*The Process of Digestion*

**Video Notes**

1. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the gateway to the digestive system.
2. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cut and grind food when it enters the mouth, and this breaking up of food is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ digestion.
3. As you chew, glands pump \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into your mouth to moisten food and make it easier to swallow.
4. Saliva contains the enzyme \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which breaks apart large molecules of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (a type of carbohydrate found in plant products).
5. As the amylase breaks the starch apart into smaller molecules of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, this is known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ digestion.
6. Putting meat in a blender symbolizes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ digestion, where as putting meat in gastric juices is a form of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ digestion.
7. The gastric juices caused the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the meat to break down into smaller molecules.
8. When food is swallowed, it moves down a tube called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which connects your \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to your \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
9. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ takes the air you breathe to your lungs.
10. Food very rarely goes down the trachea, because it is covered by a flap of tissue known as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which acts as a trap door.
11. The journey of food down the esophagus lasts only several \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
12. Can we eat upside-down? \_\_\_\_\_\_\_\_\_\_\_\_\_
13. Why? … Food is propelled through the esophagus (and other parts of the digestive tract) by a series of muscle contractions known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
14. In order to pass food through the body, muscles behind the food squeeze \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, while muscles in front of the food \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
15. At the end of the esophagus, food reaches the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
16. How does mechanical digestion occur in the stomach?   
    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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18. Gastric juice in the stomach contains \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
19. The stomach enzyme \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ breaks down molecules of protein into simpler molecules.
20. The enzymes and acid in the stomach are so strong, they could eat away the stomach wall itself.   
    Why doesn’t this happen? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
21. When the protection fails, and the stomach wall is eaten away, this is called an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
22. After the stomach comes the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which is the longest part of the digestive tract. Uncoiled, it is about \_\_\_\_\_\_\_\_\_\_\_ feet long in adults.
23. The first part of the small intestine is called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ , which is near the liver.
24. The liver secretes a green substance called \_\_\_\_\_\_\_\_\_\_\_\_\_\_ , which flows into the small intestine to break up large particles of \_\_\_\_\_\_\_\_\_\_\_\_ so enzymes can work on them.
25. Many enzymes come from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
26. Some enzymes break down \_\_\_\_\_\_\_\_\_\_ , while another breaks down \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, while another breaks down \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Enzymes from both the pancreas and stomach work together to complete the process of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
27. How do food molecules get from the small intestine to muscle, bone, and brain cells? The body’s transport system consists of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that carry blood, containing molecules of \_\_\_\_\_\_\_\_\_\_\_\_\_ to all the cells in the body.
28. Food molecules must pass from the small intestine to the circulatory system, which occurs thorough the inside \_\_\_\_\_\_\_\_\_\_\_ of the small intestine. They contain \_\_\_\_\_\_\_\_\_\_\_\_\_\_, which allow for increased surface area.
29. Fingerlike projections on these walls are called \_\_\_\_\_\_\_\_\_\_\_, which help absorb \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
30. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the process by which food molecules pass through the walls of the villi into blood vessels called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
31. Name a food we cannot digest: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
32. Foods that are not broken down continue from the small intestine to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.   
    Which is named not because it is longer, but because it is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
33. The narrow tube, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, has no function and only causes a problem if it becomes infected.
34. As food moves through the large intestine, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is absorbed into the blood, which will later be removed as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which filter wastes from the blood.
35. As water is removed, the remaining waste, called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ , becomes more and more \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
36. Feces contains undigested food and also \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that live in the small and large intestines.
37. The bacteria in our intestines help digest \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and produce \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
38. In the final stage of the digestive tract, feces collected in the last section called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
39. When enough collects there, the body signals that we must get rid of the feces, which then comes out the opening at the end of the digestive tract, known as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
40. About \_\_\_\_\_\_\_\_\_\_\_\_\_ hours after a meal, our food’s journey is over and only waste remains.

In your own words, describe how the body is able get the nutrients that are stored in food:  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
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