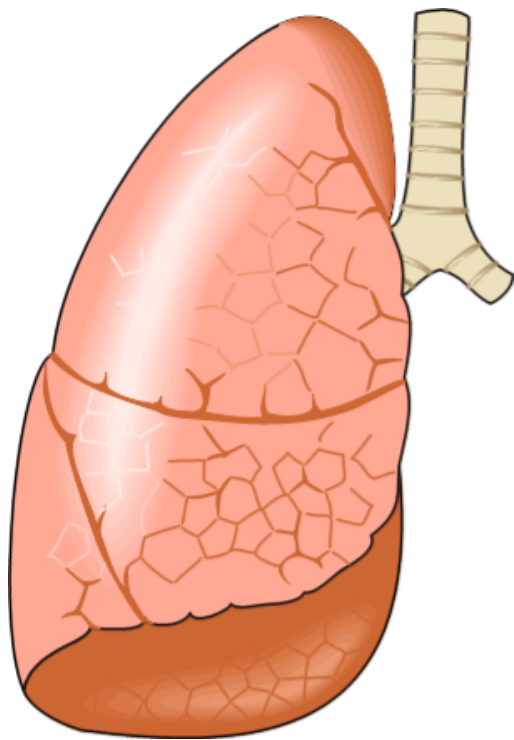


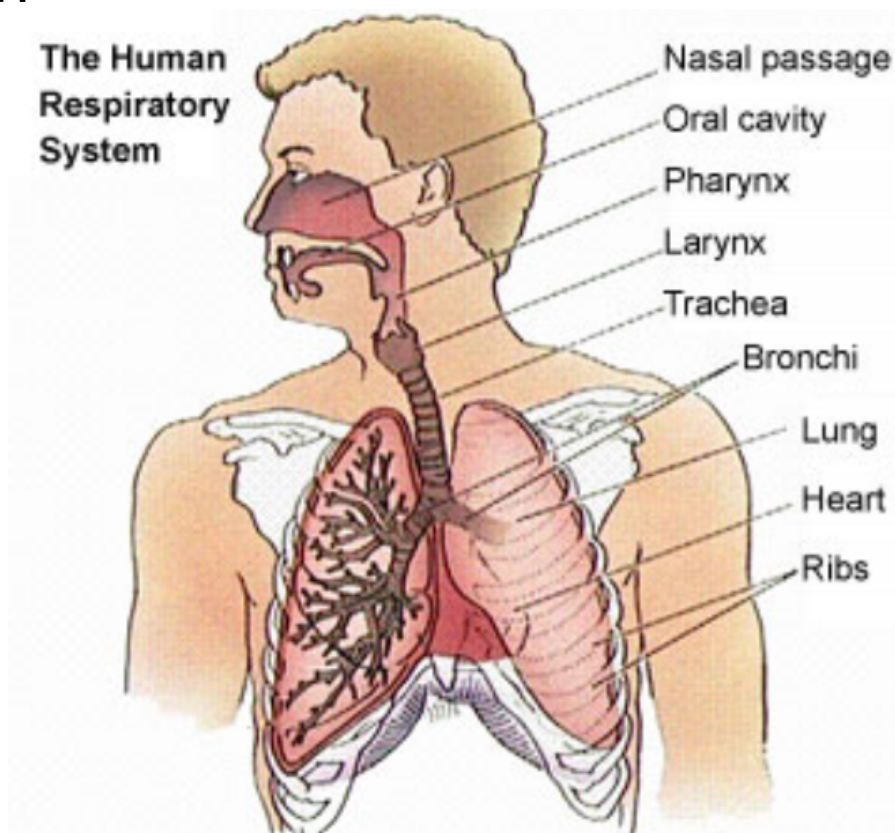
Functions of Respiratory system

- The primary function of the respiratory system is to supply the blood with oxygen in order for the blood to deliver oxygen to all parts of the body. Oxygen is used in the creation of energy through the process of respiration.
- The respiratory system is also responsible for getting rid of carbon dioxide and water. These are waste products of respiration and are exhaled.

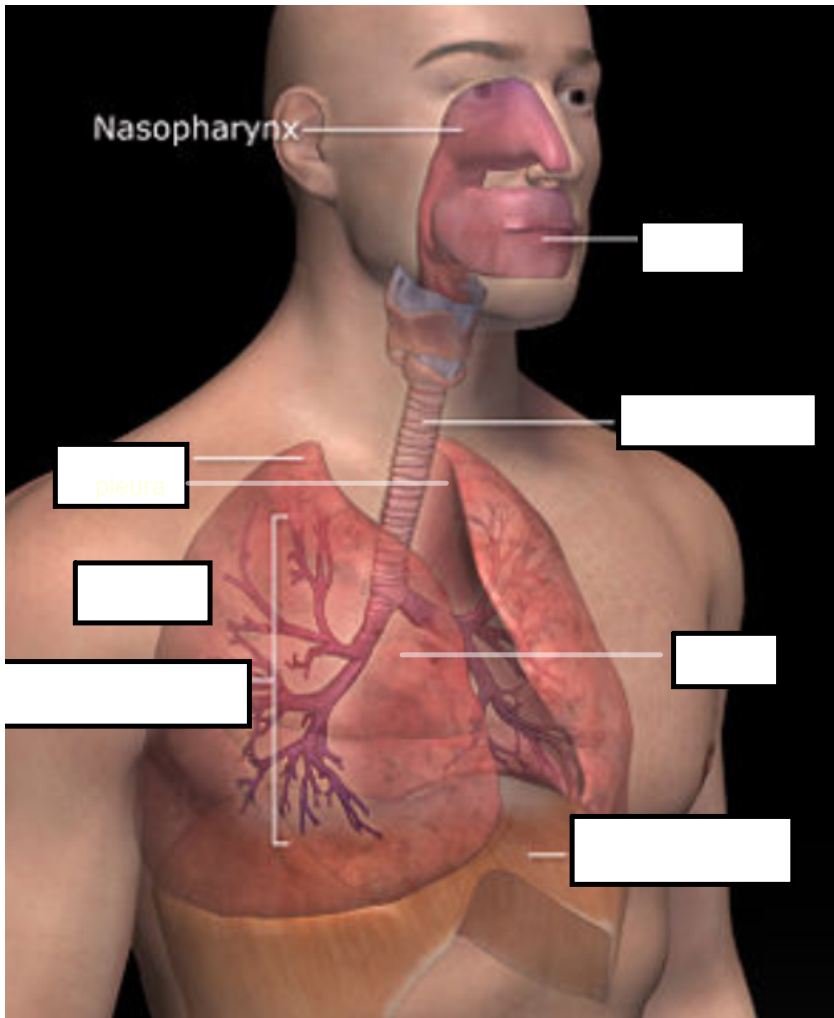


Click on the
picture to
take an
introductory
quiz to see
what you
know!

What do you know about the respiratory system?



Pull



Mouth: Where the body takes in oxygen and releases carbon dioxide.

Trachea: Tube that carries the air (oxygen and carbon dioxide) to and from the lungs.

Bronchial tubes: Smaller tubes that carry the air in and out of the lungs. These tubes branch off to each lung.

Diaphragm: a strand of muscle tissue that controls the breathing for the body.

Lungs: soft tissue organs where the oxygen, carbon dioxide gas exchange takes place.

Larynx: voice box.

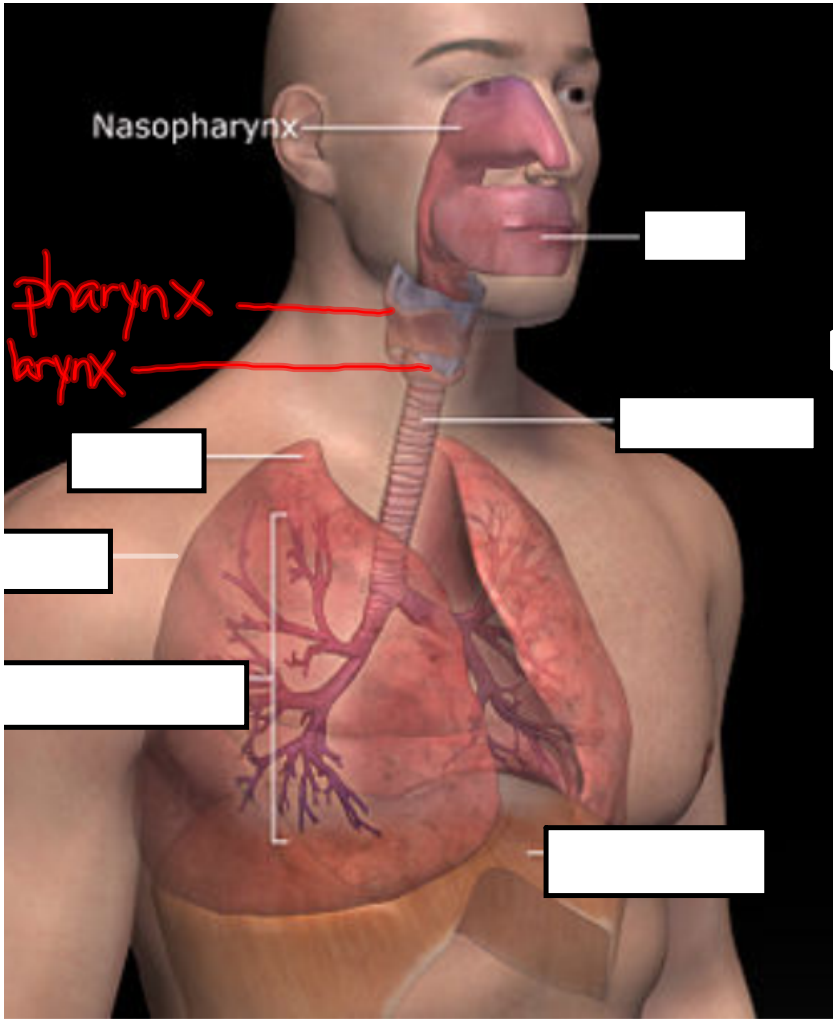
Alveoli: tiny air sac in the lungs where the oxygen/carbon dioxide gas exchange takes place.

Pleura: The lining on the outside of the lung. It helps to protect the lung.

Capillaries: tiny blood vessels where gas exchange happens.

Pharynx: the part of the neck and throat situated immediately behind the mouth and nasal cavity.

Nasopharynx: (nasal part of the pharynx) is the uppermost part of the pharynx.



Mouth: Where the body takes in oxygen and dioxide.

Trachea: Tube that (oxygen and carbon dioxide) to and from the lungs.

Bronchial tubes: carry the air in and out of the lungs. These tubes branch off to each lung.

Diaphragm: a strand of controls the breathing for the body.

Lungs: soft where the oxygen, carbon dioxide gas exchange takes place.

Larynx: voice box.

Alveoli: tiny air sac in the lungs where the dioxide gas exchange takes place.

Pleura: outside of the lung. It helps to protect the lung.

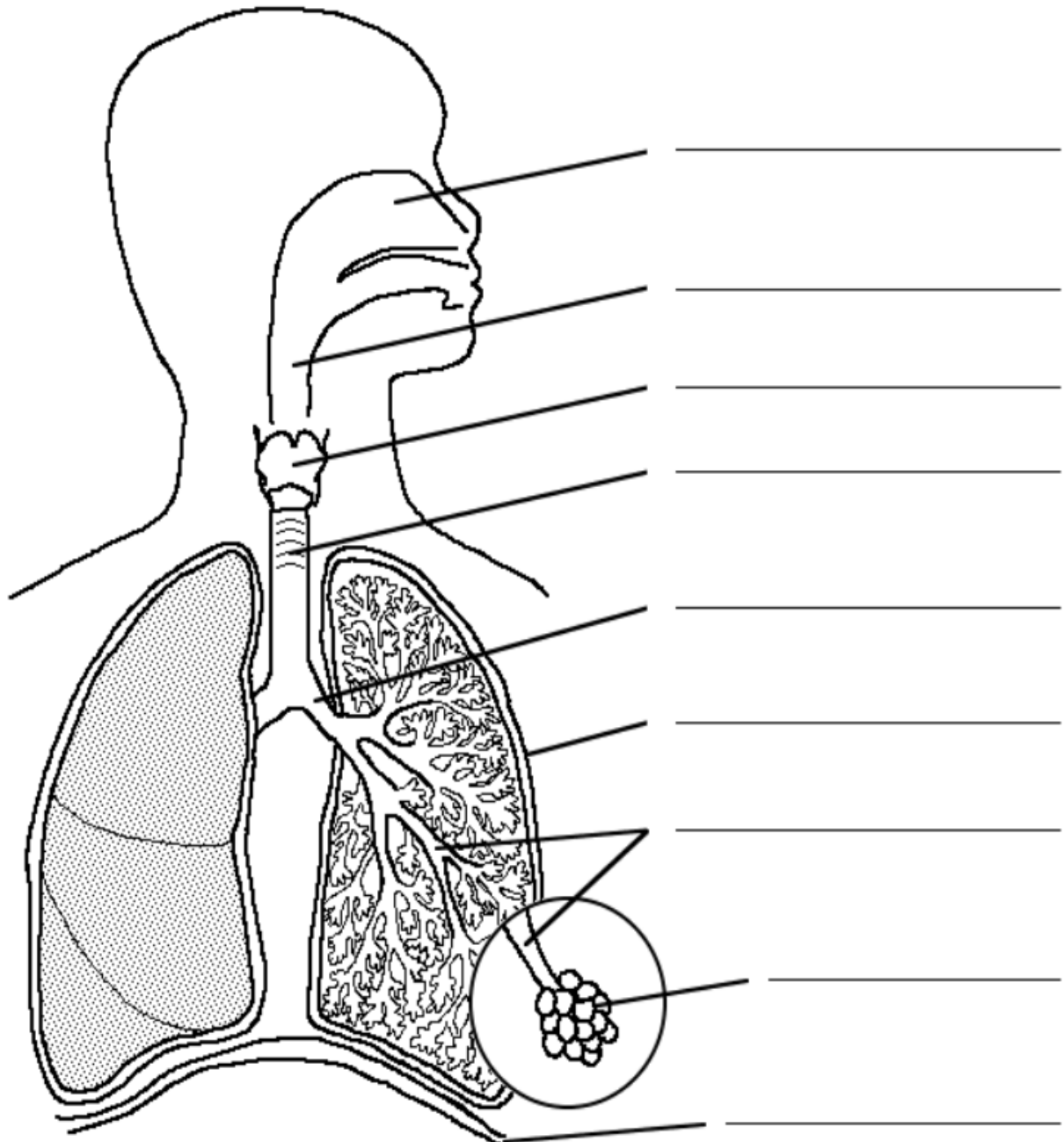
Capillaries: tiny blood vessels where happens.

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Respiratory System



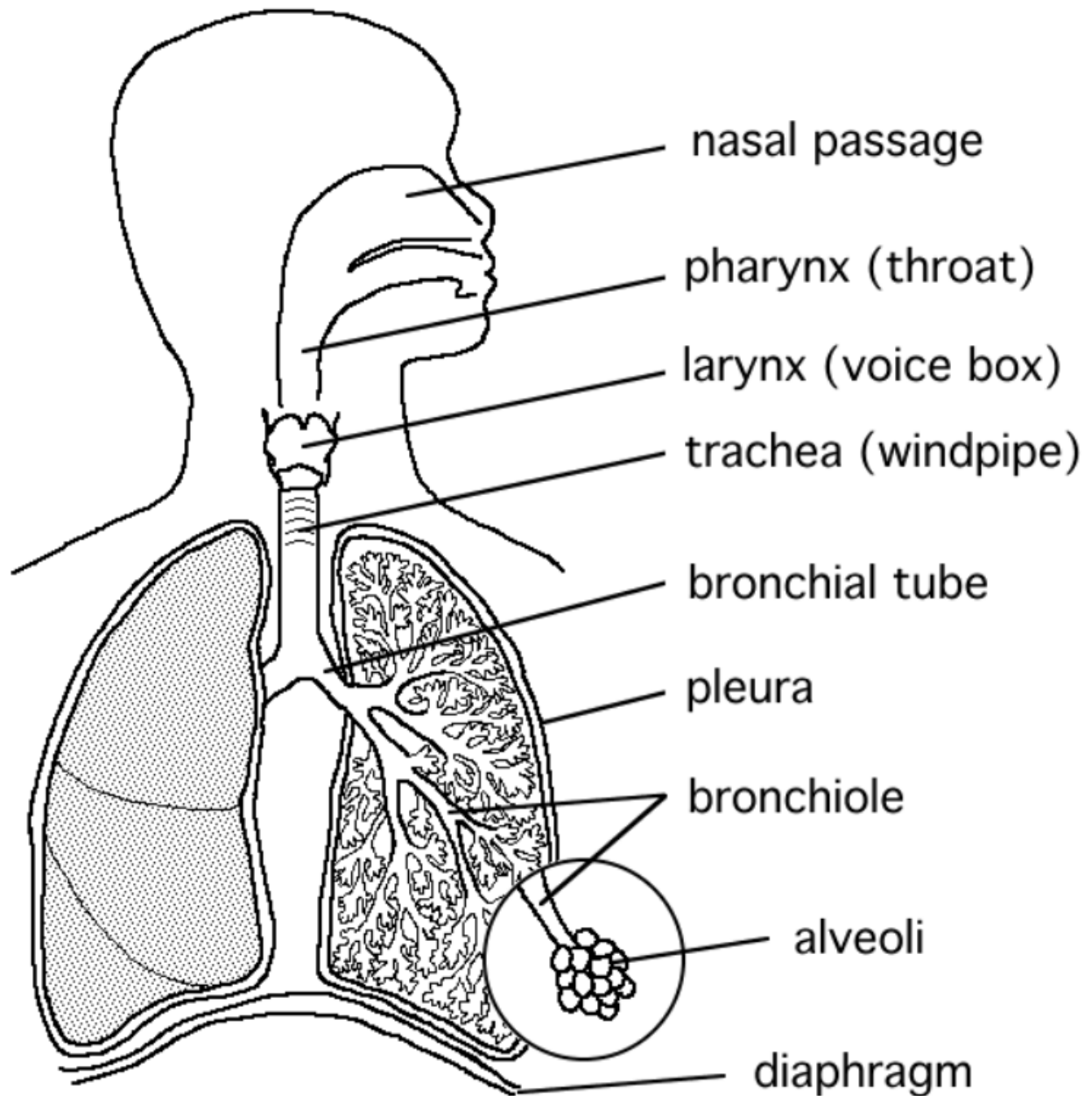
alveoli	larynx (voice box)	bronchial tube
diaphragm	pharynx (throat)	bronchiole
pleura	trachea (windpipe)	nasal passage

Respiration 3-D Video



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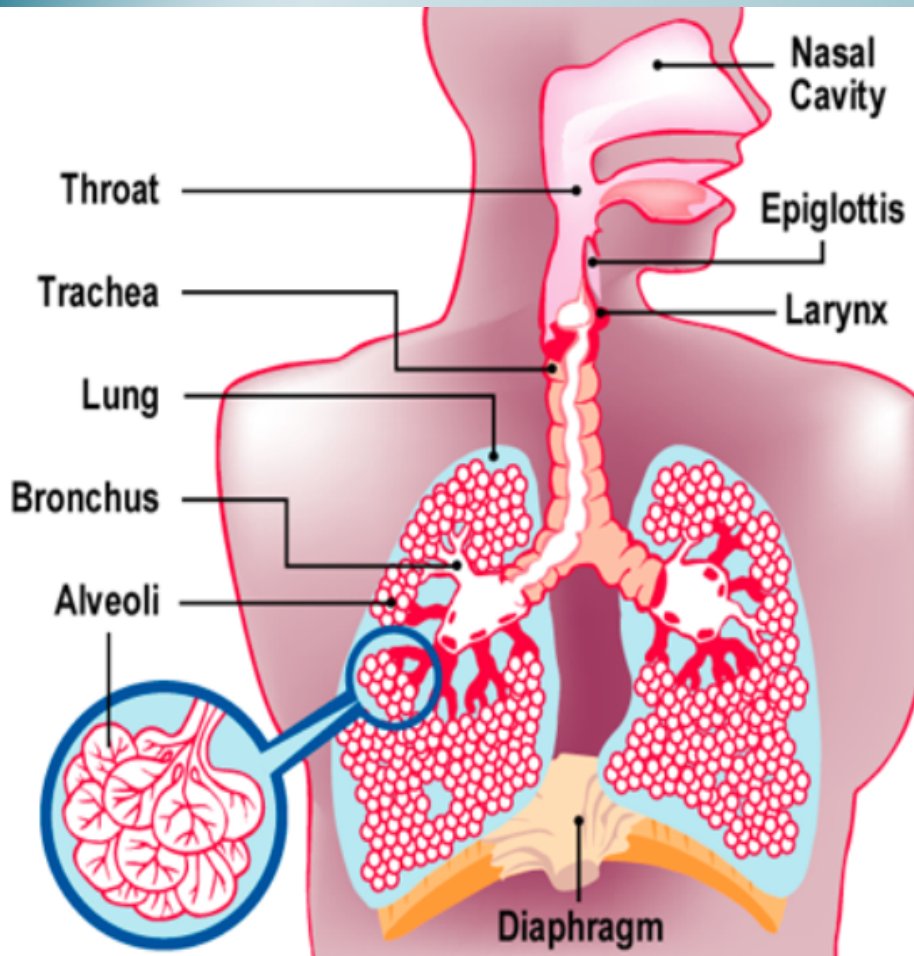
Respiratory System

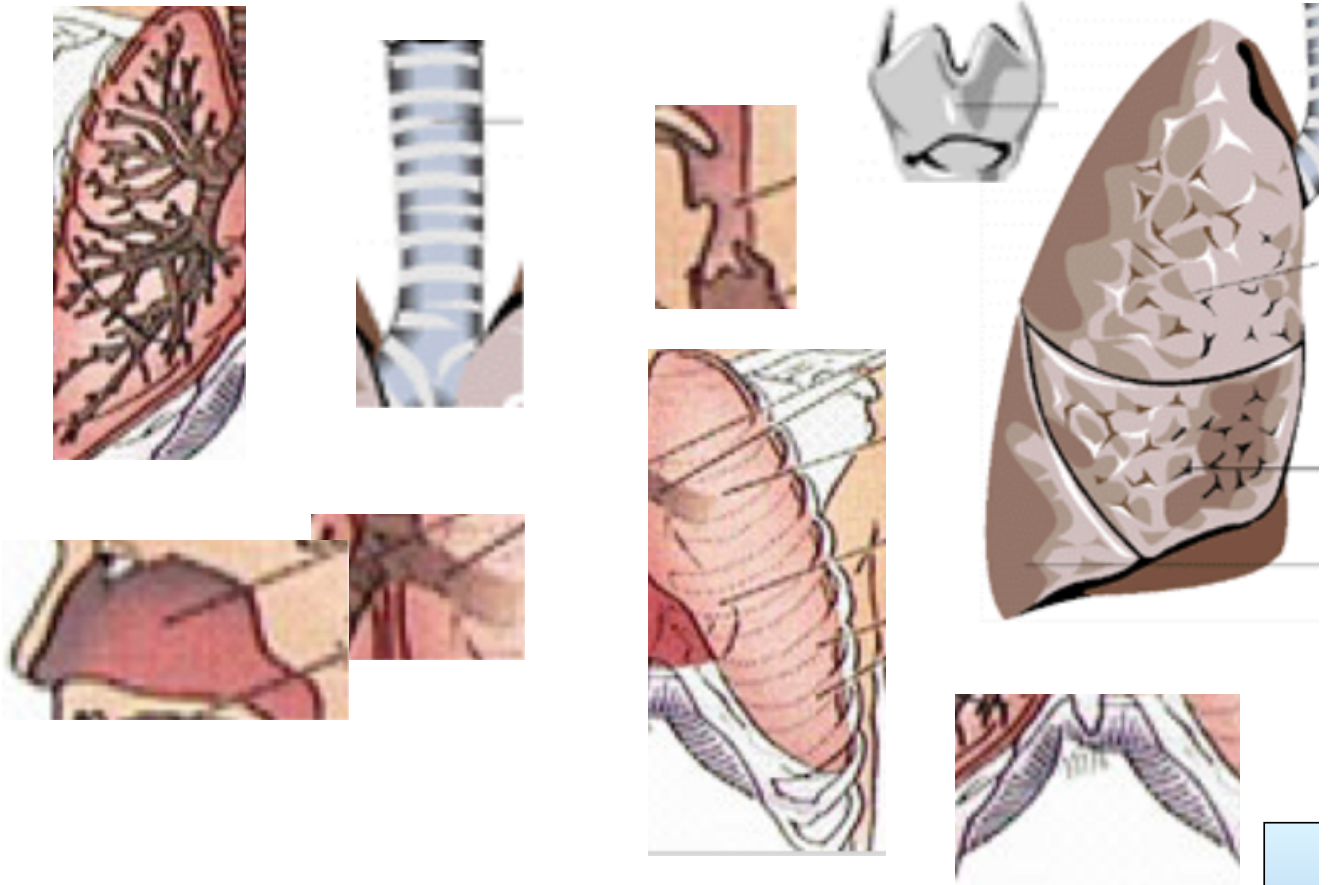


Respiratory System: Interactive Labels



©edHelper.com





bronchial tubes

nasal cavity

larynx

pharynx

lung

diaphragm

bronchi

trachea

ribs

Check



Name _____

Breathe In, Breathe Out!

The respiratory system is made up of several parts that work together to bring air in and out of the body. What parts make up the respiratory system?

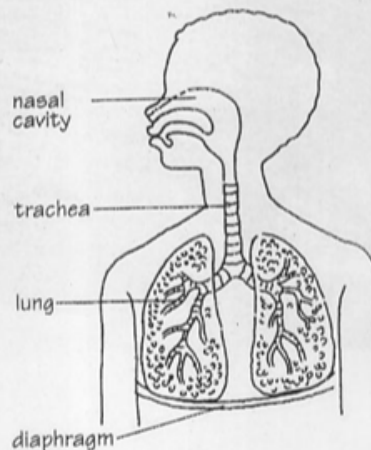
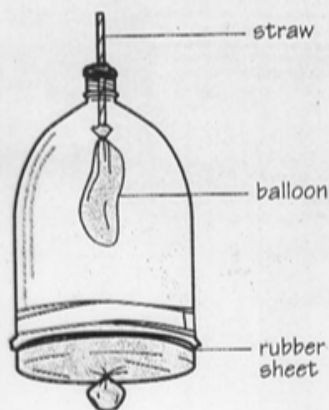
You'll Need:

- ✓ balloon lung model

1. Look carefully at the balloon lung model. Predict: What will happen to the balloon inside the model when you pull down on the rubber sheet?

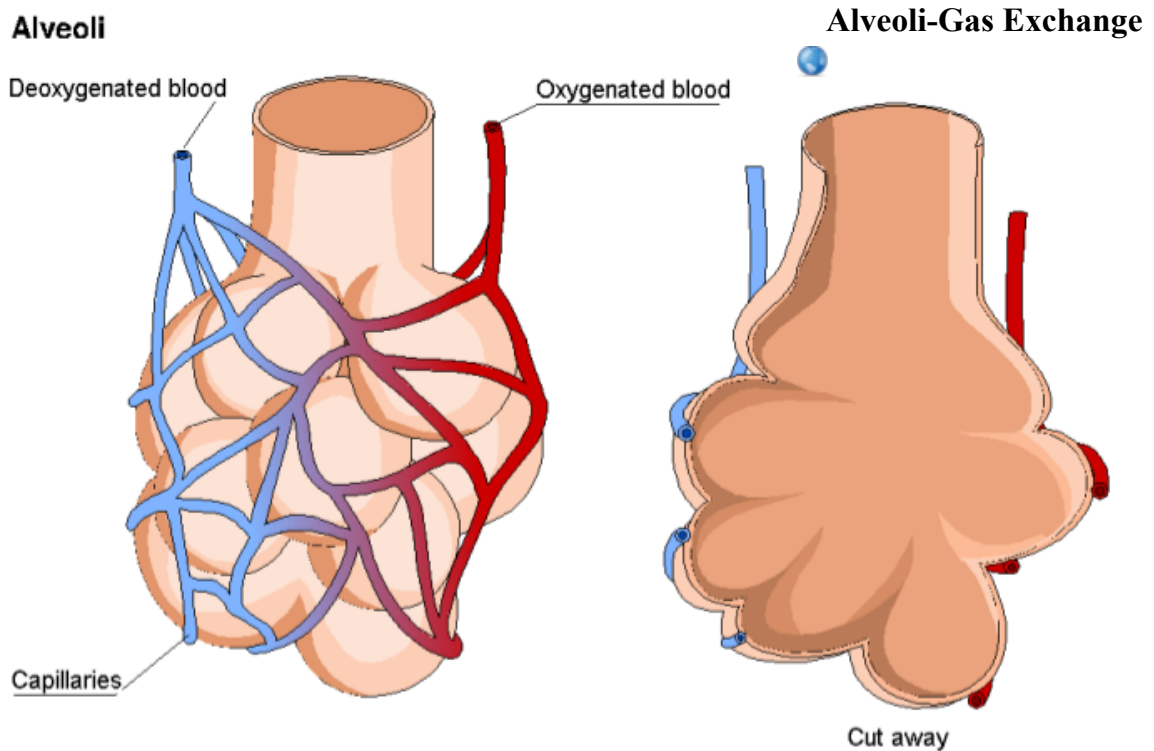
2. Gently pull down on the rubber sheet at the bottom of the bottle. Watch and listen to what happens to the balloon inside as you pull down and push up on the rubber sheet. Describe what you see and hear.

3. Compare the illustrations of the balloon lung model and the respiratory system below. Match the parts of the balloon lung model with the respiratory system. Draw a line to connect the model part to the real part.



Wrap-up

- ◆ Based on the balloon lung model, explain how the respiratory system works.



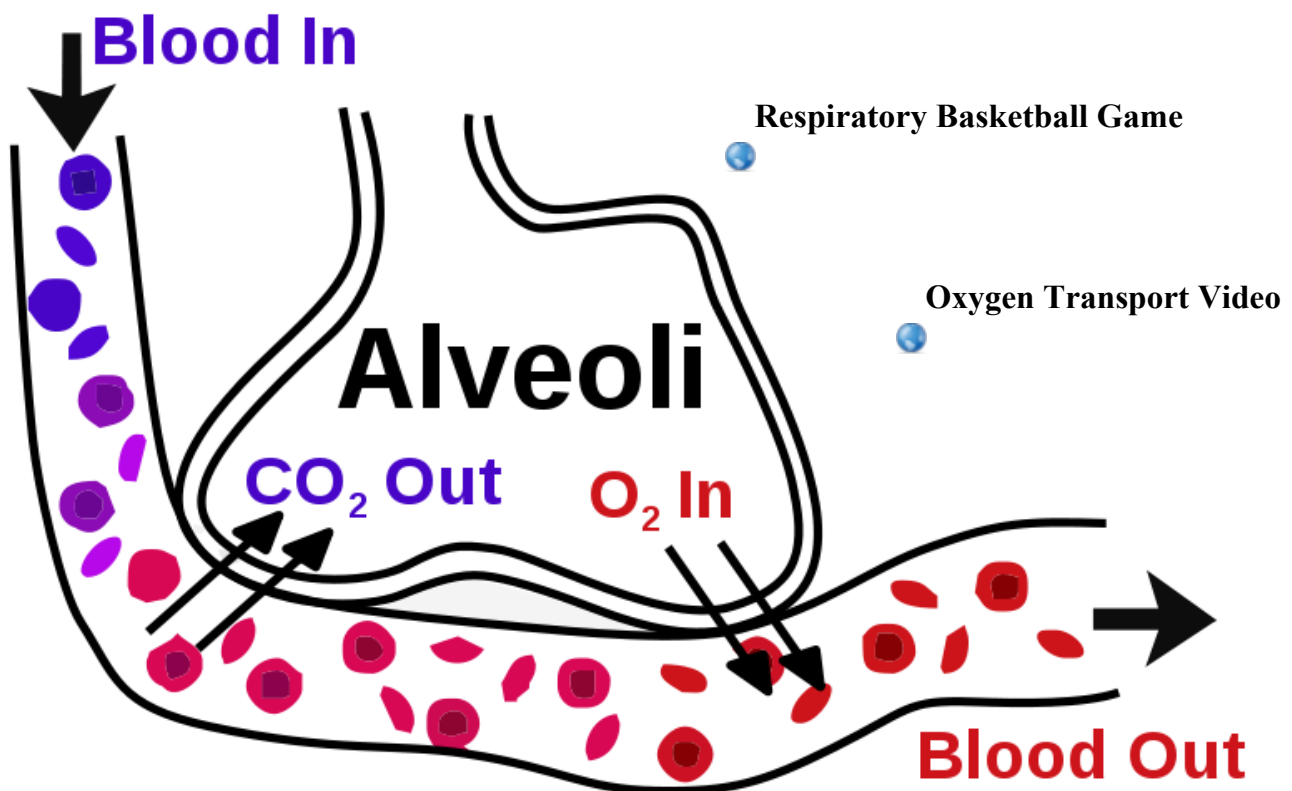
Oxygen/Carbon Dioxide Gas Exchange: Alveoli are air sacs. It is through these thin-walled chambers that oxygen moves into the blood and carbon dioxide moves from the blood into the alveoli. Each sac is surrounded by blood vessels/capillaries. The blood vessels carry oxygen to the cells where it is needed and deliver carbon dioxide and water to the lungs to be exhaled.

Oxygen - Carbon Dioxide Gas Exchange

The circulatory system carries oxygen to the cells, along with glucose. These materials are used by the cells to create energy. The blood then returns to the lungs with carbon dioxide. Once in the lungs, the carbon dioxide is transferred to the lungs to be exhaled and the blood "picks up" more oxygen to deliver to the cells. This is called the oxygen - carbon dioxide gas exchange. This exchange of gases takes place between the alveoli and the capillaries.

Capillaries pick up O_2 from the lungs and take it to the rest of the body.

The blood returns from the body with CO_2 to be exhaled



Most air contains:

- oxygen, nitrogen, and carbon dioxide

Tidal Air Volume: the amount of breath lungs contain during normal breathing.

Reserve Air Volume: the amount of breath that can be forced out of lungs after normal breathing.

Vital Air Volume: the maximum amount of air that lungs can hold.

Label the Lungs



Respiration

Pull

What is it?

Pull

Where does it take place?

Pull

How does the respiratory system help?

Pull

How does the digestive system help?

Pull

How does the circulatory system help?

Pull

How does the oxygen get around the body?

Pull

How does oxygen get into the body?

Pull

Why does the body need oxygen?

Pull

How does the body get rid of the carbon dioxide?



Respiration

Takes place in the cells



How does the oxygen get into the body?

How does the oxygen get around to the body?

What is carbon dioxide? Why does the body want to get rid of it?

How does the body get rid of the carbon dioxide?

Why does the body need oxygen?

Attachments

human - resp alveoli.JPG

human - resp act.JPG



Respiratory Movie

human - resp picture.jpg

alveoli.htm