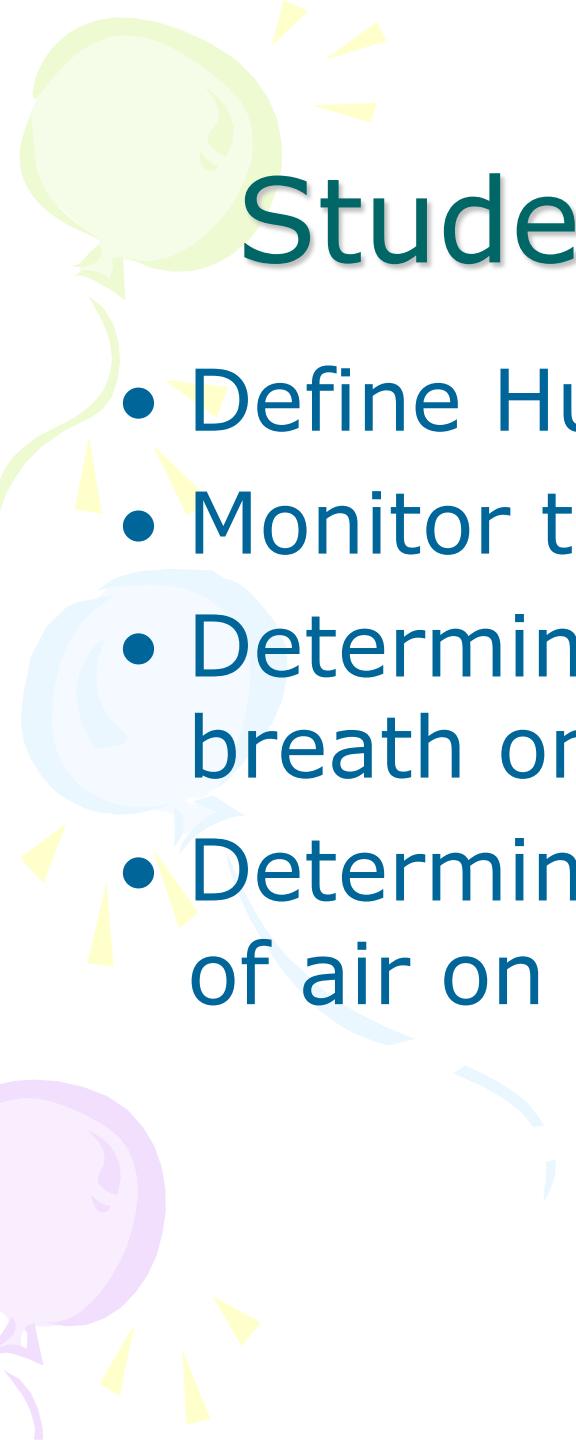


# Human Respiration

**Meetu Walia**

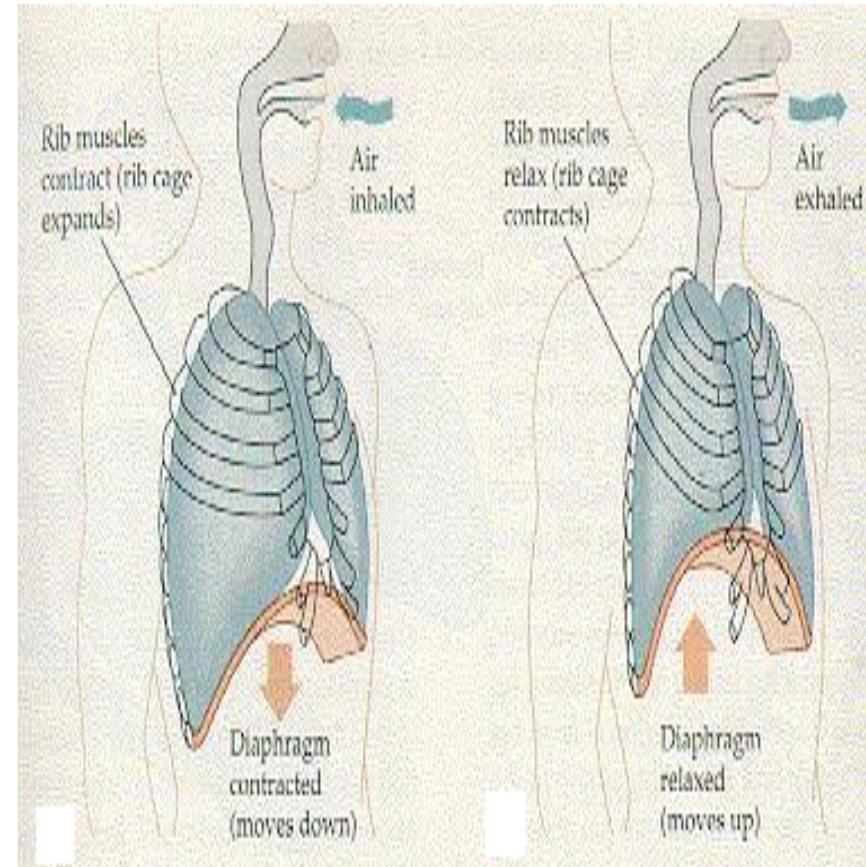


# Students will be able to:

- Define Human Respiration
- Monitor the Respiratory Cycle
- Determine the effect of holding of breath on the respiratory cycle
- Determine the effect of re-breathing of air on the respiratory cycle.

# What is Human Respiration?

- The human respiratory system allows one to obtain oxygen, eliminate carbon dioxide.
- Breathing consists of two phases, inspiration and expiration
  - Inspiration- the process of taking in air
  - Expiration- the process of blowing out air

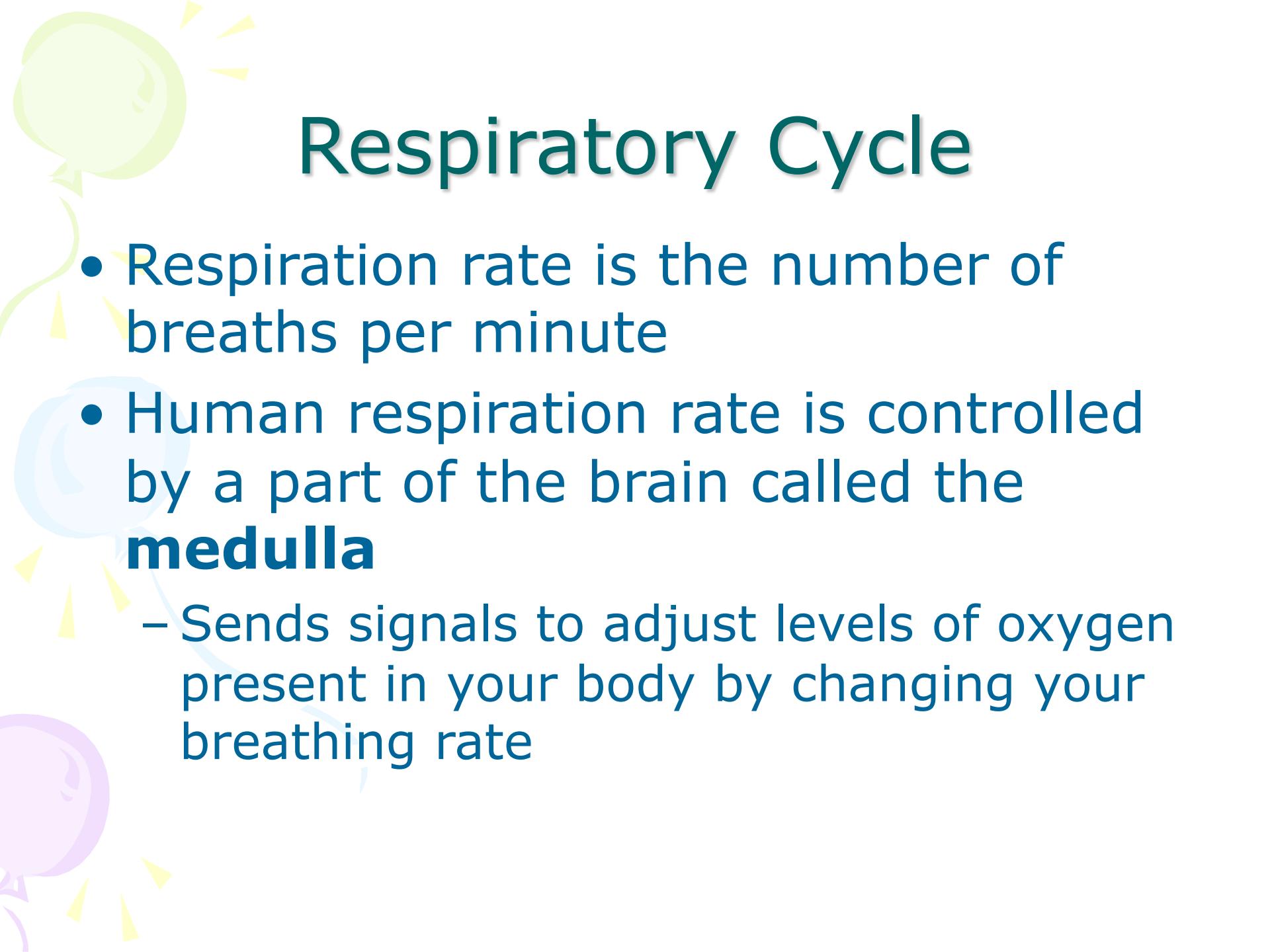


# Organs in the Respiratory System

STRUCTURE	FUNCTION
<b>nose / nasal cavity</b>	<b>warms, moistens, &amp; filters air as it is inhaled</b>
<b>pharynx (throat)</b>	<b>passageway for air, leads to trachea</b>
<b>larynx</b>	<b>the voice box, where vocal chords are located</b>
<b>trachea (windpipe)</b>	<b>keeps the windpipe "open" trachea is lined with fine hairs called <i>cilia</i> which filter air before it reaches the lungs</b>
<b>bronchi</b>	<b>two branches at the end of the trachea, each lead to a lung</b>
<b>bronchioles</b>	<b>a network of smaller branches leading from the bronchi into the lung tissue &amp; ultimately to air sacs</b>
<b>alveoli</b>	<b>the functional respiratory units in the lung where gases are exchanged</b>

# **Malfunctions & Diseases of the Respiratory System**

<b>asthma</b>	<b>severe allergic reaction characterized by the constriction of bronchioles</b>
<b>bronchitis</b>	<b>inflammation of the lining of the bronchioles</b>
<b>emphysema</b>	<b>condition in which the alveoli deteriorate, causing the lungs to lose their elasticity</b>
<b>pneumonia</b>	<b>condition in which the alveoli become filled with fluid, preventing the exchange of gases</b>
<b>lung cancer</b>	<b>irregular &amp; uncontrolled growth of tumors in the lung tissue</b>



# Respiratory Cycle

- Respiration rate is the number of breaths per minute
- Human respiration rate is controlled by a part of the brain called the **medulla**
  - Sends signals to adjust levels of oxygen present in your body by changing your breathing rate

# Lab experiment

