

## **Chapter 02**

1. A nutrient or other substance must pass through the cells of the digestive tract wall before it actually enters the body.
- True
  - False

**ANSWER:** True

**POINTS:** 1

**DIFFICULTY:** Bloom's: Remember

**REFERENCES:** 5.1

**QUESTION TYPE:** True / False

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.

**DATE CREATED:** 3/11/2015 4:07 AM

**DATE MODIFIED:** 3/11/2015 4:11 AM

2. Digestion is completed in the large intestine.

- True
- False

**ANSWER:** False

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.1

**QUESTION TYPE:** True / False

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.

**DATE CREATED:** 3/11/2015 4:12 AM

**DATE MODIFIED:** 3/11/2015 4:13 AM

3. Segmentation propels or pushes food through the GI tract, while peristalsis mixes the food, with a more gradual pushing motion.

- True
- False

**ANSWER:** False

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.1

**QUESTION TYPE:** True / False

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.

**DATE CREATED:** 3/11/2015 4:14 AM

**DATE MODIFIED:** 3/11/2015 4:16 AM

4. The mouth initiates the liquefying process to reduce the food to a coarse mash suitable for swallowing.

- True

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b. False

**ANSWER:** True

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.1

**QUESTION TYPE:** True / False

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.

**DATE CREATED:** 3/11/2015 4:17 AM

**DATE MODIFIED:** 3/11/2015 4:18 AM

5. Of all the organs in the GI tract, the small intestine has the thickest walls and strongest muscles.

a. True

b. False

**ANSWER:** False

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.1

**QUESTION TYPE:** True / False

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.

**DATE CREATED:** 3/11/2015 4:20 AM

**DATE MODIFIED:** 3/11/2015 4:21 AM

6. Saliva protects tooth surfaces and the linings of the mouth, esophagus, and stomach from attack by molecules that might be harmful.

a. True

b. False

**ANSWER:** True

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.2

**QUESTION TYPE:** True / False

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.

**DATE CREATED:** 3/11/2015 4:21 AM

**DATE MODIFIED:** 3/11/2015 4:27 AM

7. Pepsin cannot function in the strong acidic environment of the stomach.

a. True

b. False

**ANSWER:** False

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**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.2  
**QUESTION TYPE:** True / False  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 4:23 AM  
**DATE MODIFIED:** 3/11/2015 4:28 AM

8. Drinking plenty of water in conjunction with eating foods high in fiber supplies fluid for the fiber to take up, thus relieving constipation.

- a. True
- b. False

**ANSWER:** True  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.2  
**QUESTION TYPE:** True / False  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 4:25 AM  
**DATE MODIFIED:** 3/11/2015 4:26 AM

9. Some partially digested nutrients can be caught in the microvilli, but they cannot be further digested.

- a. True
- b. False

**ANSWER:** False  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.3  
**QUESTION TYPE:** True / False  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.  
**DATE CREATED:** 3/11/2015 4:29 AM  
**DATE MODIFIED:** 3/11/2015 4:30 AM

10. People should not eat certain food combinations at the same meal because the digestive system cannot handle more than one task at a time.

- a. True
- b. False

**ANSWER:** False  
**POINTS:** 1

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**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.3

**QUESTION TYPE:** True / False

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.

**DATE CREATED:** 3/11/2015 4:31 AM

**DATE MODIFIED:** 3/11/2015 4:32 AM

11. Another name for the digestive tract is the:

- a. urinary tract.
- b. exocrine system.
- c. gastrointestinal tract.
- d. muscular system.
- e. bolus reduction system.

**ANSWER:** c

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.1

**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.

**DATE CREATED:** 3/11/2015 4:33 AM

**DATE MODIFIED:** 9/30/2018 5:04 PM

12. The digestive tract begins at the \_\_\_\_ and ends at the \_\_\_\_.

- a. stomach; large intestine
- b. pharynx; rectum
- c. lower esophageal sphincter; rectum
- d. mouth; anus
- e. tongue; renal glands

**ANSWER:** d

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.1

**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.

**DATE CREATED:** 3/11/2015 4:35 AM

**DATE MODIFIED:** 3/11/2015 4:41 AM

13. A bolus is a(n):

- a. sphincter muscle separating the stomach from the small intestine.

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- b. portion of food swallowed at one time.
- c. enzyme that hydrolyzes starch.
- d. portion of partially digested food expelled by the stomach into the duodenum.
- e. small, indigestible portion of food that can get stuck in the large intestine.

**ANSWER:** b  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.1  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.  
**DATE CREATED:** 3/11/2015 4:42 AM  
**DATE MODIFIED:** 9/30/2018 5:04 PM

14. The \_\_\_\_ is formed in the mouth.

- a. bile
- b. bolus
- c. chyme
- d. villus
- e. sphincter

**ANSWER:** b  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.1  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.  
**DATE CREATED:** 3/11/2015 4:44 AM  
**DATE MODIFIED:** 3/11/2015 4:47 AM

15. The \_\_\_\_ prevents food from entering the lungs.

- a. lower esophageal sphincter
- b. pharynx
- c. ileocecal valve
- d. epiglottis
- e. esophagus

**ANSWER:** d  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.1  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False

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**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.

**DATE CREATED:** 3/11/2015 4:50 AM

**DATE MODIFIED:** 3/11/2015 4:53 AM

16. The stomach empties into the:

- a. ileum.
- b. cecum.
- c. jejunum.
- d. duodenum.
- e. gallbladder.

**ANSWER:** d

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.1

**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.

**DATE CREATED:** 3/11/2015 4:53 AM

**DATE MODIFIED:** 9/30/2018 5:05 PM

17. Chyme is a(n):

- a. semiliquid mass of partially digested food.
- b. portion of food swallowed at one time.
- c. enzyme in the stomach needed for the digestion of protein.
- d. esophageal secretion.
- e. digesting liquid, similar to pepsin.

**ANSWER:** a

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.1

**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.

**DATE CREATED:** 3/11/2015 4:55 AM

**DATE MODIFIED:** 9/30/2018 5:05 PM

18. Two organs that secrete digestive juices into the small intestine are the \_\_\_\_ and the \_\_\_\_.

- a. gallbladder; pancreas
- b. pancreas; liver
- c. gallbladder; liver
- d. duodenum; pancreas
- e. appendix; prostate

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**ANSWER:** a  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.1  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.  
**DATE CREATED:** 3/11/2015 4:58 AM  
**DATE MODIFIED:** 3/11/2015 5:00 AM

19. The movement of chyme from the stomach into the small intestine is regulated by the:
- a. pancreas.
  - b. pyloric sphincter.
  - c. ileocecal valve.
  - d. duodenum.
  - e. epiglottis.

**ANSWER:** b  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.1  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.  
**DATE CREATED:** 3/11/2015 5:00 AM  
**DATE MODIFIED:** 9/30/2018 5:05 PM

20. Immediately before passing into the large intestine, the food mass must pass through the:
- a. pyloric sphincter.
  - b. lower esophageal sphincter.
  - c. ileocecal valve.
  - d. bolus.
  - e. pancreas.

**ANSWER:** c  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.1  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.  
**DATE CREATED:** 3/11/2015 5:04 AM  
**DATE MODIFIED:** 9/30/2018 5:05 PM

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21. "Peristalsis" is a term that refers to the:
- circulation of blood in the blood vessels.
  - absorption of food in the intestines.
  - mixing and moving of food through the lymphatic system.
  - action of the involuntary muscles of the digestive tract.
  - breakdown of food in the stomach.

**ANSWER:** d  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.1  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.  
**DATE CREATED:** 3/11/2015 5:07 AM  
**DATE MODIFIED:** 9/30/2018 5:06 PM

22. Involuntary muscle contractions move food through the intestinal tract. The movement that forces the contents back a few inches before pushing it forward again is called:
- segmentation.
  - rotation.
  - peristalsis.
  - liquefaction.
  - digestion.

**ANSWER:** a  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.1  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.  
**DATE CREATED:** 3/11/2015 5:14 AM  
**DATE MODIFIED:** 9/30/2018 5:06 PM

23. Enzymes:
- facilitate chemical reactions.
  - draw water into the small intestine.
  - are present in all parts of the GI tract.
  - encourage bacterial growth.
  - discourage water removal by the duodenum.

**ANSWER:** a  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand

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**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 5:24 AM  
**DATE MODIFIED:** 9/30/2018 5:07 PM

24. Which enzyme breaks down starch in the mouth?

- a. carbohydrase
- b. lipase
- c. salivary amylase
- d. gastric protease
- e. salivary chymylase

**ANSWER:** c  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 5:33 AM  
**DATE MODIFIED:** 3/11/2015 5:36 AM

25. The products of amylase digestion in the mouth are:

- a. proteins.
- b. monosaccharides and lactose.
- c. polysaccharides and maltose.
- d. polysaccharides and sucrose.
- e. lipids and proteins.

**ANSWER:** c  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 6:31 AM  
**DATE MODIFIED:** 9/30/2018 5:07 PM

26. Which substance is not found in gastric juice?

- a. water
- b. lipase

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- c. chylomicrons
- d. hydrochloric acid
- e. pepsin

**ANSWER:** c  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 6:34 AM  
**DATE MODIFIED:** 3/11/2015 6:36 AM

27. The normal pH of the stomach is:
- a. very acidic.
  - b. slightly acidic.
  - c. neutral.
  - d. slightly alkaline.
  - e. strongly alkaline.

**ANSWER:** a  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 6:36 AM  
**DATE MODIFIED:** 9/30/2018 5:07 PM

28. Which organ contributes juices to the GI tract during digestion?
- a. mesenchyme
  - b. colon
  - c. renal glands
  - d. pancreas
  - e. esophagus

**ANSWER:** d  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Analyze  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive

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secretions.

*DATE CREATED:* 3/11/2015 6:38 AM

*DATE MODIFIED:* 3/11/2015 6:40 AM

29. The function of mucus in the stomach is to:

- a. neutralize stomach acid.
- b. activate pepsinogen to pepsin.
- c. protect stomach cells from gastric juices.
- d. emulsify fats.
- e. denature proteins.

*ANSWER:* c

*POINTS:* 1

*DIFFICULTY:* Bloom's: Understand

*REFERENCES:* 5.2

*QUESTION TYPE:* Multiple Choice

*HAS VARIABLES:* False

*LEARNING OBJECTIVES:* NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.

*DATE CREATED:* 3/11/2015 6:40 AM

*DATE MODIFIED:* 9/30/2018 5:08 PM

30. The major digestive work in the stomach is the initial breakdown of:

- a. starch.
- b. proteins.
- c. fat.
- d. vitamins.
- e. minerals.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Bloom's: Understand

*REFERENCES:* 5.2

*QUESTION TYPE:* Multiple Choice

*HAS VARIABLES:* False

*LEARNING OBJECTIVES:* NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.

*DATE CREATED:* 3/11/2015 6:43 AM

*DATE MODIFIED:* 9/30/2018 5:08 PM

31. In addition to hydrochloric acid, the stomach cells also secrete:

- a. mucus.
- b. bile.
- c. amylase.
- d. lipoproteins.
- e. lactase.

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**ANSWER:** a  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 6:46 AM  
**DATE MODIFIED:** 9/30/2018 5:08 PM

32. The major digestive enzyme secreted by the stomach is:
- a. amylase.
  - b. lipase.
  - c. pepsin.
  - d. disaccharidase.
  - e. sucrase.

**ANSWER:** c  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 6:49 AM  
**DATE MODIFIED:** 9/30/2018 5:08 PM

33. The nutrients that are digested in the small intestine are \_\_\_\_.
- a. carbohydrate, fat, and protein
  - b. fat, water, and fiber
  - c. protein, vitamins, and fiber
  - d. water, fiber, and minerals
  - e. carbohydrate, fiber, and minerals

**ANSWER:** a  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 6:53 AM  
**DATE MODIFIED:** 3/11/2015 6:56 AM

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34. The digestion of proteins begins in the \_\_\_\_ and ends in the \_\_\_\_.
- a. stomach; pancreas
  - b. pancreas; small intestine
  - c. stomach; small intestine
  - d. small intestine; liver
  - e. mouth; liver

**ANSWER:** c

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.2

**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.

**DATE CREATED:** 3/11/2015 6:56 AM

**DATE MODIFIED:** 3/11/2015 6:59 AM

35. Which organ is the primary source of digestive enzymes?
- a. pancreas
  - b. gallbladder
  - c. small intestine
  - d. liver
  - e. spleen

**ANSWER:** a

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.2

**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.

**DATE CREATED:** 3/11/2015 7:12 AM

**DATE MODIFIED:** 3/11/2015 7:14 AM

36. After the pancreatic juices have mixed with chyme in the intestine, the resulting mixture is:
- a. very acidic.
  - b. slightly acidic.
  - c. strongly alkaline.
  - d. slightly alkaline.
  - e. very basic.

**ANSWER:** d

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.2

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**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 7:14 AM  
**DATE MODIFIED:** 9/30/2018 5:09 PM

37. The liver:
- a. reabsorbs water and salts.
  - b. makes bile.
  - c. churns food to chyme.
  - d. performs enzymatic digestion.
  - e. shunts bloods away from the stomach during digestion.

**ANSWER:** b  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 7:17 AM  
**DATE MODIFIED:** 9/30/2018 5:09 PM

38. The main function of bile is to:
- a. emulsify fats.
  - b. stimulate the activity of protein digestive enzymes.
  - c. neutralize the intestinal contents.
  - d. decrease the acidity of the contents of the stomach.
  - e. increase the acidity of the contents of the stomach.

**ANSWER:** a  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 7:19 AM  
**DATE MODIFIED:** 9/30/2018 5:09 PM

39. If the gallbladder becomes diseased, the digestion of \_\_\_\_ can become compromised.
- a. fat
  - b. protein
  - c. carbohydrate

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- d. fiber
- e. minerals

**ANSWER:** a  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Apply  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 7:21 AM  
**DATE MODIFIED:** 3/11/2015 7:23 AM

40. The gallbladder:
- a. reabsorbs water and salts.
  - b. churns food to chyme.
  - c. performs enzymatic digestion.
  - d. stores bile.
  - e. produces gall stones that aid in the digestion of fiber.

**ANSWER:** d  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 7:24 AM  
**DATE MODIFIED:** 9/30/2018 5:10 PM

41. A component of pancreatic juice that functions to neutralize acidic chyme as it enters the small intestine is called:
- a. bile.
  - b. a bolus.
  - c. an emulsifier.
  - d. intestinal flora.
  - e. bicarbonate.

**ANSWER:** e  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.

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*DATE CREATED:* 3/11/2015 7:27 AM

*DATE MODIFIED:* 9/30/2018 5:10 PM

42. Which substance contains no digestive enzymes?

- a. saliva
- b. gastric juice
- c. intestinal juice
- d. bile
- e. pancreatic juice

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Bloom's: Understand

*REFERENCES:* 5.2

*QUESTION TYPE:* Multiple Choice

*HAS VARIABLES:* False

*LEARNING OBJECTIVES:* NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.

*DATE CREATED:* 3/11/2015 7:31 AM

*DATE MODIFIED:* 3/11/2015 7:33 AM

43. Which nutrient takes the longest to digest?

- a. fat
- b. sugar
- c. vitamin C
- d. iron
- e. magnesium

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Bloom's: Apply

*REFERENCES:* 5.2

*QUESTION TYPE:* Multiple Choice

*HAS VARIABLES:* False

*LEARNING OBJECTIVES:* NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.

*DATE CREATED:* 3/11/2015 7:34 AM

*DATE MODIFIED:* 3/11/2015 7:36 AM

44. Fats present in the GI tract:

- a. slow down the process of digestion and absorption.
- b. cause difficulty in digestion.
- c. stimulate and hasten digestion and absorption.
- d. are carriers of thiamin, riboflavin, and niacin.
- e. stimulate the absorption of minerals.

*ANSWER:* a

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**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 7:38 AM  
**DATE MODIFIED:** 9/30/2018 5:10 PM

45. Which food would be digested the slowest?
- a. a piece of toast with strawberry jam
  - b. a grilled steak
  - c. a green salad with low-fat salad dressing
  - d. a cup of green beans
  - e. a cup of yams

**ANSWER:** b  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Apply  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 7:41 AM  
**DATE MODIFIED:** 3/11/2015 7:43 AM

46. Which food would be digested most quickly?
- a. sugar cookies
  - b. peanut butter sandwich and milk
  - c. stew and cornbread
  - d. hamburger
  - e. milkshake

**ANSWER:** a  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Apply  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 7:45 AM  
**DATE MODIFIED:** 3/11/2015 7:46 AM

47. Which food would be digested most quickly?

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- a. a scoop of lemon sherbet
- b. an apple
- c. a baked potato with sour cream
- d. a piece of cheese on a cracker
- e. peanut butter on celery

**ANSWER:** a

**POINTS:** 1

**DIFFICULTY:** Bloom's: Apply

**REFERENCES:** 5.2

**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.

**DATE CREATED:** 3/11/2015 7:51 AM

**DATE MODIFIED:** 3/11/2015 7:52 AM

48. Which nutrients must be broken down in order to be absorbed?

- a. vitamins, minerals, and water
- b. carbohydrate, vitamins, and minerals
- c. fat, protein, and minerals
- d. carbohydrate, protein, and fat
- e. carbohydrate, protein, and vitamins

**ANSWER:** d

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.2

**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.

**DATE CREATED:** 3/11/2015 7:53 AM

**DATE MODIFIED:** 3/11/2015 7:55 AM

49. In the GI tract, bacteria produce:

- a. amylase.
- b. pepsin.
- c. mucus.
- d. vitamin K.
- e. bile.

**ANSWER:** d

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.2

**QUESTION TYPE:** Multiple Choice

## Chapter 02

*HAS VARIABLES:* False

*LEARNING OBJECTIVES:* NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.

*DATE CREATED:* 3/11/2015 7:56 AM

*DATE MODIFIED:* 9/30/2018 5:11 PM

50. Fiber functions to:

- a. aid in the absorption of vitamins.
- b. produce bacteria in the small intestine.
- c. stimulate the GI tract muscles.
- d. stimulate the absorption of nutrients.
- e. produce chyme.

*ANSWER:* c

*POINTS:* 1

*DIFFICULTY:* Bloom's: Remember

*REFERENCES:* 5.2

*QUESTION TYPE:* Multiple Choice

*HAS VARIABLES:* False

*LEARNING OBJECTIVES:* NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.

*DATE CREATED:* 3/11/2015 7:59 AM

*DATE MODIFIED:* 9/30/2018 5:18 PM

51. A benefit of fiber is that it:

- a. promotes mineral absorption.
- b. aids in keeping stools soft.
- c. inhibits peristalsis.
- d. keeps individual foods from getting mixed together.
- e. speeds excretion of toxins.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Bloom's: Understand

*REFERENCES:* 5.2

*QUESTION TYPE:* Multiple Choice

*HAS VARIABLES:* False

*LEARNING OBJECTIVES:* NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.

*DATE CREATED:* 3/11/2015 8:06 AM

*DATE MODIFIED:* 9/30/2018 5:21 PM

52. Once the digestive process is complete, the colon retrieves \_\_\_\_, which the body must recycle.

- a. water and dissolved salts
- b. iron and water
- c. protein and sodium
- d. water and fiber

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e. urea and bile

**ANSWER:** a  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/11/2015 8:12 AM  
**DATE MODIFIED:** 3/11/2015 8:14 AM

53. The primary site of nutrient absorption is the:

- a. stomach.
- b. pancreas.
- c. small intestine.
- d. large intestine.
- e. liver.

**ANSWER:** c  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.3  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.  
**DATE CREATED:** 3/11/2015 8:14 AM  
**DATE MODIFIED:** 9/30/2018 5:21 PM

54. Villi are found in the:

- a. esophagus.
- b. stomach.
- c. small intestine.
- d. large intestine.
- e. colon.

**ANSWER:** c  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.3  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.  
**DATE CREATED:** 3/11/2015 8:16 AM

## **Chapter 02**

**DATE MODIFIED:** 9/30/2018 5:21 PM

55. The microscopic hairs that cover the surface of each cell lining the small intestine are called:

- a. intestinal folds.
- b. villi.
- c. microvilli.
- d. lymphatics.
- e. microcilia.

**ANSWER:** c

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.3

**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.

**DATE CREATED:** 3/11/2015 8:26 AM

**DATE MODIFIED:** 9/30/2018 5:22 PM

56. Which nutrient(s) is/are absorbed into the lymphatic system?

- a. fat-soluble vitamins
- b. water
- c. amino acids
- d. glucose
- e. glucosamine

**ANSWER:** a

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.3

**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.

**DATE CREATED:** 3/11/2015 8:29 AM

**DATE MODIFIED:** 3/11/2015 8:30 AM

57. After absorption, the water-soluble nutrients are released directly into the:

- a. bloodstream.
- b. kidneys.
- c. liver.
- d. lymph.
- e. nephrons.

**ANSWER:** a

**POINTS:** 1

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**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.3

**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.

**DATE CREATED:** 3/11/2015 8:30 AM

**DATE MODIFIED:** 9/30/2018 5:22 PM

58. After absorption, the larger fats and fat-soluble vitamins are first released into the \_\_\_\_ transport system.

- a. excretory
- b. mesentery
- c. vascular
- d. lymphatic
- e. digestible

**ANSWER:** d

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.3

**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.

**DATE CREATED:** 3/11/2015 8:32 AM

**DATE MODIFIED:** 3/11/2015 8:34 AM

59. After digestion, lipids are packaged for transport as lipoproteins known as:

- a. HDL.
- b. VLDL.
- c. LDL.
- d. chylomicrons.
- e. triglycerides.

**ANSWER:** d

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.4

**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.4 - Explain how nutrients are delivered from the GI tract to body cells by the vascular system and describe the different types of lipoproteins.

**DATE CREATED:** 3/11/2015 8:35 AM

**DATE MODIFIED:** 9/30/2018 5:22 PM

60. Which substance is not found in a chylomicron?

- a. phospholipid

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- b. protein
- c. triglyceride
- d. water-soluble vitamins
- e. cholesterol

**ANSWER:** d  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.4  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.4 - Explain how nutrients are delivered from the GI tract to body cells by the vascular system and describe the different types of lipoproteins.  
**DATE CREATED:** 3/11/2015 8:37 AM  
**DATE MODIFIED:** 3/11/2015 8:39 AM

61. The lymphatic system:
- a. contains fluid with the same composition as blood.
  - b. eventually drains into the blood circulatory system.
  - c. carries chylomicrons to the intestines.
  - d. is where metabolism of nutrients takes place.
  - e. drains directly into the appendix.

**ANSWER:** b  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.4  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.4 - Explain how nutrients are delivered from the GI tract to body cells by the vascular system and describe the different types of lipoproteins.  
**DATE CREATED:** 3/11/2015 8:39 AM  
**DATE MODIFIED:** 9/30/2018 5:23 PM

62. When nutrients enter the blood vessels from the small intestine, they are first transported to the:
- a. kidney.
  - b. liver.
  - c. cells throughout the body.
  - d. thoracic duct.
  - e. spleen.

**ANSWER:** b  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.4  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False

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**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.4 - Explain how nutrients are delivered from the GI tract to body cells by the vascular system and describe the different types of lipoproteins.

**DATE CREATED:** 3/11/2015 8:41 AM

**DATE MODIFIED:** 9/30/2018 5:24 PM

63. The \_\_\_\_ is the body's major metabolic organ, serving as a large chemistry lab and creating substances necessary for life.

- a. pancreas
- b. small intestine
- c. gallbladder
- d. liver
- e. thyroid

**ANSWER:** d

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.4

**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.4 - Explain how nutrients are delivered from the GI tract to body cells by the vascular system and describe the different types of lipoproteins.

**DATE CREATED:** 3/11/2015 8:43 AM

**DATE MODIFIED:** 8/12/2018 2:33 PM

64. Elevated LDL concentrations are associated with a high risk of heart disease because they:

- a. transport cholesterol and triglycerides from the liver to the tissues.
- b. carry excessive amounts of fat that is deposited around the heart.
- c. encourage high levels of iron in the blood.
- d. take excess cholesterol back to the liver, which increases the production of cholesterol.
- e. transport cholesterol and triglycerides away from the liver.

**ANSWER:** a

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.4

**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.4 - Explain how nutrients are delivered from the GI tract to body cells by the vascular system and describe the different types of lipoproteins.

**DATE CREATED:** 3/11/2015 8:45 AM

**DATE MODIFIED:** 9/30/2018 5:24 PM

65. Elevated HDL concentrations are associated with a low risk of heart disease because they:

- a. transport newly absorbed lipids from intestinal cells to the rest of the body.
- b. carry cholesterol and triglycerides from the liver to the rest of the body.
- c. carry lipids around in the blood more than LDL.
- d. take excess cholesterol and phospholipids from the tissues and return them to the liver.

## **Chapter 02**

e. take excess cholesterol and phospholipids to the tissues and away from the liver.

**ANSWER:** d  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Apply  
**REFERENCES:** 5.4  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.4 - Explain how nutrients are delivered from the GI tract to body cells by the vascular system and describe the different types of lipoproteins.  
**DATE CREATED:** 3/11/2015 8:48 AM  
**DATE MODIFIED:** 9/30/2018 5:25 PM

66. The lipoprotein that contains the greatest proportion of triglycerides is the:

- a. HDL.
- b. LDL.
- c. VLDL.
- d. chylomicron.
- e. lymph.

**ANSWER:** d  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.4  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.4 - Explain how nutrients are delivered from the GI tract to body cells by the vascular system and describe the different types of lipoproteins.  
**DATE CREATED:** 3/11/2015 8:50 AM  
**DATE MODIFIED:** 9/30/2018 5:25 PM

67. Which factor is most instrumental to the optimal health and performance of the digestive system?

- a. bicarbonate
- b. adequate sleep
- c. the glycemic index
- d. hepatic shunting
- e. enzyme supplements

**ANSWER:** b  
**POINTS:** 1  
**DIFFICULTY:** Bloom's: Understand  
**REFERENCES:** 5.4  
**QUESTION TYPE:** Multiple Choice  
**HAS VARIABLES:** False  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.4 - Explain how nutrients are delivered from the GI tract to body cells by the vascular system and describe the different types of lipoproteins.  
**DATE CREATED:** 3/11/2015 8:52 AM

## Chapter 02

DATE MODIFIED: 3/11/2015 8:54 AM

68. Which item(s) can cause a foodborne infection?

- a. foods containing toxin-producing microbes
- b. *Clostridium botulinum*
- c. *Campylobacter*
- d. *Staphylococcus aureus*
- e. too much magnesium

ANSWER: c

POINTS: 1

DIFFICULTY: Bloom's: Understand

REFERENCES: 5.5

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

LEARNING OBJECTIVES: NUTR.DEBR.16.05.5.5 - Describe how foodborne illnesses can be prevented.

DATE CREATED: 3/11/2015 8:55 AM

DATE MODIFIED: 8/12/2018 2:38 PM

69. To prevent bacterial growth, cooked foods should be kept at \_\_\_\_° F or higher until served.

- a. 40
- b. 140
- c. 165
- d. 200
- e. 100

ANSWER: b

POINTS: 1

DIFFICULTY: Bloom's: Understand

REFERENCES: 5.5

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

LEARNING OBJECTIVES: NUTR.DEBR.16.05.5.5 - Describe how foodborne illnesses can be prevented.

DATE CREATED: 3/11/2015 8:58 AM

DATE MODIFIED: 3/11/2015 9:01 AM

70. Which recommendation is appropriate for preventing foodborne illnesses?

- a. Fresh produce should be washed before it is eaten.
- b. Only new sponges and towels should be used in the kitchen.
- c. Leftovers can safely be covered and left at room temperature until the next meal.
- d. Meats should be marinated at room temperature.
- e. Vegetables should be cooked and never eaten raw.

ANSWER: a

POINTS: 1

DIFFICULTY: Bloom's: Apply

REFERENCES: 5.5

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**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.5 - Describe how foodborne illnesses can be prevented.

**DATE CREATED:** 3/11/2015 9:01 AM

**DATE MODIFIED:** 3/11/2015 9:03 AM

71. Cold food should be stored at \_\_\_\_ or less.

- a. 40° F
- b. 55° F
- c. 80° F
- d. 140° F
- e. 100° F

**ANSWER:** a

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.5

**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.5 - Describe how foodborne illnesses can be prevented.

**DATE CREATED:** 3/11/2015 9:04 AM

**DATE MODIFIED:** 3/11/2015 9:06 AM

72. Leftovers should be eaten within \_\_\_\_ days.

- a. 5-7
- b. 3-4
- c. 2-3
- d. 1-2
- e. 8-10

**ANSWER:** b

**POINTS:** 1

**DIFFICULTY:** Bloom's: Understand

**REFERENCES:** 5.5

**QUESTION TYPE:** Multiple Choice

**HAS VARIABLES:** False

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.5 - Describe how foodborne illnesses can be prevented.

**DATE CREATED:** 3/11/2015 9:06 AM

**DATE MODIFIED:** 3/11/2015 9:08 AM

Match each nutrition term with the appropriate definition.

- a. the oral cavity containing the tongue and teeth
- b. the passageway leading from the nose and mouth to the larynx and esophagus, respectively
- c. a cartilage structure in the throat that prevents fluid or food from entering the trachea when a person swallows
- d. the passageway from the mouth and nose to the lungs
- e. the conduit from the mouth to the stomach

## Chapter 02

- f. the sphincter muscle at the junction between the esophagus and the stomach
- g. the sphincter muscle separating the stomach from the small intestine
- h. the organ that stores and concentrates bile
- i. a gland that secretes enzymes and digestive juices into the duodenum
- j. a 10-foot length of small-diameter (1-inch diameter) intestine that is the major site of digestion of food and absorption of nutrients
- k. the top portion of the small intestine
- l. the first two-fifths of the small intestine beyond the duodenum
- m. the last segment of the small intestine
- n. the sphincter muscle separating the small and large intestines
- o. the last portion of the intestine, which absorbs water
- p. a narrow blind sac extending from the beginning of the large intestine; stores lymphocytes
- q. the muscular terminal part of the GI tract extending from the sigmoid colon to the anus
- r. the terminal sphincter muscle of the GI tract

*DIFFICULTY:* Bloom's: Remember

*REFERENCES:* 5.1

*QUESTION TYPE:* Matching

*HAS VARIABLES:* False

*LEARNING OBJECTIVES:* NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.

*DATE CREATED:* 10/7/2015 4:05 AM

*DATE MODIFIED:* 2/4/2019 4:42 PM

73. anus

*ANSWER:* r

*POINTS:* 1

74. appendix

*ANSWER:* p

*POINTS:* 1

75. duodenum

*ANSWER:* k

*POINTS:* 1

76. epiglottis

*ANSWER:* c

*POINTS:* 1

77. esophagus

*ANSWER:* e

*POINTS:* 1

78. gallbladder

*ANSWER:* h

*POINTS:* 1

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79. ileocecal valve

*ANSWER:* n

*POINTS:* 1

80. ileum

*ANSWER:* m

*POINTS:* 1

81. jejunum

*ANSWER:* l

*POINTS:* 1

82. large intestine

*ANSWER:* o

*POINTS:* 1

83. lower esophageal sphincter

*ANSWER:* f

*POINTS:* 1

84. mouth

*ANSWER:* a

*POINTS:* 1

85. pancreas

*ANSWER:* i

*POINTS:* 1

86. pharynx

*ANSWER:* b

*POINTS:* 1

87. pyloric sphincter

*ANSWER:* g

*POINTS:* 1

88. rectum

*ANSWER:* q

*POINTS:* 1

89. small intestine

*ANSWER:* j

*POINTS:* 1

90. trachea

*ANSWER:* d

## Chapter 02

POINTS: 1

91. Outline and trace the path food follows through the digestive tract from one end to the other.

**ANSWER:** (For this question, a list of the structures and their functions - i.e., an outline - is sufficient. Food travels through the digestive tract in this order: mouth, esophagus, lower esophageal sphincter (or cardiac sphincter), stomach, pyloric sphincter, duodenum (common bile duct enters here), jejunum, ileum, ileocecal valve, large intestine (colon), rectum, and anus.).

The process of digestion begins in the mouth. As you chew, your teeth crush and soften the food, while saliva mixes with the food mass and moistens it for comfortable swallowing. Saliva also helps dissolve the food so that you can taste it; only particles in solution can react with taste buds.

When you swallow a mouthful of food, it passes through the pharynx.

The esophagus has a sphincter muscle at each end. During a swallow, the upper esophageal sphincter opens. The bolus then slides down the esophagus, which conducts it through the diaphragm to the stomach. The lower esophageal sphincter closes behind the bolus so that it cannot slip back. The stomach retains the bolus for a while, adds juices to it, and transforms it into a semiliquid mass called chyme. Then, bit by bit, the stomach releases the chyme through another sphincter, the pyloric sphincter, which opens into the small intestine and then closes after the chyme passes through.

At the beginning of the small intestine, the chyme passes by an opening from the common bile duct, which secretes digestive fluids into the small intestine from two organs outside the GI tract—the gallbladder and the pancreas. The chyme travels on down the small intestine through its three segments—the duodenum, the jejunum, and the ileum. Digestion is completed within the small intestine.

Having traveled the length of the small intestine, what remains of the intestinal contents passes through another sphincter, the ileocecal valve, into the beginning of the large intestine (colon). The contents travel up the right-hand side of the abdomen, across the front to the left-hand side, down to the lower left-hand side, and finally below the other folds of the intestines to the back side of the body above the rectum.

As the intestinal contents pass to the rectum, the colon withdraws water, leaving semisolid waste. The strong muscles of the rectum hold back this waste until it is time to defecate. Then the rectal muscles relax, and the last sphincter in the system, the anus, opens to allow the wastes to pass.

**POINTS:** 1  
**DIFFICULTY:** Bloom's: Analyze  
**REFERENCES:** 5.1  
**QUESTION TYPE:** Essay  
**HAS VARIABLES:** False  
**STUDENT ENTRY MODE:** Basic  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.1 - Identify the path that food takes during digestion and describe the muscular actions of digestion.  
**DATE CREATED:** 3/12/2015 2:59 AM  
**DATE MODIFIED:** 3/12/2015 3:00 AM

92. Describe the role of the stomach in the process of digestion.

**ANSWER:** Gastric juice, secreted by the gastric glands, is composed of water, enzymes, and

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hydrochloric acid. The acid is so strong that it burns the throat if it happens to reflux into the upper esophagus and mouth. The major digestive event in the stomach is the initial breakdown of proteins. Other than being crushed and mixed with saliva in the mouth, nothing happens to protein until it comes in contact with the gastric juices in the stomach. There, the acid helps to uncoil (denature) the protein's tangled strands so that the stomach enzymes can attack the bonds. Both the enzyme pepsin and the stomach acid itself act as catalysts in the process. Minor events are the digestion of some fat by a gastric lipase, the digestion of sucrose (to a very small extent) by the stomach acid, and the attachment of a protein carrier to vitamin B12. The stomach enzymes work most efficiently in the stomach's strong acid, but salivary amylase, which is swallowed with food, does not work in acid this strong. Consequently, the digestion of starch gradually ceases as the acid penetrates the bolus. In fact, salivary amylase becomes just another protein to be digested. The amino acids in amylase end up being absorbed and recycled into other body proteins.

**POINTS:** 1  
**DIFFICULTY:** Bloom's: Apply  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Essay  
**HAS VARIABLES:** False  
**STUDENT ENTRY MODE:** Basic  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/12/2015 3:01 AM  
**DATE MODIFIED:** 3/12/2015 3:02 AM

93. Should antacids be taken to decrease the strong acidity of the stomach? Explain your answer.

**ANSWER:** No, because the stomach's strong acidity naturally prevents bacterial growth and kills most bacteria that enter the body along with food. You might expect that the stomach's acid would attack the stomach itself, but the cells of the stomach wall secrete mucus, a thick, slimy, white polysaccharide that coats and protects the stomach's lining. However, some people may need to take antacids if they have excess stomach acid, which can cause problems such as heartburn and indigestion.

**POINTS:** 1  
**DIFFICULTY:** Bloom's: Apply  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Essay  
**HAS VARIABLES:** False  
**STUDENT ENTRY MODE:** Basic  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/12/2015 3:03 AM  
**DATE MODIFIED:** 2/8/2016 4:18 PM

94. Explain what determines the rate of digestion of the energy nutrients.

**ANSWER:** The rate of digestion of the energy nutrients depends on the meal contents. If the meal is high in simple sugars, digestion proceeds fairly rapidly. On the other hand, if it is rich in fat, digestion is slower.

**POINTS:** 1  
**DIFFICULTY:** Bloom's: Apply

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**REFERENCES:** 5.2  
**QUESTION TYPE:** Essay  
**HAS VARIABLES:** False  
**STUDENT ENTRY MODE:** Basic  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/12/2015 3:04 AM  
**DATE MODIFIED:** 3/12/2015 3:06 AM

95. Explain the benefits of intestinal flora to health.

**ANSWER:** GI bacteria protect people from infections. Provided that the normal intestinal flora are thriving, infectious bacteria have a hard time getting established and launching an attack on the system. In addition, the small intestine and the entire GI tract manufacture and maintain a strong arsenal of defenses against foreign invaders. Several different types of defending cells are present in the GI tract, and they confer specific immunity against intestinal diseases.

**POINTS:** 1  
**DIFFICULTY:** Bloom's: Apply  
**REFERENCES:** 5.2  
**QUESTION TYPE:** Essay  
**HAS VARIABLES:** False  
**STUDENT ENTRY MODE:** Basic  
**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.2 - Describe the actions and origins of the digestive secretions.  
**DATE CREATED:** 3/12/2015 3:06 AM  
**DATE MODIFIED:** 3/12/2015 3:07 AM

96. Describe the difference between low-density lipoproteins (LDL) and high-density lipoproteins (HDL). What is the relationship between blood levels of these lipoproteins and risk of heart disease?

**ANSWER:** When necessary, the liver can assemble different lipoproteins, which are known as very-low-density lipoproteins (VLDL). As the body's cells remove triglycerides from the VLDL, the proportions of their lipid and protein contents shift. As this occurs, VLDL become cholesterol-rich low-density lipoproteins (LDL). Cholesterol returning to the liver from other parts of the body for metabolism or excretion is packaged in lipoproteins known as high-density lipoproteins (HDL). HDL are synthesized primarily in the liver. The density of lipoproteins varies according to the proportion of lipids and protein they contain. The more lipids in the lipoprotein molecule, the lower the density; the more protein, the higher the density. Both LDL and HDL carry lipids around in the blood, but LDL are larger, lighter, and filled with more lipid; HDL are smaller, denser, and packaged with more protein. LDL deliver cholesterol and triglycerides from the liver to the tissues; HDL scavenge excess cholesterol from the tissues and return it to the liver for metabolism or disposal. These different functions explain why some people refer to LDL as "bad" cholesterol and HDL as "good" cholesterol. Keep in mind, though, that there is only one kind of cholesterol molecule; the differences between LDL and HDL reflect proportions of lipids and proteins within them—not the type of cholesterol. The distinction between LDL and HDL has implications for the health of the heart and blood vessels. High concentrations of LDL in the blood are associated with an increased risk of heart disease, as are low concentrations of HDL.

**POINTS:** 1

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**DIFFICULTY:** Bloom's: Apply

**REFERENCES:** 5.4

**QUESTION TYPE:** Essay

**HAS VARIABLES:** False

**STUDENT ENTRY MODE:** Basic

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.4 - Explain how nutrients are delivered from the GI tract to body cells by the vascular system and describe the different types of lipoproteins.

**DATE CREATED:** 3/12/2015 3:08 AM

**DATE MODIFIED:** 3/12/2015 3:09 AM

97. Describe the route of blood in the vascular system in relation to digestion.

**ANSWER:** The vascular or blood circulatory system is a closed system of vessels through which blood flows continuously in a figure eight, with the heart serving as a pump at the crossover point. On each loop of the figure eight, blood travels a simple route: heart to arteries to capillaries to veins to heart. The routing of blood through the digestive system is different, however. Blood is carried to the digestive system (as it is to all organs) by way of an artery, which (as in all organs) branches into capillaries to reach every cell. Blood leaving the digestive system goes by way of a vein. The hepatic portal vein, however, directs blood not back to the heart but to another organ—the liver. This vein again branches into a network of small blood vessels (sinusoids) so that every cell of the liver has access to the newly absorbed nutrients that the blood is carrying. Blood leaving the liver then again collects into a vein, called the hepatic vein, which returns the blood to the heart. The route is thus heart to arteries to capillaries (in intestines) to hepatic portal vein to sinusoids (in liver) to hepatic vein to heart.

**POINTS:** 1

**DIFFICULTY:** Bloom's: Apply

**REFERENCES:** 5.4

**QUESTION TYPE:** Essay

**HAS VARIABLES:** False

**STUDENT ENTRY MODE:** Basic

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.4 - Explain how nutrients are delivered from the GI tract to body cells by the vascular system and describe the different types of lipoproteins.

**DATE CREATED:** 3/12/2015 3:10 AM

**DATE MODIFIED:** 3/12/2015 3:11 AM

98. What is norovirus and how is it linked to personal hygiene?

**ANSWER:** Norovirus illustrates the importance of personal hygiene. Norovirus is passed in the stool and vomit of infected people. Thus, infected people who do not wash their hands adequately can pass the virus directly to other people, or they can pass it indirectly by way of contaminated food or water. Outbreaks in the United States are often linked to food touched by infected food handlers or to person-to-person contact in day care centers, in nursing homes, and on cruise ships. People can also be infected with norovirus by eating raw shellfish such as oysters and clams that are grown in sewage-contaminated waters.

**POINTS:** 1

**DIFFICULTY:** Bloom's: Apply

**REFERENCES:** 5.5

**QUESTION TYPE:** Essay

**HAS VARIABLES:** False

## Chapter 02

**STUDENT ENTRY MODE:** Basic

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.5 - Describe how foodborne illnesses can be prevented.

**DATE CREATED:** 3/12/2015 3:11 AM

**DATE MODIFIED:** 3/12/2015 3:12 AM

99. Is eating raw seafood, like fish and oysters, ever safe?

**ANSWER:**

Most seafood available in the United States and Canada is safe, but eating it undercooked or raw can cause severe illnesses- hepatitis, worms, parasites, viral intestinal disorders, and other diseases. Rumor has it that freezing fish will make it safe to eat raw, but this is only partly true. Commercial freezing will kill mature parasitic worms, but only cooking can kill all worm eggs and other microorganisms that can cause illness. For safety's sake, all seafood should be cooked until it is opaque. Even sushi can be safe to eat when chefs combine cooked seafood and other ingredients into delicacies.

Eating raw oysters can be dangerous for anyone, but people with liver disease and weakened immune systems are most vulnerable. At least 10 species of bacteria found in raw oysters can cause serious illness and even death. Raw oysters may also carry the hepatitis A virus, which can cause liver disease. Some hot sauces can kill many of these bacteria but not the virus; alcohol may also protect some people against some oyster-borne illnesses but not enough to guarantee protection (or to recommend drinking alcohol). Pasteurization of raw oysters-holding them at a specified temperature for a specified time-holds promise for killing bacteria without cooking the oyster or altering its texture or flavor.

**POINTS:** 1

**DIFFICULTY:** Bloom's: Apply

**REFERENCES:** 5.5

**QUESTION TYPE:** Essay

**HAS VARIABLES:** False

**STUDENT ENTRY MODE:** Basic

**LEARNING OBJECTIVES:** NUTR.DEBR.16.05.5.5 - Describe how foodborne illnesses can be prevented.

**DATE CREATED:** 3/12/2015 3:13 AM

**DATE MODIFIED:** 3/12/2015 3:14 AM

100. Describe how the US government is working to help keep foods safe.

**ANSWER:**

To improve the safety of the U.S. food supply, the Food Safety Modernization Act (FSMA) was signed into law in 2011. It has been called "historic" because it shifts the focus of FDA activities from reacting after people become ill to preventing foodborne illness in the first place. The new law stresses prevention at food processing facilities; provides the FDA with greater enforcement, inspection, and recall authorities; and affords the FDA greater oversight of imported foods. In addition, the U.S. Department of Agriculture (USDA), the FDA, and the food processing industries have developed and implemented programs to control foodborne illness. For example, USDA inspectors examine meat-processing plants every day to ensure that these facilities meet government standards. Seafood, egg, produce, and processed food facilities are inspected less often, but all food producers must use a Hazard Analysis Critical Control Points (HACCP) plan to help prevent foodborne illnesses at their source. Each slaughterhouse, packer, distributor, and transporter of susceptible foods must identify "critical control points" that pose a risk of contamination and implement verifiable procedures to eliminate or minimize the risk. The HACCP system has proved a remarkable success for domestic products, but such

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programs do not apply to imported foods.

*POINTS:*

1

*DIFFICULTY:*

Bloom's: Apply

*REFERENCES:*

5.5

*QUESTION TYPE:*

Essay

*HAS VARIABLES:*

False

*STUDENT ENTRY MODE:* Basic

*LEARNING OBJECTIVES:* NUTR.DEBR.16.05.5.5 - Describe how foodborne illnesses can be prevented.

*DATE CREATED:*

3/12/2015 3:14 AM

*DATE MODIFIED:*

3/12/2015 3:16 AM