

Name _____

The Airway Adventure: How Does Air Get into Our Lungs?

Short Answer Key

1. The diaphragm contracts and moves downward, while the rib muscles lift the ribcage, increasing the chest cavity's size during inhalation. During exhalation, these muscles relax, causing the chest cavity to decrease in size.
2. In the alveoli, oxygen from the air passes through thin walls into the bloodstream, while carbon dioxide from the bloodstream moves into the alveoli to be expelled during exhalation.
3. The brain controls our breathing rate by continuously monitoring the levels of oxygen and carbon dioxide in our blood. When these levels change, the brain sends signals to respiratory muscles to adjust our breathing rate, ensuring our body gets the right amount of oxygen and removes excess carbon dioxide.
4. The trachea is a tube that carries air from the nose and mouth to the bronchi. The bronchi are two tubes that lead to the lungs and further divide into bronchioles, which carry air deep into the lungs. The trachea and bronchi primarily serve as pathways for air, while bronchioles also play a role in regulating airflow.
5. We don't have to consciously think about breathing because the brain's respiratory center automatically controls our breathing based on the body's oxygen and carbon dioxide levels, ensuring our survival.

