

UNIT 10 - DIGESTIVE SYSTEM

ACTIVITY - The Mechanism of Swallowing

Objective:

Students will become familiar with the anatomy and basic physiology of the mouth, pharynx and swallowing.

Materials:

- Flashlight
- Gloves
- Tongue blade
- Cup of water
- Stethoscope
- 2-3 saltines

Strategy:

Students will work as partners to begin this activity.

1. Put on a pair of gloves and with the aid of a tongue blade and flashlight look into the mouth of your lab partner and identify the following structures: mucous membrane, hard palate, soft palate, uvula, molars, premolar, canines, incisors, tongue and frenulum.

2. This portion of the lab is to be done by yourself. Study the movements that are associated with swallowing. Slowly sip a glass of water and note the direction of its movement. Place a stethoscope over the left surface of the abdomen, about where the rib margin is. This should be where the esophagus enters the stomach. Swallow another sip and listen for the sound of water as it enters the stomach. Now gently place your hand over your larynx and swallow another sip of water. Note the movement of the larynx. Swallow another sip of water and see if you can prevent the larynx from moving while you swallow.

3. This portion of the lab is also to be done on yourself. Study the initial digestion of carbohydrates, obtain saltine crackers chew one normally and swallow it. Does any taste change occur in this process? Chew another cracker slowly for at least a full minute. Do you notice any change in taste occurring now?

Discussion:

1. Were you able to prevent the larynx from moving as you swallowed?
Why or why not?
Why might this be important to you?
2. Describe the steps of swallowing.
3. Explain how mechanical digestion occurs in the mouth.
4. Explain how chemical digestion occurs in the mouth.
5. Explain why so little chemical digestion occurs in the mouth.