

The Breathing System

Why do we need to breathe?



We breathe to,

1. Take in **Oxygen**
2. Break down our food to make **energy** (respiration)

Food and **Oxygen** are essential for energy for living.

What happens when we breathe?

The air is **21%** Oxygen.

Oxygen moves into our red blood cells.

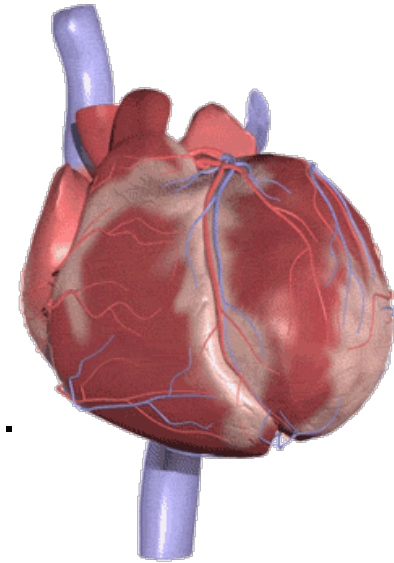
These are pumped around the body by the **heart**.

The oxygen moves into cells and breaks down food.

Energy is released.

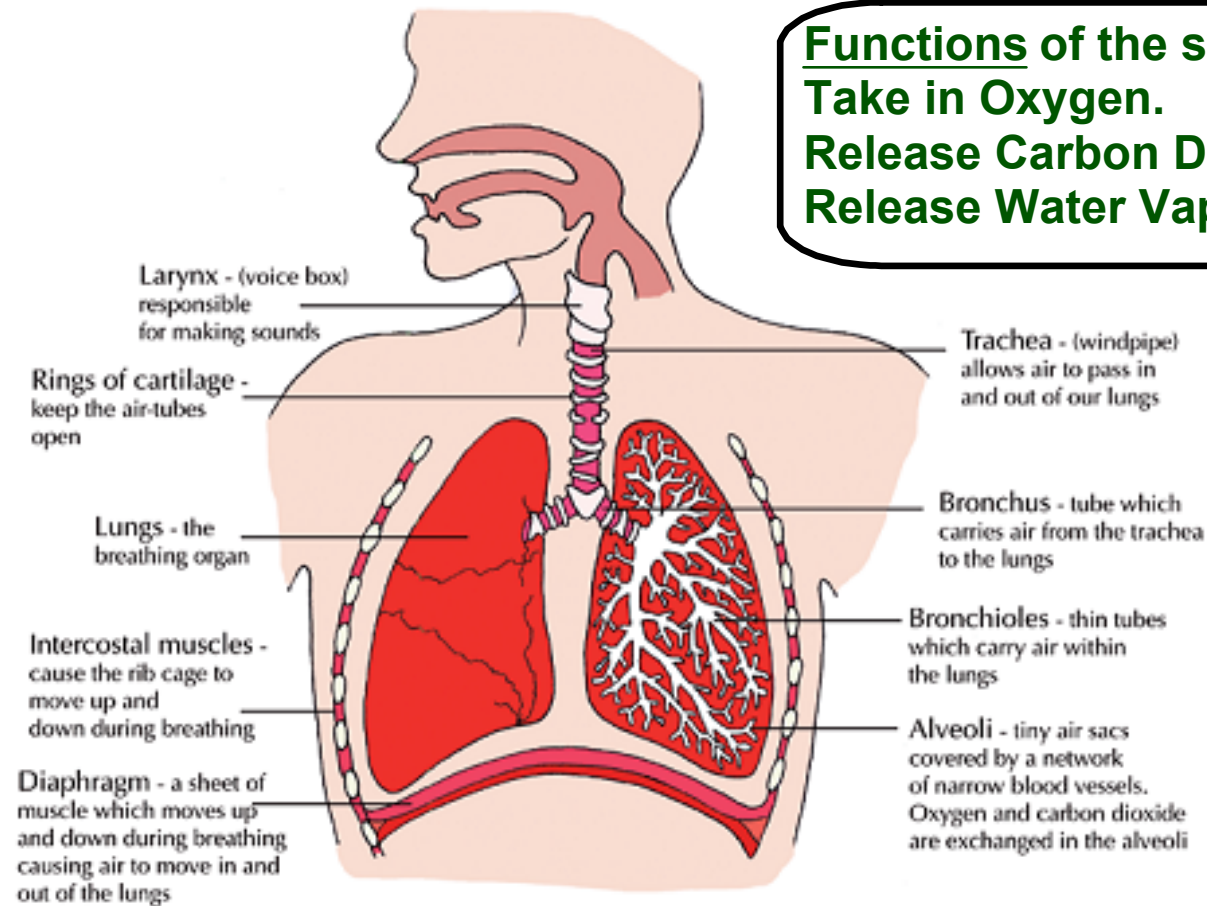
Carbon Dioxide and **water vapour** are released as wastes and dissolve into the blood.

The lungs breathe out the wastes.



The Breathing System

**Functions of the system,
Take in Oxygen.
Release Carbon Dioxide.
Release Water Vapour.**

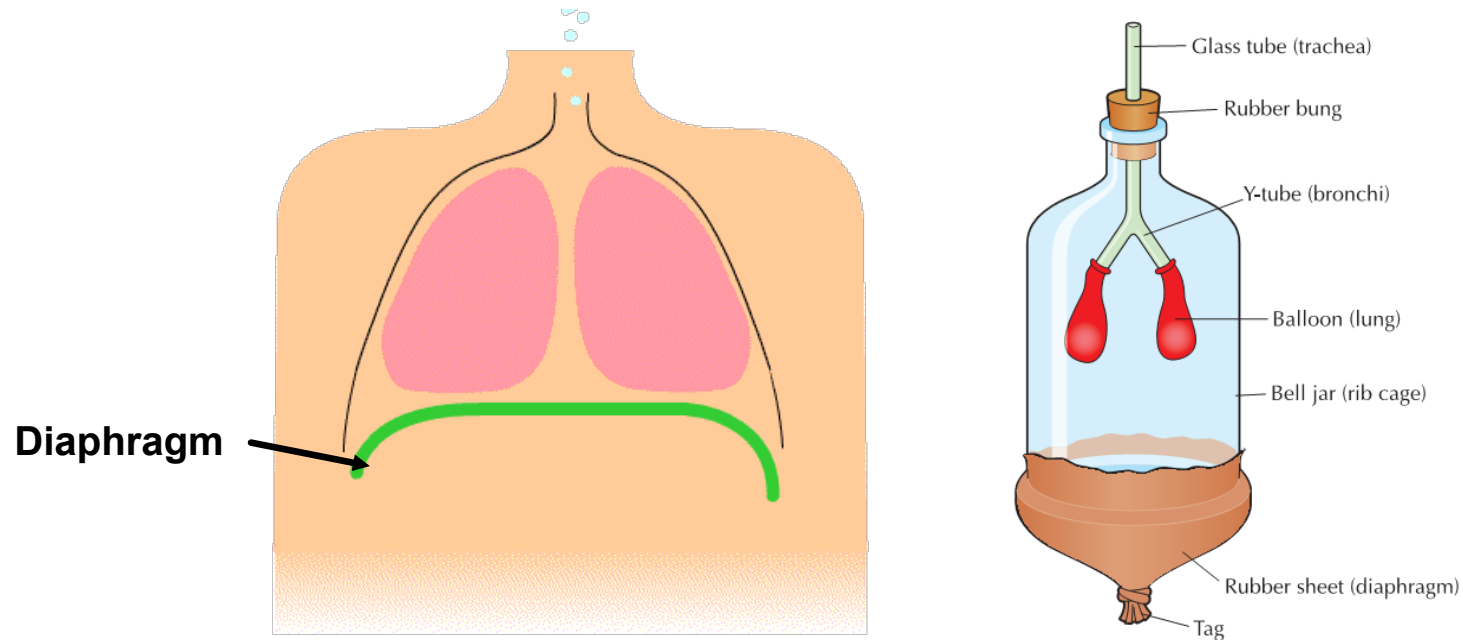


How Breathing Happens

When we breathe, air is actually pushed into our lungs by atmospheric pressure. Our **diaphragm** muscle moves down and makes **more space**.

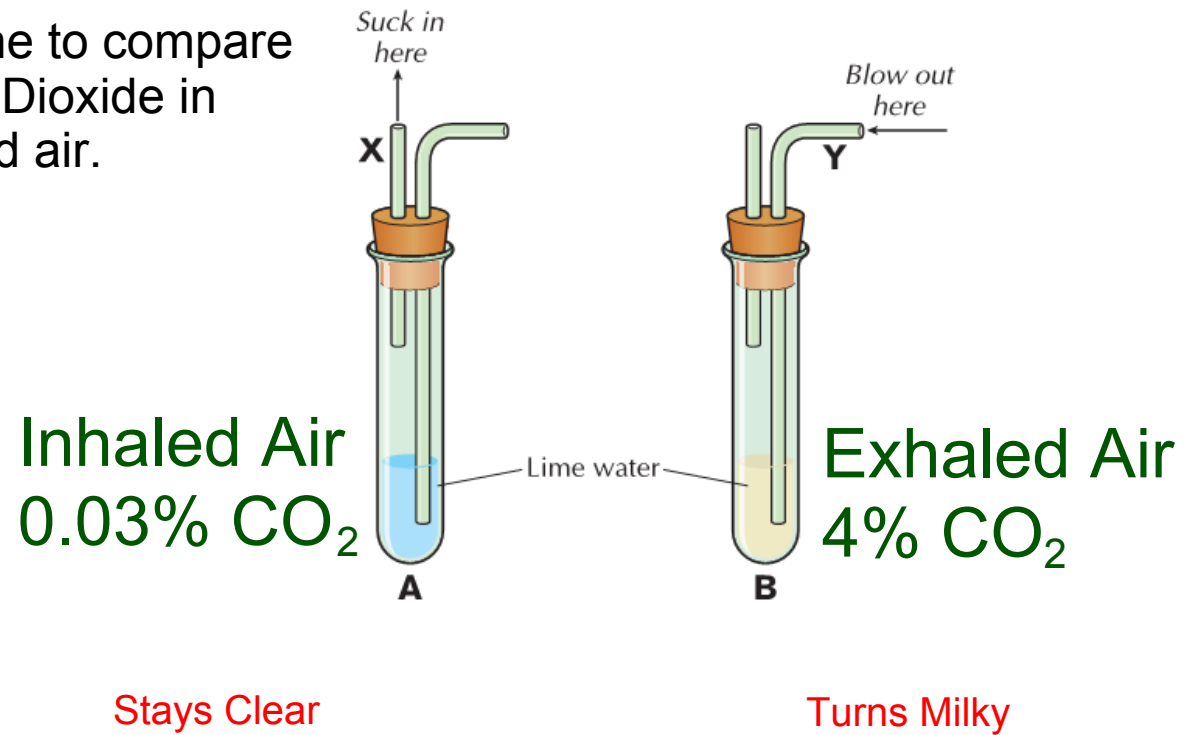
Air rushes in to fill up this space.

When we breathe out we push the air out by pulling our diaphragm back up.



Mandatory Experiment

This experiment is done to compare the amount of Carbon Dioxide in inhaled air and exhaled air.



Respiration

This is the release of energy from Food.

Glucose (Food) + **Oxygen** \longrightarrow **Energy** + **Carbon** + **Water**
Dioxide **Vapour**



Gaseous Exchange

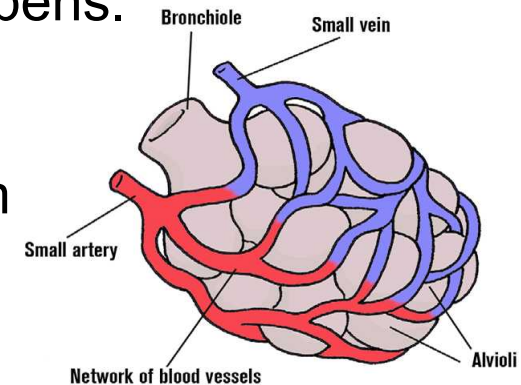
Gaseous exchange is when **Oxygen** from the air is swapped for **Carbon Dioxide** from the body.

An Alveolus is a little sac where exchange happens.

Oxygen from the air **enters** the lungs.

It moves from the lungs through the alveoli and into the blood. **Carbon dioxide** moves from the blood into the alveoli and **leaves** the lungs when it is breathed out.

The Oxygen and carbon dioxide move by **DIFFUSION**



Alveolus

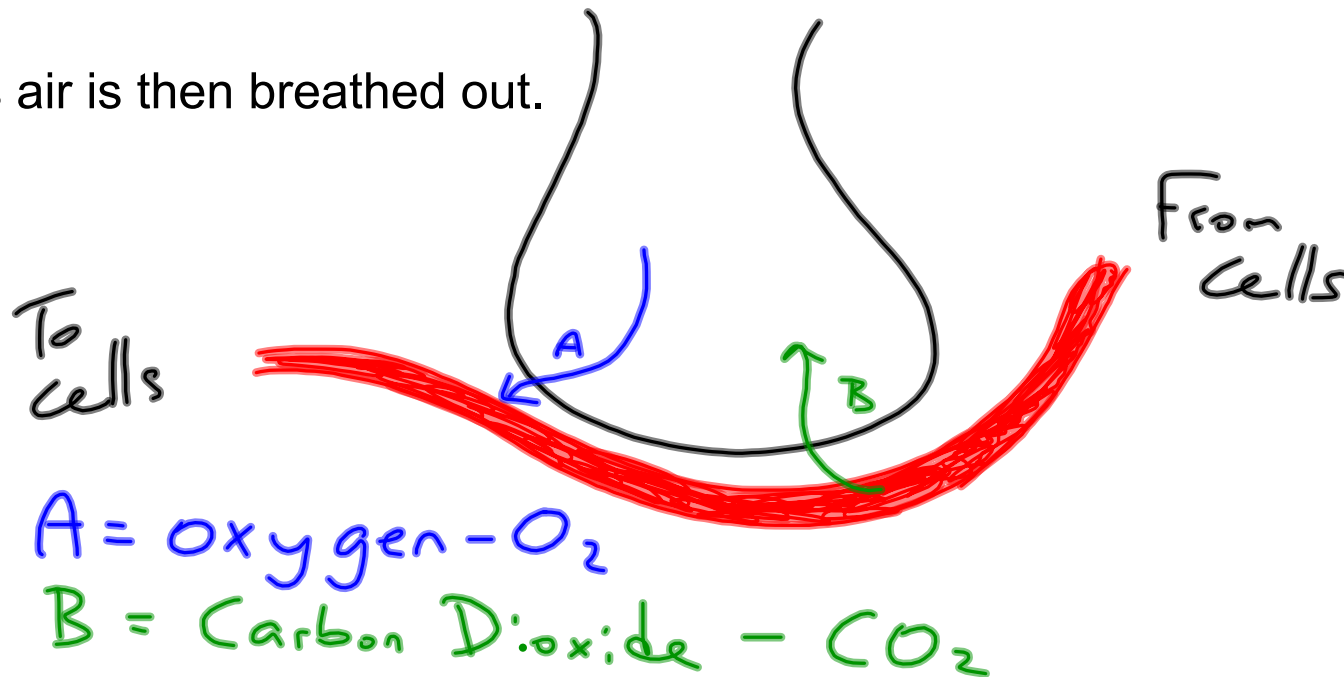
The **Alveoli** is a sac (balloon) that lets gases pass through it.

Oxygen (red) comes down into the sac from the lungs.

The Oxygen moves into the blood by diffusion where it is used to make energy in cells.

Wastes from cells, **Carbon Dioxide** (blue) move from the blood into the alveolus.

This air is then breathed out.



Smoking

For years the cigarette companies lied to people and told them that cigarette smoking was not bad for you. It was seen as cool and manly or cool and sexy.

Smoking causes **cancer**. It causes **strokes** and **heart attacks**. It is the main cause of **cot deaths**. It is highly addictive and costs money. If you smoke 20 a day, that is 7300 cigarettes a year. That will cost you **€3,640** a year.


Tar damages the bronchiole lining and builds up mucous.

Nicotine damages heart vessels.

Carbon monoxide replaces Oxygen in the blood causing faster breathing and heart strain.

Pregnant women reduce oxygen to their babies which stunts growth and can cause lung and brain problems.

Lung cancer is one of the biggest killers in the world.



Should a gentleman offer a Tiparillo to a lab technician?

Underneath that pocket of pencils there beats the heart of a digital computer. This girl has already catalogued and cross-indexed the Tiparillo slim, elegant shape. And

the neat, white tip. She knows that there are two Tiparillos. Regular, for a mild smoke. Or new Tiparillo M with menthol, for a cold smoke. She knows. She's programmed.

And she's ready.

But how about you? Which Tiparillo are you going to offer? Or are you just going to stand there and stare at her pencils?



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SURGEON GENERAL'S WARNING: Cigarette
Smoke Contains Carbon Monoxide.



Blow in her face and she'll follow you anywhere.

Hit her with tangy Tipalet Cherry. Or rich, grape-y Tipalet Burgundy. Or luscious Tipalet Blueberry. It's Wild! Tipalet. It's new. Different. Delicious in taste and in aroma. A puff in her direction and she'll follow you, anywhere. Oh yes.... you get smoking satisfaction without inhaling smoke.

			
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Smokers of America, do yourself a flavor. Make your next cigarette a **Tipalet.**

New from Muriel. About 5 for 25¢.

According to repeated nationwide surveys,

More Doctors Smoke **CAMELS** than any other cigarette!

Doctors in every branch of medicine were asked, "What cigarette do you smoke?" The brand named most was Camel!

You'll enjoy Camels for the same reasons so many doctors enjoy them. Camels have cool, cool *mildness*, pack after pack, and a flavor unmatched by any other cigarette. Make this sensible test: Smoke only Camels for 30 days and see how well Camels please your taste. How well they suit your throat as you steady smoke. You'll see how enjoyable a cigarette can be!

THE DOCTORS' CHOICE IS AMERICA'S CHOICE!





MARJORIE GIBSON says: "I pick Camels. They seem to be the throat and taste favorite!"



DR. HARVEY KARP says: "I get more pleasure from Camels than from any other brand!"



DR. PHILIP BRIDGES says: "Camels are my taste and throat. I've smoked 'em for years!"

For 30 days, test Camels in your "T-Zone" (T for Throat, T for Taste).







Exercise and Breathing

