

Lung Volume

Does exercise increase or decrease how much air you take in with each breath?

Materials: two clean balloons, measuring tape, masking tape.

Directions:

1. Take three deep breaths.
2. Blow as much as you can in one breath into a balloon. Quickly tie the neck of the balloon shut. Mark the balloon with a piece of masking tape.
3. Now jump rope, jog, play tag, or exercise in some other way for five minutes.
4. Repeat the test—take three breaths and blow into a balloon with one breath.
5. Measure each balloon.

Results:

1. How much did you expand each balloon? Before exercise _____
After exercise _____
2. How did exercise affect your breath volume (also called your tidal volume)?
 Increased it Decreased it

Compare your breath balloons with the balloons filled by someone who is bigger than you are and someone who is smaller than you are. Does the person's size make a difference?

Have a parent try this breath test. Compare his or her results with yours. If possible compare an athlete's breath volume to that of a person who is usually inactive.

Exercising regularly increases your breath volume so your body can supply the greater oxygen requirements of your active muscles. Exercise also makes your heart stronger so that instead of beating more times a minute, each beat pumps a greater volume of blood. The activities listed below increase your breath volume, strengthen your heart, and build up your muscle endurance.

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| Biking | Swimming | Jogging | Dancing |
| Walking fast | Soccer | Jumping rope | Skating (ice or roller) |

Did you ever notice that you breathe faster when you're frightened? Why do you think this happens? _____
