

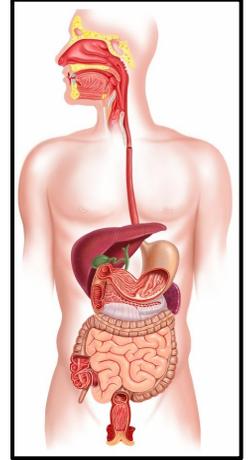


Reading Science

Name: _____ Date: _____

Physical and Chemical Changes in the Digestive System

- 1 Imagine that you eat a ham sandwich for lunch. Many physical and chemical changes must occur to the eaten material. The sandwich comes out nothing like it went in! The digestive system works to turn food into fuel for your body.
- 2 Your body starts to work as soon as you take your first bite. A physical change occurs in the sandwich so your food can go on its journey. Your teeth grind the components into smaller parts. Your salivary glands excrete spit, which helps chewing. Then, a chemical change occurs after your food is mixed with saliva. The spit turns the bread of the sandwich into sugar. More physical change occurs when your tongue moves the wad of food further back in your mouth to your throat.
- 3 The sandwich blob moves down a tube called the esophagus. It is physically pushed by involuntary muscle action. Once your sandwich arrives at your stomach, a flap lets it fall into a vat of strong acid. Then even more changes occur. Muscles in your stomach make food pieces smaller when they physically churn your food. This breaks the food into even smaller pieces. At the same time, your sandwich gets chemically dissolved by acid. What was once your lunch is now ready to enter the small intestine.
- 4 Once in the small intestine, your sandwich gets chemically changed into fuel that your body can use. The carbohydrates of the bread are broken down into sugars the body can absorb. The protein in the ham is also broken down. Finger-like villi absorb nutrients so that they enter your bloodstream. Your body uses a lot of food it takes in, but not all of it. The leftovers enter your large intestine. It turns them into material you can expel when you go to the bathroom.
- 5 That ham sandwich you ate for lunch takes a long journey through the digestive system. Food goes through several physical and chemical changes before your body is done with it.





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1 What is the main point of the passage?

- A** Food undergoes much physical, but little chemical change during its journey through the body.
- B** Food is chemically, but not physically altered by the body when eaten.
- C** Food goes through both chemical and physical changes when eaten.
- D** Food comes out the body in basically the same form it goes in.

2 Which of the following statements about the changes food goes through is correct?

- A** There is a chemical change when saliva moves from the salivary glands into the mouth.
- B** There is a physical change when saliva changes bread into sugars.
- C** There is a physical change when the teeth grind food into smaller pieces.
- D** There is a chemical change when the tongue forms the food into a wad.

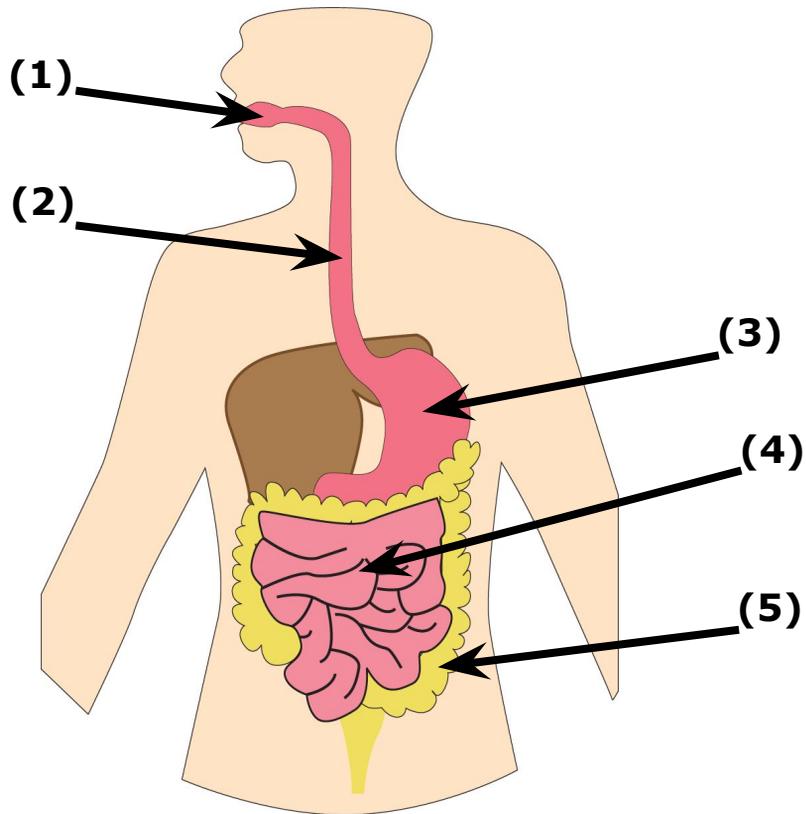


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- 3** According to the context of paragraph 3, the term **vat** refers to _____.
- A** the esophagus
 - B** a large vessel
 - C** a flap
 - D** the villi
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- 4** After the nutrients are extracted, where does the food go, waiting to be expelled?
- A** The large intestine
 - B** The esophagus
 - C** The stomach
 - D** The mouth



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- 5** Based on the sequence described in the passage, which part of the digestive system is labeled **(3)** in the diagram above?
- A** The stomach
 - B** The esophagus
 - C** The large intestine
 - D** The small intestine