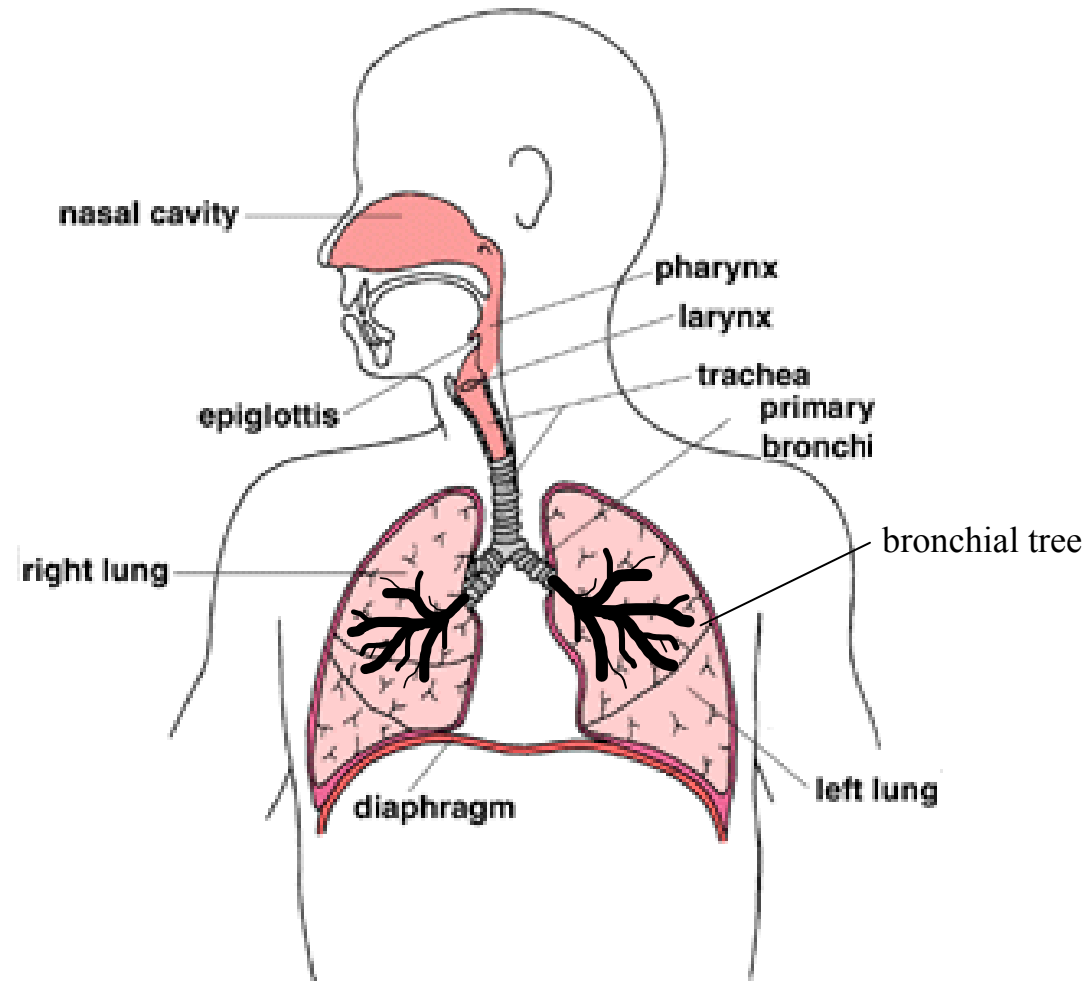


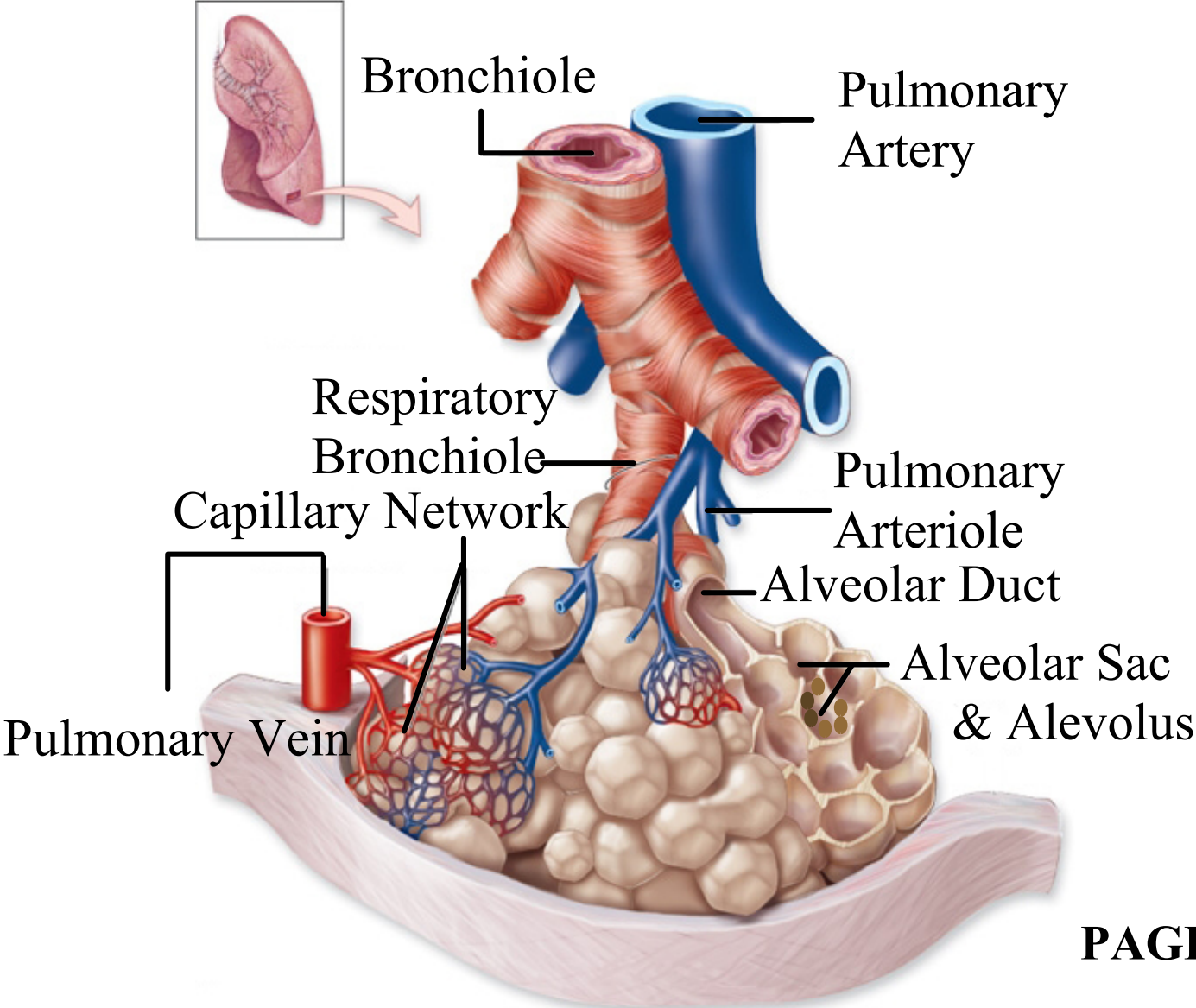
Anatomy of Respiration

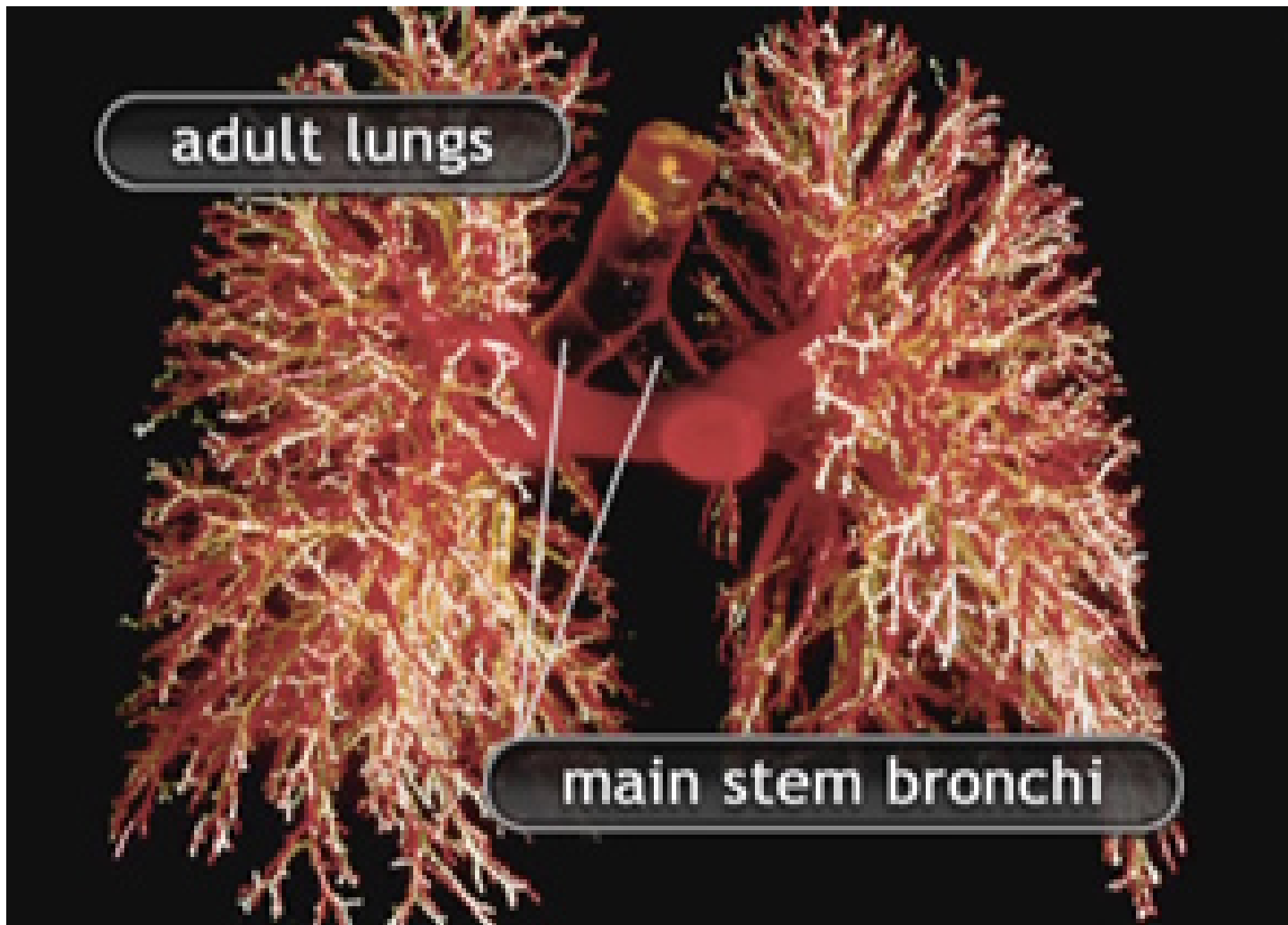


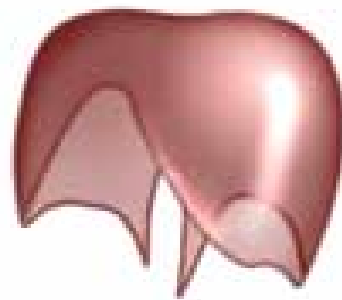
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- nasal cavity - warms and filters the air
- pharynx - joint passageway for food and air (limited space in neck)
- larynx - voice box
- trachea - wind pipe allowing air to travel to lungs
- bronchi - main entrance to lungs
- lungs - organs that house gas exchange cells

Bronchiole

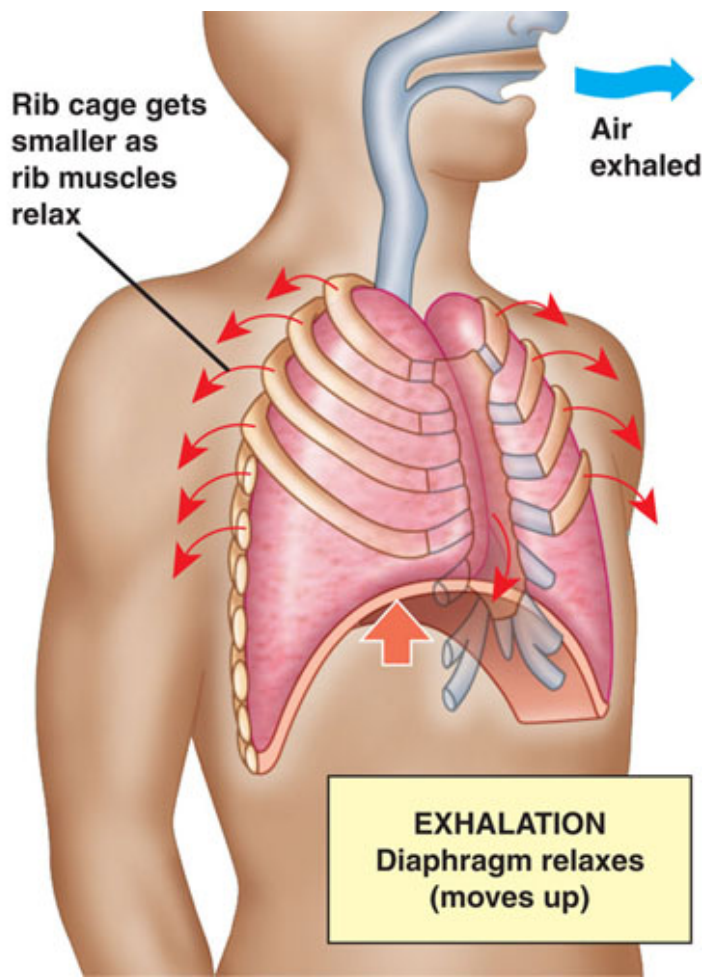
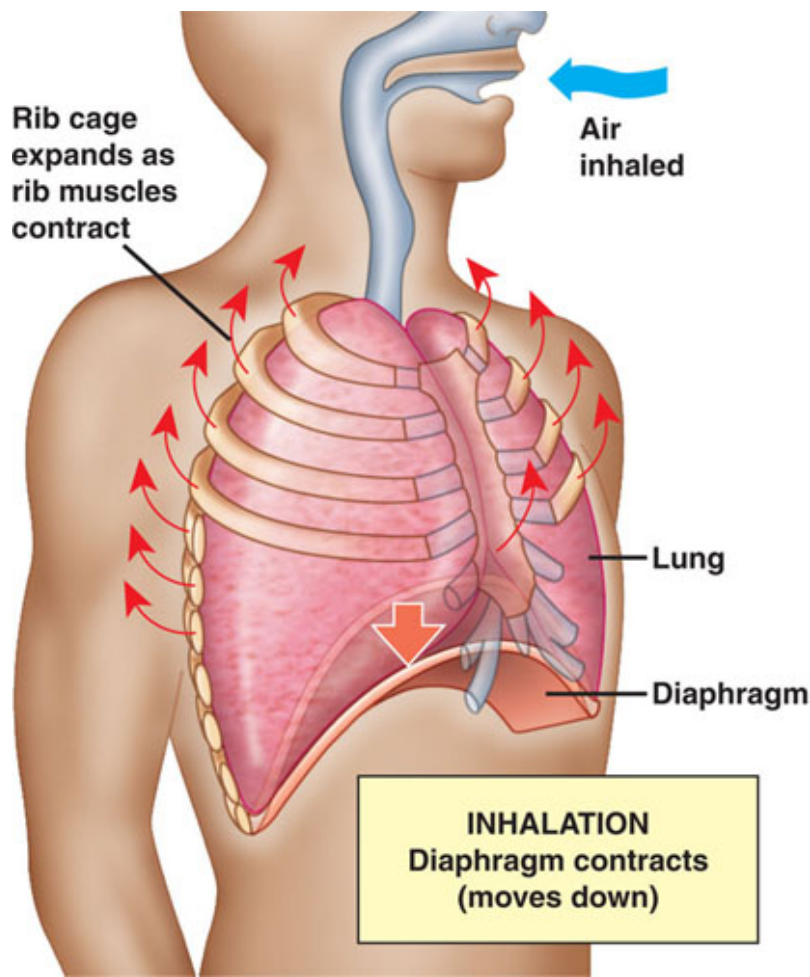






The diaphragm
is shaped
like a parachute





In mammals, breathing in, or inhaling, is usually an active movement, with the contraction of the diaphragm muscle. This is known as negative pressure breathing. The diaphragm's relaxed position is recoiled (decreasing the thoracic volume) whereas in the contracted position it is pulled downwards (increasing the thoracic volume). This process works in conjunction with the intercostal muscles connected to the rib cage. Contraction of these muscles lifts the rib cage, thus aiding in increasing the thoracic volume. Relaxation of the diaphragm compresses the lungs, effectively decreasing their volume while increasing the pressure inside them. The intercostal muscles simultaneously relax, further decreasing the volume of the lungs. With a pathway to the mouth or nose clear, this increased pressure forces air out of the lungs. Conversely, contraction of the diaphragm increases the volume of the (partially empty) lungs, decreasing the pressure inside, which creates a partial vacuum. Environmental air then follows its pressure gradient down to fill the lungs.

