Unit #2: Digestion

Ingestion (3)

“Swallowing”
Stage #1: “Oral Phase”

- Teeth mechanically digest food
  - Technically called **Mastication**
  - Commonly called **Chewing**

- The tongue mixes “mashed up” food together with saliva secreted by the salivary glands forming a **bolus**
Stage #2: “Pharyngeal Phase”

- Tongue passes the bolus to the back of the mouth towards the pharynx (this is the last voluntary act of swallowing)

- The pharynx forces the tongue to press against the hard and soft palate of the mouth (creating a seal)
Stage #3: “Esophageal Phase”

- The pharynx closes the epiglottis which seals the trachea (wind-pipe) so that food does not enter the respiratory system (causing choking)

- Esophageal Sphincter Relaxes which allows the bolus to enter the Esophagus

- The movement of the tongue triggers a wave of peristalsis (muscle contractions) along the pharynx and esophagus which carries the bolus to the stomach
1. When a person is not swallowing, the esophageal sphincter muscle is contracted, the epiglottis is up, and the glottis is open, allowing air to flow through the trachea to the lungs.

2. The swallowing reflex is triggered when a bolus of food reaches the pharynx.

3. The larynx, the upper part of the respiratory tract, moves upward and tips the epiglottis over the glottis, preventing food from entering the trachea.

4. The esophageal sphincter relaxes, allowing the bolus to enter the esophagus.

5. After the food has entered the esophagus, the larynx moves downward and opens the breathing passage.

6. Waves of muscular contraction (peristalsis) move the bolus down the esophagus to the stomach.