

Human Body: Respiratory System

The respiratory system is responsible for gas exchange—the inhalation of oxygen (O_2) and the exhalation of carbon dioxide (CO_2). The lungs, conducting airways, and the diaphragm are key structures of the system.

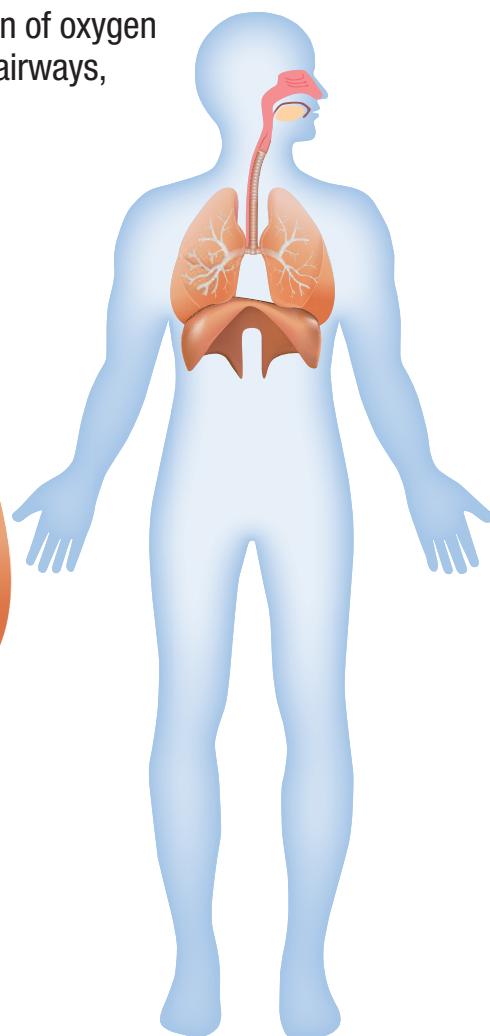
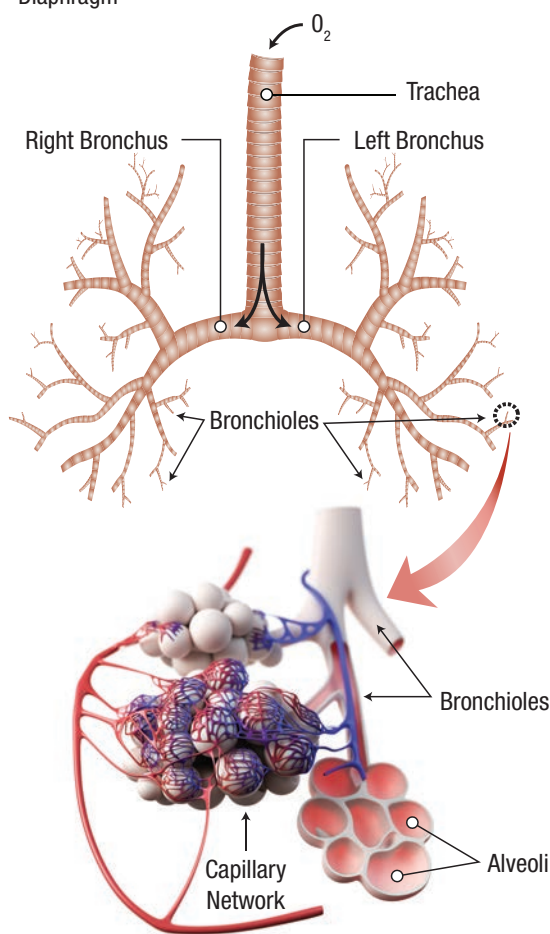
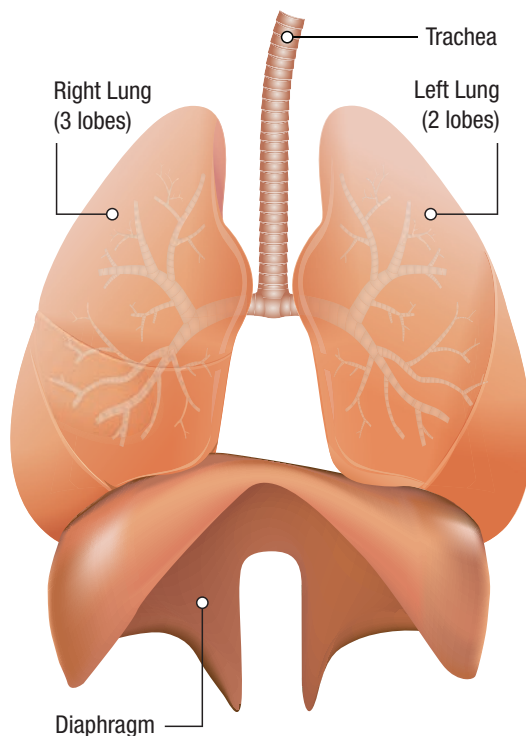
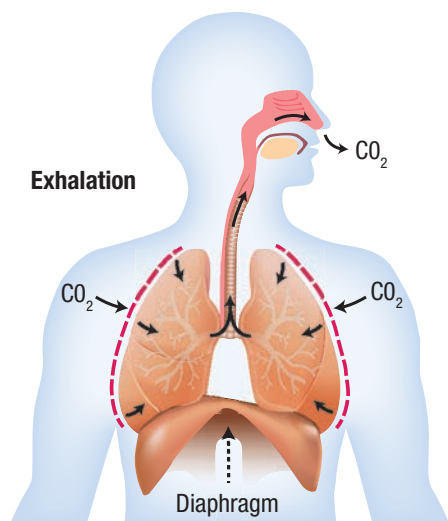
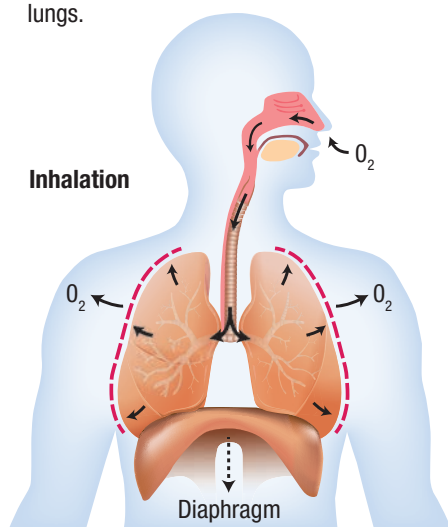
Lungs and Diaphragm

Human lungs are sponge-like organs found in the thoracic (chest) cavity. The right lung has 3 lobes and is larger than the bilobed left lung, as the heart occupies more space on the left side.

The diaphragm is a domed, sheet-like muscle that separates the thoracic and abdominal cavities.

Breathing

During **inhalation**, the diaphragm contracts, and air is pulled through the conducting airways into the lungs. During **exhalation**, the diaphragm relaxes, and air is pushed from the lungs.



Bronchi, Bronchioles, and Alveoli

Air enters the lungs from the trachea through the right and left bronchus. These branching airways lead to bronchioles and end in microscopic air sacs called alveoli. The alveoli are the sites of gas exchange between the cardiovascular and respiratory systems.