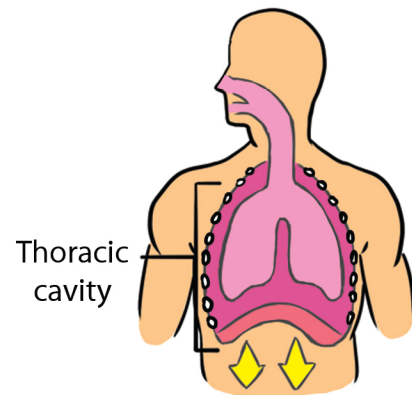
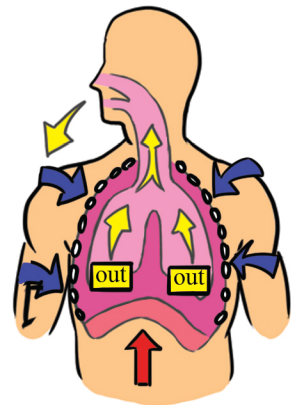


Air Pressure and Thoracic Volume



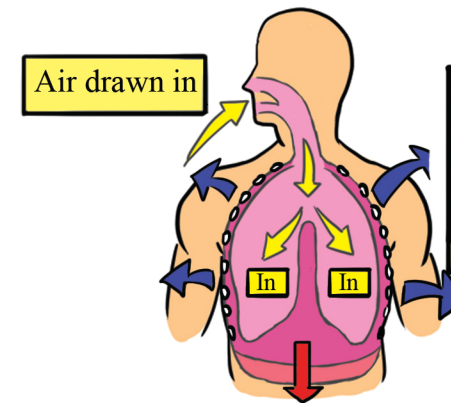
1. Inspiration: Size of thoracic cavity increases as diaphragm lowers. Increase in volume (size) means lowered air pressure. The ribs begin to move outward, the diaphragm continues to flatten as the volume of the chest increases, and the pressure decreases.

Expiration

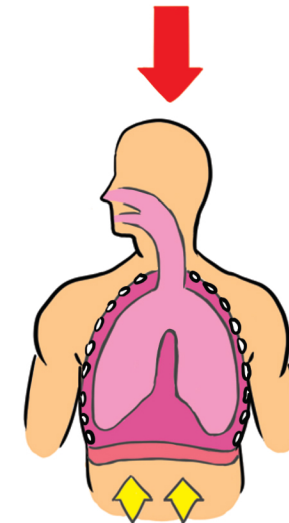


4. Expiration: As air is expelled in singing in a slow, steady stream, the volume of lungs decreases and the diaphragm begins to return to the pre-inspiratory dome shape. The intercostals move in gradually, in a more delayed way for singing than for resting respiration. As the diaphragm rises and the ribs come in, the volume of the lungs is further decreased. This begins the cycle again, as a decrease in volume will create higher pressure.

Inspiration



2. When pressure in the lungs is less than atmospheric pressure, air is drawn in.
 $P_{lungs} < P_{atm} = \text{airflow in}$



3. With a full capacity breath, the diaphragm is at its lowest position: singing begins. Now the pressure in the lungs is greater than atmospheric pressure, so air is forced out. In singing, we want to make sure it is a slow, steady stream of air. This is known as Breath Management.
 $P_{lungs} > P_{atm} = \text{airflow out}$

For more information about how your voice works please visit www.singlikeastar.com