**Respiratory system**

Respiration is the process by which gets and uses oxygen (O2) and releases carbon dioxide (CO2) and water (H2O)

Respiration is divided into 2 parts

1. Breathing – involves inhaling and exhaling
2. Cellular respiration – chemical reactions that release energy from food

Respiratory system includes:

1. Nose – major passageway into and out of the respiratory system
2. Throat
3. Pharynx – air flows from nose into pharynx. Food and drink also pass through the pharynx. Pharynx divides into 2 tubes: 1) esophagus for food and 2) larynx
4. Larynx – leads to lungs. The part of the throat that contains the vocal cords (pair of elastic bands that stretch across the larynx. When air flows between the vocal cords, they vibrate, producing sound).
5. Trachea – large tube that is the passageway from the larynx to the lungs
6. Bronchi – trachea splits into two branches called bronchi (sing. Bronchus). One bronchus goes to each lung.
7. Lungs – two sponge-like organs. Each bronchus branches into smaller tubes called bronchioles. Each bronchiole branches to form tiny sacs called alveoli (sing. Alveolus). This is where the O2 – CO2 exchange takes place

Breathing

When you air, is sucked into and forced out of your lungs, however, the lungs have no muscles of their own. Instead breathing is done by the diaphragm and rib muscles.

Diaphragm = dome-shaped muscle beneath the lungs, When you inhale, the diaphragm contracts and moves down. The chest cavity increases in volume. Rib muscles also contract and lift your rib cage. A vacuum is created and air is sucked in. Exhaling is the reverse of this process.