

Advanced Human Nutrition, Fourth Edition

Chapter Quizzes: Chapter 2

Medeiros and Wildman

Import Settings:

Base Settings: Brownstone Default

Information Field: Complexity

Information Field: Ahead

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Highest Answer Letter: D

Multiple Keywords in Same Paragraph: No

NAS ISBN13: 9781284136623, add to Ahead, Title tags

Multiple Choice

1. What is the name of the innermost part of the digestive tract?

- A) Lumen
- B) Mucosa
- C) Submucosa
- D) Serosa

Ans: A

Complexity: Easy

Ahead: Gastrointestinal Anatomy

Subject: Chapter 2

2. The enteric nervous system contains two main plexus systems. They are called the _____ plexus.

- A) dopamine and epinephrine
- B) propulsion and autonomic
- C) myenteric and submucosa
- D) peristalsis and parasympathetic

Ans: C

Complexity: Moderate

Ahead: Enteric Nervous System

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3. The _____ delivers blood to the stomach.

- A) celiac artery
- B) superior mesenteric artery
- C) inferior mesenteric artery
- D) portal vein

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Ans: A

Complexity: Easy

Ahead: Gastrointestinal Vasculature

Subject: Chapter 2

4. What stimulates gastrin release?

A) Carbohydrate

B) Small peptides and calcium

C) Cholesterol and vitamin D

D) Essential fatty acids

Ans: B

Complexity: Moderate

Ahead: Gastrointestinal Endocrine and Paracrine Substances

Subject: Chapter 2

5. Probiotics may be helpful in some people for treating which condition?

A) Cancer of the colon

B) Cystic fibrosis

C) Anemia

D) Irritable bowel syndrome

Ans: D

Complexity: Moderate

Ahead: Digestion and Absorption

Subject: Chapter 2

6. What are the two types of protein secretions found in saliva?

A) Acidic and alkaline

B) Gastric and esophageal

C) Hydrophobic and hydrophilic

D) Serous and mucous

Ans: D

Complexity: Easy

Ahead: Digestion and Absorption

Subject: Chapter 2

7. Bile is essential for _____ digestion.

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- A) vitamin
- B) protein
- C) lipid
- D) carbohydrate

Ans: C

Complexity: Easy

Ahead: Digestion and Absorption

Subject: Chapter 2

8. Most of the enzymes involved in digestion are produced by the _____.

- A) liver
- B) small intestine
- C) pancreas
- D) stomach

Ans: C

Complexity: Easy

Ahead: Digestion and Absorption

Subject: Chapter 2

True/False

1. The liver has the first shot/pass at substances absorbed into the intestinal wall capillaries.

Ans: True

Complexity: Easy

Ahead: Gastrointestinal Vasculature

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2. Cholecystokinin is secreted from cells located in the stomach.

Ans: False

Complexity: Moderate

Ahead: Gastrointestinal Endocrine and Paracrine Substances

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Essay

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1. Explain how the small intestine's anatomy is designed for optimal digestion and absorption.

Ans: The folds of Kerckring (rugae) increase the surface area of the small intestine. Next, millions of fingerlike projections called villi protrude from the small intestine wall and enhance the surface area even more. The villi are lined with small intestine epithelial cells called enterocytes, which are highly specialized for digestive and absorptive purposes. Finally, the microvilli expand the surface area even further. Cumulatively, the folds of Kerckring, villi, and microvilli increase the surface areas of the small intestine about 600 times.

Complexity: Difficult

Ahead: Gastrointestinal Anatomy

Subject: Chapter 2

2. Explain the two basic types of GI tract movement.

Ans: Propulsive movement is forward movement, whereas mixing movement allows for thorough blending of GI tract contents. Peristalsis is the basic propulsive movement. Distention is a stimulus for a peristaltic wave. Parasympathetic signals can also initiate peristalsis along with irritation of the mucosal lining of the gut. Mixing movements can be forward, chopping, or blending motions.

Complexity: Easy

Ahead: Digestive Tract Movements

Subject: Chapter 2

3. What are the primary functions of the stomach?

Ans: To provide a depot for ingested food and regulate its release into the small intestine; to provide an acidic environment supportive of protein digestion and bactericidal activity; to secrete a proteolytic enzyme; and to secrete substances that assist in vitamin B₁₂ absorption.

Complexity: Easy

Ahead: Digestion and Absorption

Subject: Chapter 2

4. What digestive/absorptive process occurs in the large intestine?

Ans: Water and electrolyte absorption occur here. An abundant bacterial population thrives in the large intestine and produces some nutrients. The action of defecation is controlled by the large intestine.

Complexity: Moderate

Ahead: Gastrointestinal Anatomy

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5. Describe how saliva is important in oral hygiene.

Ans: It washes away pathogenic bacteria, it cleanses the mouth of residual food particles from between the teeth, it has antibacterial factors, and it destroys bacteria in the mouth.

Complexity: Moderate

Ahead: Digestion and Absorption

Subject: Chapter 2

6. Identify the composition of bile.

Ans: Bile is a watery composite of bile acids, bilirubin, cholesterol, fatty acids, phospholipids, electrolytes, and bicarbonate.

Complexity: Moderate

Ahead: Digestion and Absorption

Subject: Chapter 2

7. Which digestive enzymes can the small intestine produce?

Ans: The small intestine produces several carbohydrate digestive enzymes: disaccharidases (lactase, maltase, sucrase) and α -1-6 dextrinase, and enterokinase.

Complexity: Difficult

Ahead: Digestion and Absorption

Subject: Chapter 2