

How Your Lungs Work

Your lungs are part of the group of body parts called the respiratory system. Lungs help you breathe in and out. The air you breathe in contains oxygen, which you need to live.

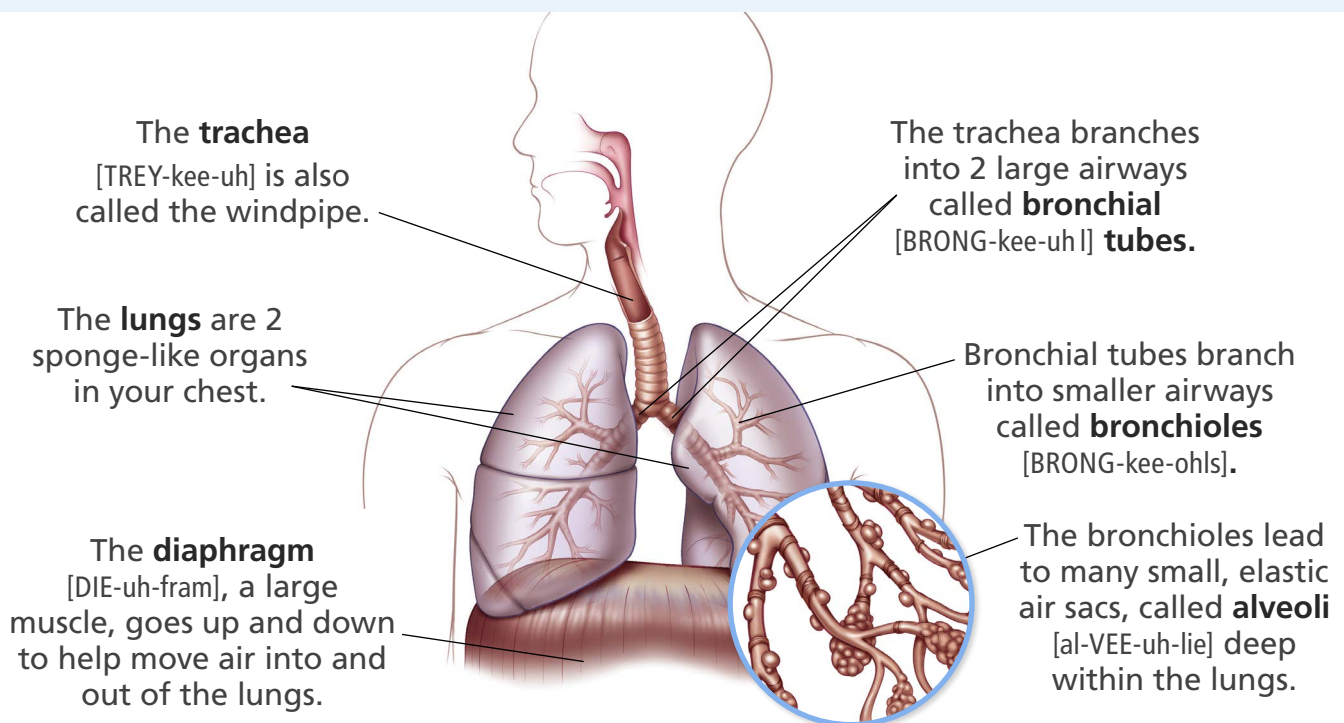
Your lungs and respiratory system:

- Exchange the oxygen you breathe in for carbon dioxide (used air) that you then breathe out
- Manage the temperature and humidity of the air you breathe
- Make mucus to filter harmful dust, smoke, and other particles you might breathe in and then help cough or sneeze out substances you need to get rid of.
- Help you with your sense of smell

Breathing is a complex process. It starts with a signal from the brain telling your chest, neck, and abdomen (belly) muscles to inhale and exhale. This process happens automatically and changes based on how active you are, your emotions, and the air around you. For example, you breathe in:

- More rapidly when exercising or when you are scared or angry
- Less air when it is smoky or the air contains other harmful substances

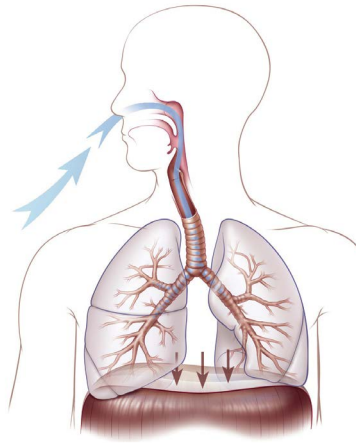
Parts of the respiratory system



The breathing process

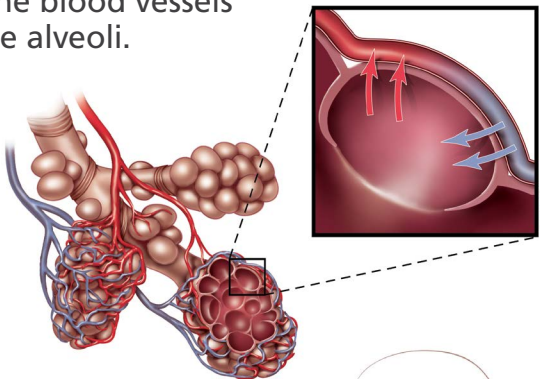
Breathing in

The diaphragm contracts (moves down) to expand the lungs and pull fresh air in through your nose and mouth. Air moves down through your trachea and airways to the alveoli.



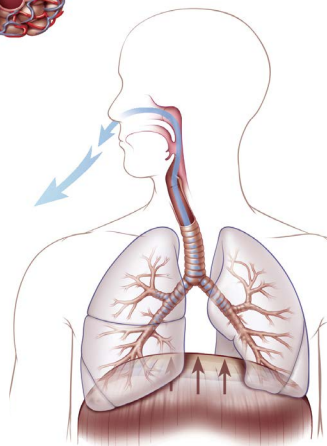
Exchanging oxygen and carbon dioxide

When air reaches the alveoli, oxygen (red arrows below) from the air passes into the blood vessels. At the same time, carbon dioxide (blue arrows below) passes from the blood vessels into the alveoli.



Breathing out

The diaphragm begins to move up, pressing on your lungs and forcing used air out of your airways and back through your nose and mouth.



Where can I learn more?

Medline Plus

(<https://medlineplus.gov/lungsandbreathing.html>)

National Heart, Lung, and Blood Institute Health Topics

(<https://www.nhlbi.nih.gov/health-topics>)

The American Lung Association: Lung Disease Lookup

(<http://www.lung.org/lung-health-and-diseases/lung-disease-lookup/?referrer=https://www.google.com/>)



Questions for my doctor

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