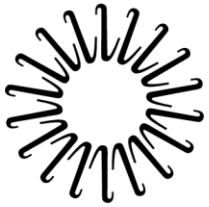
Respiratory Anatomy



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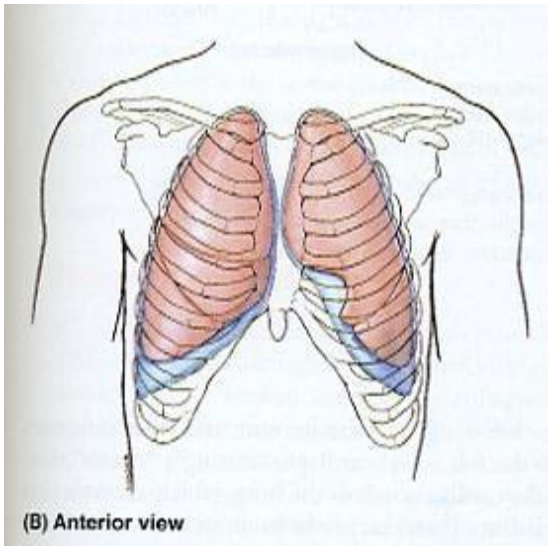
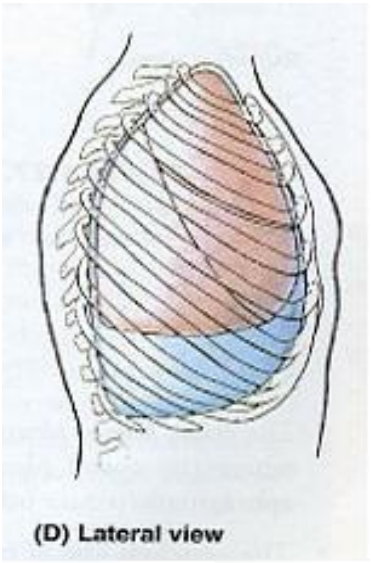
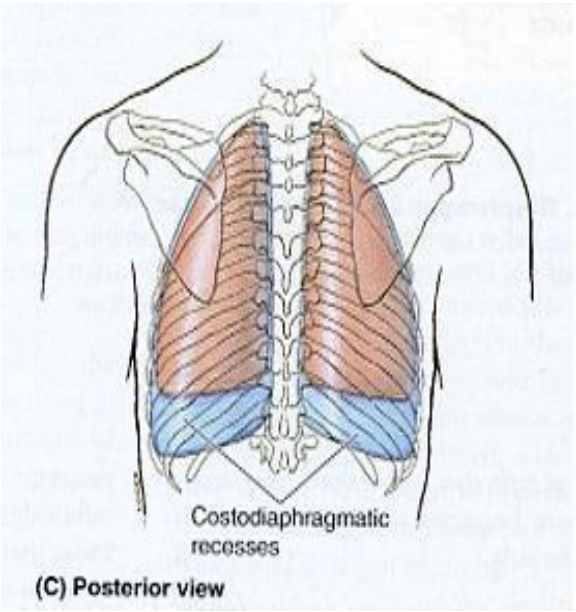
The Lungs Are Surrounded by the Rib Cage for Protection







Your ribs need to move to allow the lungs to fill with air

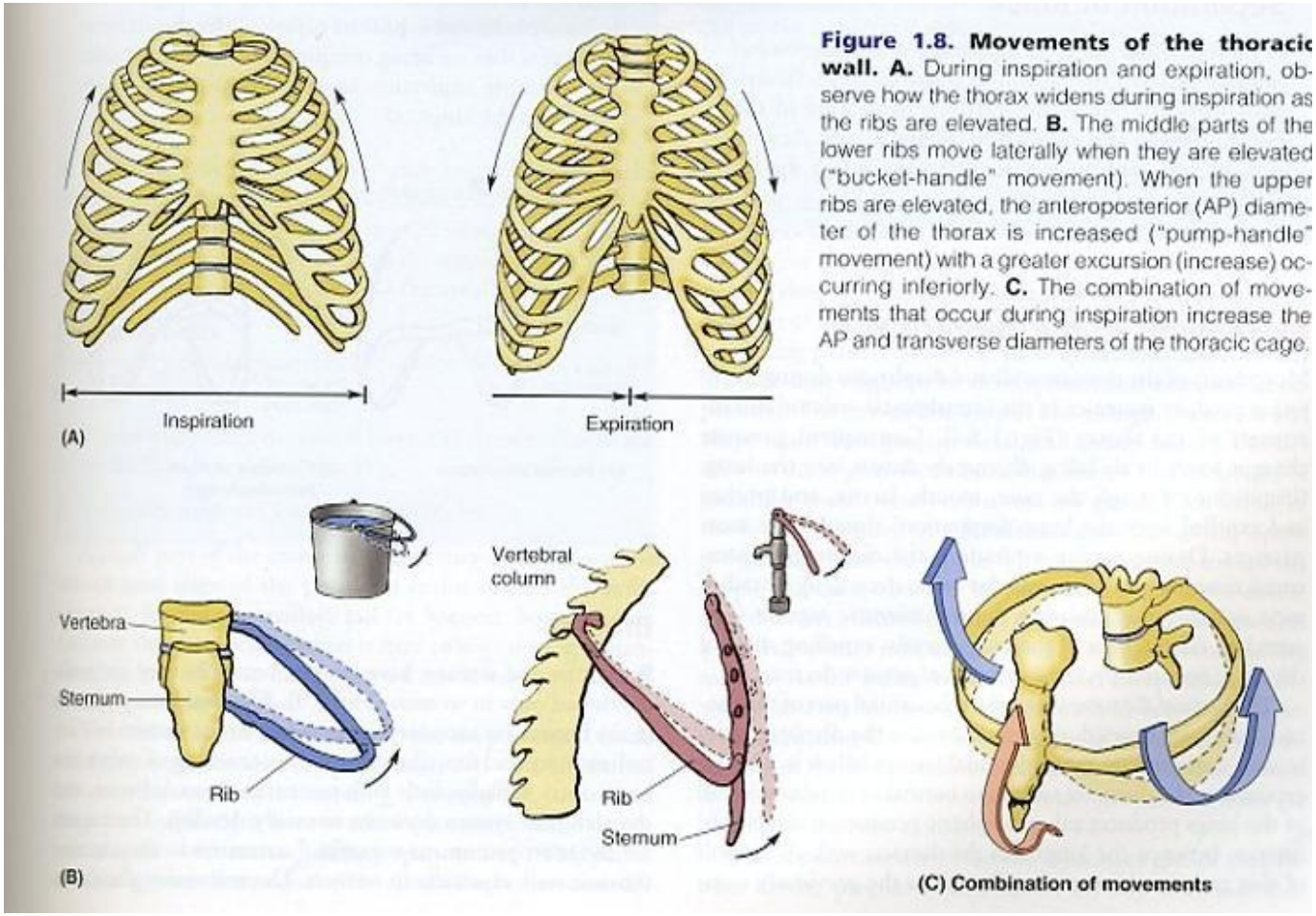
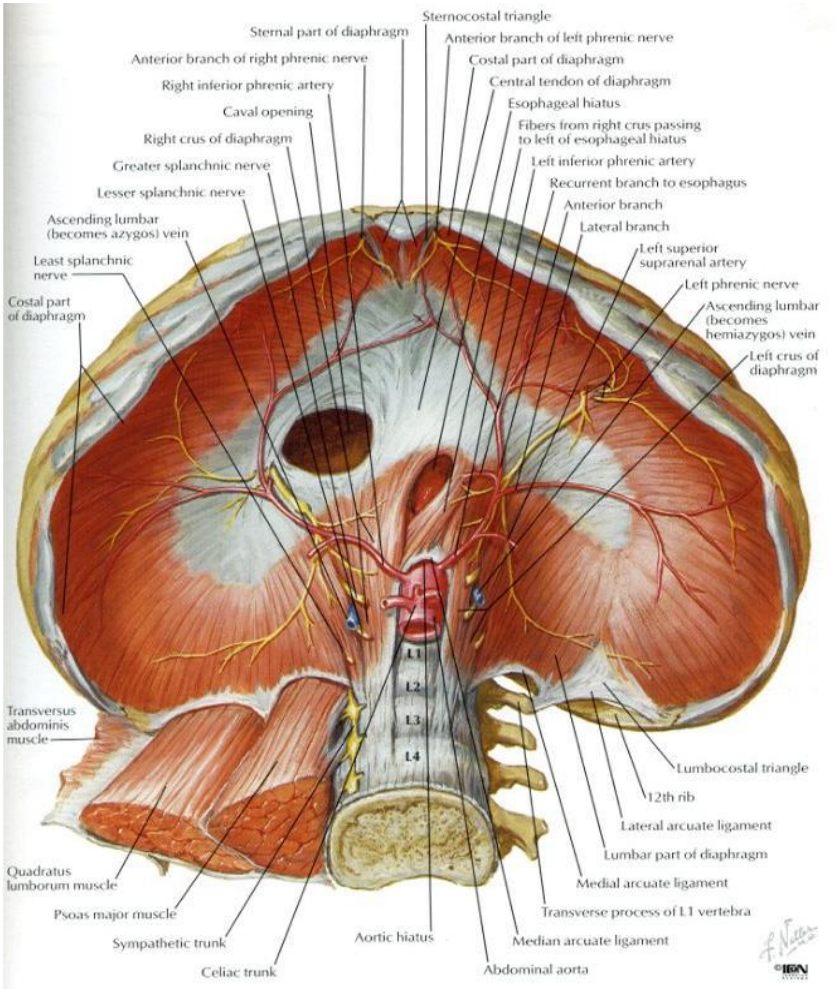
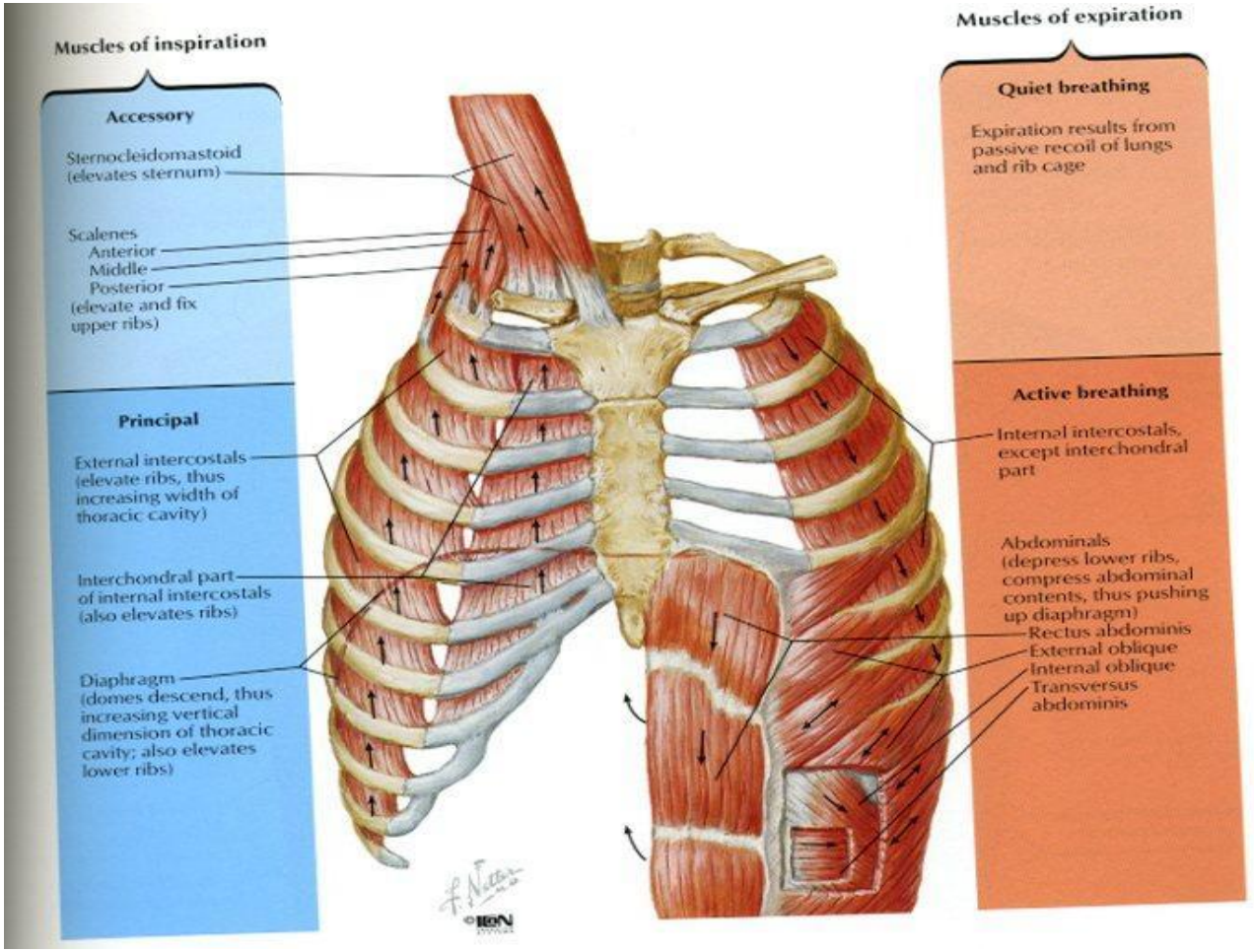


Figure 1.8. Movements of the thoracic wall. A. During inspiration and expiration, observe how the thorax widens during inspiration as the ribs are elevated. **B.** The middle parts of the lower ribs move laterally when they are elevated ("bucket-handle" movement). When the upper ribs are elevated, the anteroposterior (AP) diameter of the thorax is increased ("pump-handle" movement) with a greater excursion (increase) occurring inferiorly. **C.** The combination of movements that occur during inspiration increase the AP and transverse diameters of the thoracic cage.

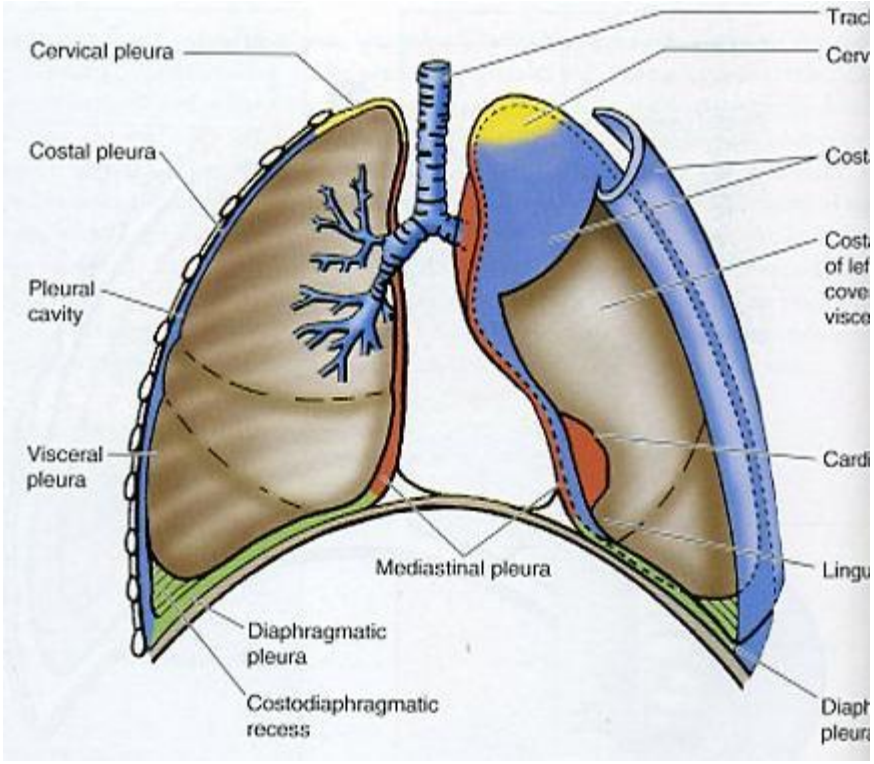
The Diaphragm Is the Main Muscle of Breathing. It Is Shaped Like a Parachute. When the Diaphragm Pushes Down- It Causes You to Inhale



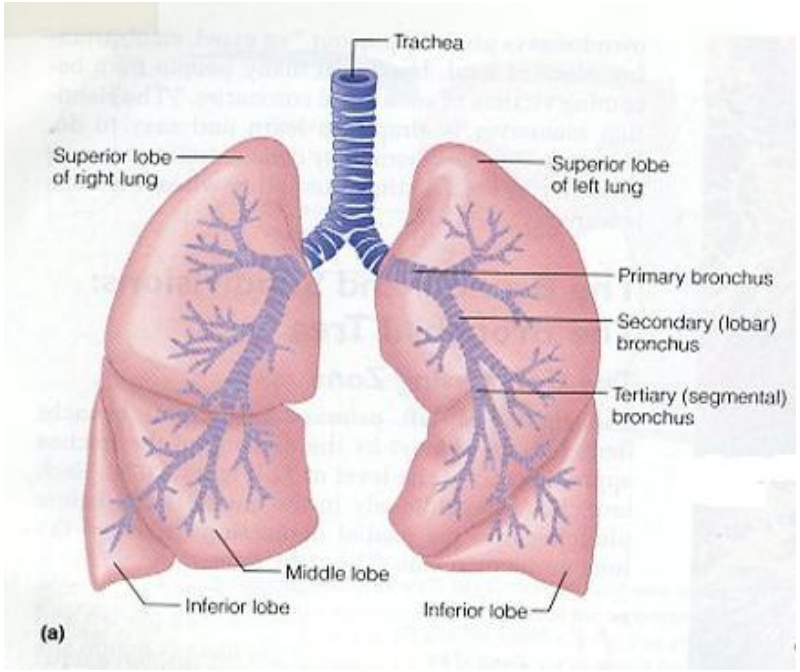
There are other muscles that assist in breathing



Lungs have a covering called the pleura that can sometimes get irritated.



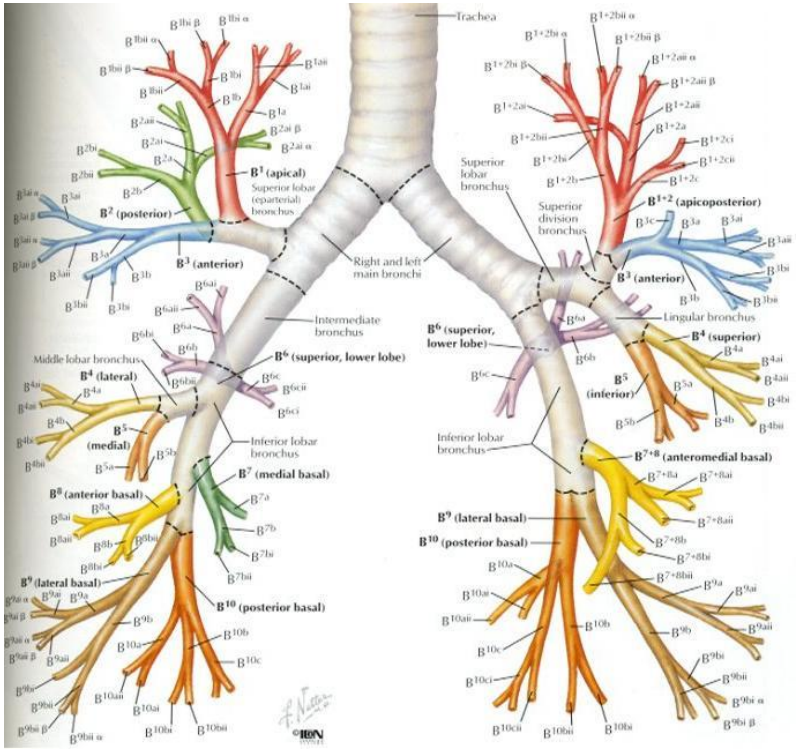
The right and left lung



There are 3 lobes (or sections) on the right and 2 lobes on the left.

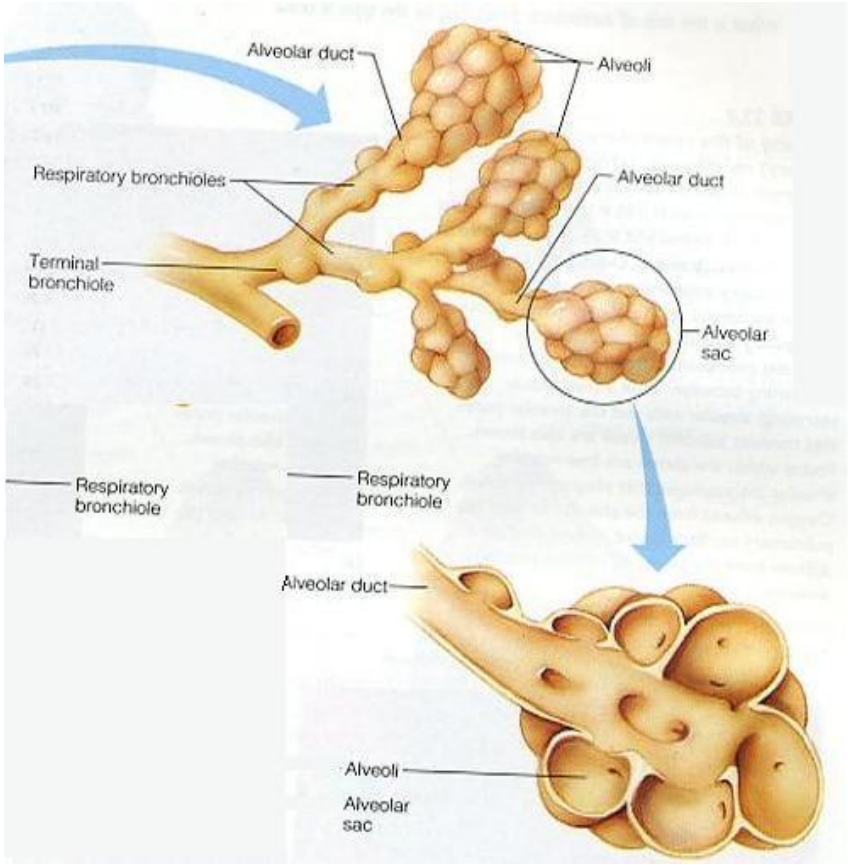
The lung tissue gives support to all of the airways or breathing tubes

The Airways



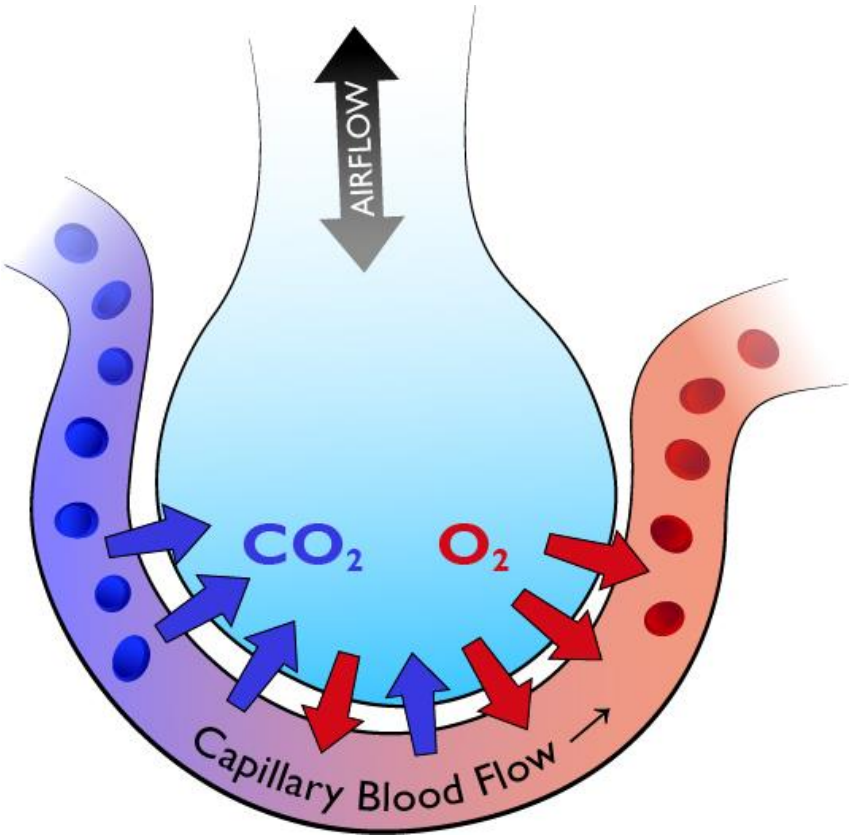
- This is what the airways look like. The smaller breathing tubes are called the bronchioles.

These are the alveoli. The walls of the alveoli are very thin which makes it easier for the oxygen to get into body and the CO2 to come out.



How does the oxygen get into your body?

- When you inhale, air goes through your airways until it gets to the alveoli.
- In healthy lungs, the oxygen will then pass into your blood stream and the CO2 will move back into your lungs so that you can blow it out.



So what happens if lungs are not healthy?

- Any lung disease that interferes with any part of the lung tissue or the blood supply to the lungs can cause shortness of breath.
- Remember that your heart and lungs work together to get the oxygen where your body needs it!

Different diseases affect breathing differently

- COPD and Asthma can affect the airways (or breathing tubes)
- Pulmonary Fibrosis can scar the lung tissue that supports the airways
- Pulmonary Hypertension changes the blood flow to the lungs and puts extra pressure on the heart.