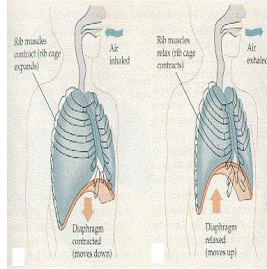


## What is Human Respiration?

- **Goal:** The human respiratory system allows one to obtain \_\_\_\_\_, eliminate \_\_\_\_\_.
- Breathing consists of two phases, inspiration and expiration
  - \_\_\_\_\_ - the process of taking in air
  - \_\_\_\_\_ - the process of blowing out air



## Organs in the Respiratory System

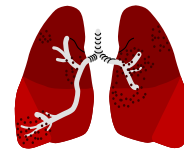
STRUCTURE	FUNCTION
nose / _____ cavity	warms, moistens, & filters air as it is inhaled
_____ (throat)	passageway for air, leads to trachea
_____	the voice box, where vocal chords are located
_____ (windpipe)	keeps the windpipe "open" trachea is lined with fine hairs called <i>cilia</i> which filter air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

## Diseases of the Respiratory System

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

## Structures of Respiratory System

- \_\_\_\_\_ respiratory tract
  - nose, mouth, pharynx, epiglottis, larynx and trachea
- \_\_\_\_\_ respiratory tract
  - bronchial tree and lungs



## Alveoli

- air sacs
- alveolar wall membranes one cell thick and surrounded by capillaries
- \_\_\_\_\_ takes place here

## Respiratory Zone of Lower Respiratory Tract

(a) Labels: Alveolar duct, Alveoli, Respiratory bronchioles, Terminal bronchiole, Alveolar sac.

(b) Labels: Respiratory bronchiole, Alveolar duct, Alveoli, Alveolar sac, Atrium, Alveolar pores.

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## Lungs

Right-3 lobes      Left-2 lobes

trachea

<http://www.youtube.com/watch?v=HIT621PrO0>

## Diaphragm

- \_\_\_\_\_ separating chest and abdomen
- **inspiration**, diaphragm contracts and increases thoracic space
  - air flows in
- **expiration**, diaphragm relaxes and decreases thoracic space
  - air flows out

Start at 7min