

# What do you plan to research for your project?

**Problem:** How does exercise affect the lung diameter?

## **Topics related to the problem:**

- 1) What is a lung
- 2) How does exercise affect your breathing?
- 3) Does temperature affect the human lung,
- 4) What is exercising
- 5) Does the size of lung affect your breathing

**\*\*Star three topics you will research during research time\*\***

<b>ONE MAIN IDEA I SHOULD RESEARCH IS...</b>
<a href="#">How does temperature affect the lung diameter.</a>
<b>Website Address (copy exactly):</b>
<a href="https://www.lung.org/blog/weather-and-your-lungs">https://www.lung.org/blog/weather-and-your-lungs</a>
<b>A SECOND MAIN IDEA I SHOULD RESEARCH IS...</b>
<a href="#">Does exercising affect the lung diameter?</a>
<b>Website Address (copy exactly):</b>
<a href="https://www.scientificamerican.com/article/if-a-persons-lung-size-ca/#:~:text=In%20general%20regular%20exercise%20does,largest%20breath%20possible%20(FVC)">https://www.scientificamerican.com/article/if-a-persons-lung-size-ca/#:~:text=In%20general%20regular%20exercise%20does,largest%20breath%20possible%20(FVC)</a>
<b>A THIRD MAIN IDEA I SHOULD RESEARCH IS...</b>
Does the lung volume matter?
<b>Website Address (copy exactly):</b> <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9431968/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9431968/</a>

## **FIVE WORDS I NEED TO KNOW FROM MY RESEARCH ARE...**

1)Word: Lung

Definition: either of the two saclike respiratory organs in the thorax of humans and the higher vertebrates.

Website Address (copy URL from definition website exactly – No ‘Google Search’):

<https://www.dictionary.com/browse/LUng>

2)Word: Lung Capacity

Definition: Lung capacity is how much oxygen your lungs can hold

Website Address (copy URL from definition website exactly – No ‘Google Search’):

3)Word: Lung Diameter

Definition: Is the tube that the oxygen goes through until it reaches the lung.

Website Address (copy URL from definition website exactly – No ‘Google Search’):

4)Word: Temperature is a measure of the warmth or coldness of an object or substance with reference to some standard value.

Definition:

Website Address (copy URL from definition website exactly – No ‘Google Search’):

<https://www.dictionary.com/browse/temperature>

5)Word: Oxygen

Definition: a colorless, odorless, gaseous element constituting about one-fifth of the volume of the atmosphere and present in a combined state in nature.

Website Address (copy URL from definition website exactly – No ‘Google Search’):

<https://www.dictionary.com/browse/Oxygen>

## **Does Exercise Affect Lung Diameter?**

A person's lungs have to work so much harder to give oxygen to the muscles during exercise.

Swimming can double a person's lung capacity over time. People argue that during exercising a lot of shortness of breath can occur, but that exercise is gonna help not have shortness of breath. There is so much to know about the lung. For example, the size of the lung affects a person's breathing in many ways, Temperature does have many effects on the human lung, exercise affects the human lung in many ways.

Temperature does have many different effects on the human lung. According to the American Lung Association, there are a lot of ways that the human lung gets affected by temperature. Usually when the weather is cold the lungs experience havoc due to the cold air going in the lungs, for example, Shortness of breath can happen, coughing and wheezing. To not experience those problems, have a scarf wrapped around the nose and mouth, so the air going in the human lungs is warm and not cold.

The size of the lung affects a person's breathing in many ways, because if the lung is small, the lung can't take in as much oxygen as bigger lungs. If born with a small lung, you can experience difficulty with breathing and taking in enough oxygen to deliver to the muscles, so people with small lungs can have a harder time breathing during exercise. If born with a normal lung or bigger there will be no problems with exercises and other stuff. In conclusion the size of the lungs do have an effect on human life.

Exercise does have an effect on the human lung, because during exercises the body and muscles need a lot more oxygen to function so lungs have to work harder. If the muscles of the lungs are weak the lungs cannot deliver enough oxygen to the muscles which leads to shortness of breath. When exercising the lungs will gradually get stronger to deliver more oxygen, so exercise has a lot of effects on the lung.

In conclusion, exercising does have many effects on the lung diameter as your lungs can experience trouble breathing and many other things. People argue that during exercises people experience shortness of breath but that that exercise is gonna help not have shortness of breath. Exercise does in fact have a big impact on the lungs as your lung diameter can decrease in size, which can lead to not having enough oxygen delivered to the body. This

leads to people not enjoying exercising as it brings them harm. People should go and exercise to have a healthy lung which leads to not having any problems in the future.

Association, American Lung. "Weather and Your Lungs." *American Lung Association*, Editorial Staff, 15 Feb. 2018, [www.lung.org/blog/weather-and-your-lungs](http://www.lung.org/blog/weather-and-your-lungs).

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Barnes, Jeremy. "If a Person's Lung Size Cannot Increase, How Does Exercise Serve to Improve Lung Function?" *Scientific American*, Scientific American, 16 May 2005, [www.scientificamerican.com/article/if-a-persons-lung-size-ca/#:~:text=In%20general%20regular%20exercise%20does,largest%20breath%20possible%20\(FVC\)](http://www.scientificamerican.com/article/if-a-persons-lung-size-ca/#:~:text=In%20general%20regular%20exercise%20does,largest%20breath%20possible%20(FVC)).

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Lee, Hyunji, et al. "The Effect of Lung Volume on the Size and Volume of Pulmonary Subsolid Nodules on CT: Intraindividual Comparison between Total Lung Capacity and Tidal Volume." *Taehan Yongsang Uihakhoe Chi*, U.S. National Library of Medicine, 18 Oct. 2021, [www.ncbi.nlm.nih.gov/pmc/articles/PMC9431968/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC9431968/).