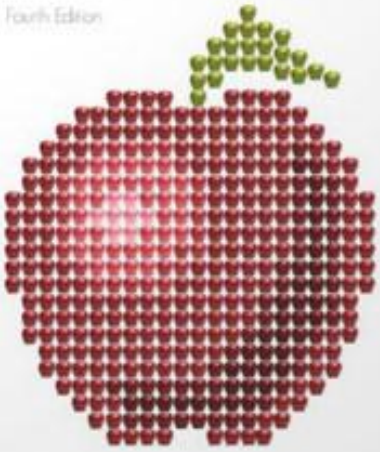
TEST BANK

NUTRITION FOR HEALTH & HEALTH CARE

Fourth Edition



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Chapter 2 – Digestion and Absorption

An. Dif. Page(s)

Multiple Choice

c K 38 1. Another name for the digestive tract is the:
a. urinary tract.
b. exocrine system.
c. gastrointestinal system.
d. muscular system.

d K 38 2. 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

b K 39 3. A bolus is a(n):
a. sphincter muscle separating the stomach from the small intestine.
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.

b K 39 4. The _____ is formed in the mouth.
a. bile
b. bolus
c. chyme
d. villus

d K 39 5. The _____ prevents food from entering the lungs.
a. lower esophageal sphincter
b. pharynx
c. ileocecal valve
d. epiglottis

d K 39 6. The stomach empties into the:
a. ileum.
b. cecum.
c. jejunum.
d. duodenum.

a K 39

7. Chyme is:
   a. a semiliquid mass of partially digested food.
   b. a portion of food swallowed at one time.
   c. an enzyme in the stomach needed for the digestion of protein.
   d. an esophageal secretion.

a K 39

8. Two organs that secrete digestive juices into the small intestine are the _____ and _____.
   a. gallbladder; pancreas
   b. pancreas; liver
   c. gallbladder; liver
   d. duodenum; pancreas

b K 39

9. 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.

c K 39

10. Immediately before passing into the large intestine, the food mass must pass though the:
    a. pyloric sphincter.
    b. lower esophageal sphincter.
    c. ileocecal valve.
    d. bolus.

e K 40-41

11. "Peristalsis" is a term that refers to the:
    a. circulation of blood in the blood vessels.
    b. absorption of food in the intestines.
    c. mixing and moving of food through the lymphatic system.
    d. last phase of digestion.
    e. action of the involuntary muscles of the digestive tract.

a K 42

12. 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:
    a. segmentation.
    b. rotation.
    c. peristalsis.
    d. liquefaction.

a K 44

13. Enzymes:
    a. facilitate chemical reactions.
    b. draw water into the small intestine.
    c. are present in all parts of the GI tract.
    d. encourage bacterial growth.

c K 44 14. Which enzyme breaks down starch in the mouth?
a. carbohydrase
b. lipase
c. salivary amylase
d. gastric protease
e. secretin

c K 44 15. Saliva contains an enzyme that digests:
a. proteins.
b. minerals.
c. starches.
d. vitamins.
e. fiber.

c K 44 16. Which of the following is not a component of gastric juice?
a. water
b. enzymes
c. chylomicrons
d. hydrochloric acid

a K 44 17. The normal pH of the stomach is:
a. very acidic.
b. slightly acidic.
c. neutral.
d. slightly alkaline.
e. strongly alkaline.

d K 44 18. Which of the following organs does not contribute juices during digestion?
a. salivary glands
b. small intestine
c. pancreas
d. esophagus

c K 45 19. 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. collect bacteria.

b K 45 20. The major digestive work in the stomach is the initial breakdown of:
a. starch.
b. proteins.
c. fat.
d. vitamins.

a K 45 21. In addition to hydrochloric acid, the stomach cells also secrete:
a. mucus.
b. bile.
c. amylase.
d. lipoproteins.
e. cholesterol.

c K 45 22. The major digestive enzyme secreted by the stomach is:
a. amylase.
b. lipase.
c. pepsin.
d. disaccharidase.

a K 45 23. 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.

c K 45 24. 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

a K 39, 45 25. Which of the following organs is the primary source of digestive enzymes?
a. pancreas
b. gallbladder
c. small intestine
d. liver

d K 45 26. 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.

b K 45 27. The liver:
a. reabsorbs water and salts.
b. secretes bile.
c. churns food to chyme.
d. performs enzymatic digestion.
e. stores bile.

a K 45 28. 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.

a A 45 29. If the gallbladder becomes diseased, the digestion of _____ can become compromised.
a. fat
b. protein
c. carbohydrate
d. fiber

d K 45 30. The gallbladder:
a. reabsorbs water and salts.
b. churns food to chyme.
c. performs enzymatic digestion.
d. stores bile.

a K 45 31. The emulsification of fat requires:
a. bile.
b. enzymes.
c. prostaglandins.
d. intestinal flora.

d K 45 32. Which of the following contains no digestive enzymes?
a. saliva
b. gastric juice
c. intestinal juice
d. bile

d K 45 33. Which of the following does not secrete digestive juices?
a. stomach
b. pancreas
c. salivary glands
d. large intestine

a A 45 34. Of the following, which nutrient takes longest to digest?
a. fat
b. sugar
c. vitamin C
d. iron
e. glucose

a K 45

35. 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.

b A 45

36. Which of the following foods would result in the slowest rate of digestion?
    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

a A 45

37. Which of these foods would be digested most quickly?
    a. sugar cookies
    b. peanut butter sandwich and milk
    c. stew and cornbread
    d. hamburger, french fries, and milkshake

a A 45

38. Which of the following foods would result in the most rapid rate of digestion?
    a. a scoop of lemon sherbet
    b. an apple
    c. a baked potato with sour cream
    d. a piece of cheese on a cracker

d K 45

39. Which nutrients must be broken down in order to be absorbed?
    a. vitamins, minerals, water
    b. carbohydrate, vitamins, minerals
    c. fat, protein, minerals
    d. carbohydrate, protein, fat

d K 45

40. Bacteria in the GI tract perform all of the following functions except:
    a. producing biotin.
    b. protecting people from infection.
    c. producing vitamin K.
    d. producing bile.

c K 45-46

41. Fiber functions to:
    a. aid in the absorption of vitamins.
    b. produce GI bacteria.
    c. stimulate the GI tract muscles.
    d. stimulate the absorption of nutrients.

b K 46

42. A benefit of fiber is that it:
    a. promotes mineral absorption.
    b. aids in keeping stools soft.
    c. prevents diarrhea.
    d. keeps individual foods from getting mixed together.

a K 46 43. Once the digestive process is complete, the colon retrieves materials that the body must recycle. These materials are:
a. water and dissolved salts.
b. iron and water.
c. protein and sodium.
d. water and fiber.

a K 46 44. One of the functions of the colon is to absorb:
a. dissolved salts.
b. vitamins.
c. sugars.
d. fiber.

c K 46 45. The primary site of nutrient absorption is the:
a. stomach.
b. pancreas.
c. small intestine.
d. large intestine.

c K 46 46. Villi are part of the structure of the:
a. esophagus.
b. stomach.
c. small intestine.
d. large intestine.

c K 46 47. 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.

a K 48 48. Which of the following nutrients is/are absorbed into the lymphatic system?
a. fat-soluble vitamins
b. water
c. amino acids
d. glucose

a K 48 49. After absorption, the water-soluble nutrients are released directly into the:
a. bloodstream.
b. kidneys.
c. liver.
d. lymph.

d K 48

50. After absorption, the larger fats and fat-soluble vitamins are first released into the _____ transport system.
    a. excretory
    b. mesentery
    c. vascular
    d. lymphatic

d K 48

51. After digestion, lipids are packaged for transport as lipoproteins known as:
    a. HDL.
    b. VLDL.
    c. LDL.
    d. chylomicrons.

d K 48

52. Which of the following is not part of the structure of a chylomicron?
    a. phospholipid
    b. protein
    c. triglyceride
    d. water-soluble vitamins

b K 48-50

53. 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.

b K 49

54. 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.

d K 49

55. Which of the following is the body's major metabolic organ?
    a. pancreas
    b. small intestine
    c. gallbladder
    d. liver

a K 50

56. 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.

d A 50 57. 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.

d K 51 58. The lipoprotein that contains the greatest proportion of triglyceride is the:
a. HDL.
b. LDL.
c. VLDL.
d. chylomicron.

b K 52 59. Which of the following factors is not instrumental to the optimal health and performance of the digestive system?
a. adequate sleep
b. enzyme supplements
c. mental state
d. nutrition

Nutrition in Practice – Food Safety

c K 54,55 60. Which of the following will cause a foodborne infection?
a. Foods containing toxin-producing microbes
b. *Clostridium botulinum*
c. *Campylobacter jejuni*
d. *Staphylococcus aureus*

b K 59 61. To prevent bacterial growth when holding cooked foods, they should be kept at _____° F or higher until served.
a. 40
b. 140
c. 165
d. 200

a A 59 62. Which of the following statements is true regarding the prevention of 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.

a K 59 63. Cold food should be stored at _____ or less.
   a. 40° F
   b. 55° F
   c. 80° F
   d. 140° F

b K 59 64. Leftovers should be used within _____ days.
   a. 5-7
   b. 3-4
   c. 2-3
   d. 1-2

Matching

r	38	1. anus	a. the oral cavity containing the tongue and teeth.
p	38	2. appendix	b. the passageway leading from the nose and mouth to the larynx and esophagus, respectively.
k	38	3. duodenum	c. a cartilage structure in the throat that prevents fluid or food from entering the trachea when a person swallows.
c	38	4. epiglottis	d. the passageway from the mouth and nose to the lungs.
e	38	5. esophagus	e. the conduit from the mouth to the stomach.
h	38	6. gallbladder	f. the sphincter muscle at the junction between the esophagus and the stomach.
n	38	7. ileocecal valve	g. the sphincter muscle separating the stomach from the small intestine.
m	38	8. ileum	h. the organ that stores and concentrates bile.
l	38	9. jejunum	i. a gland that secretes enzymes and digestive juices into the duodenum.
o	38	10. large intestine	j. a 10-foot length of small-diameter (1-inch) intestine that is the major site of digestion of food and absorption of nutrients.
f	38	11. lower esophageal sphincter	k. the top portion of the small intestine.
a	38	12. mouth	l. the first two-fifths of the small intestine beyond the duodenum.
i	38	13. pancreas	m. the last segment of the small intestine.
b	38	14. pharynx	n. the sphincter muscle separating the small and large intestines.
g	38	15. pyloric sphincter	o. the last portion of the intestine, which absorbs water.
q	38	16. rectum	p. a narrow blind sac extending from the beginning of the large intestine; stores lymphocytes.
j	38	17. small intestine	q. the muscular terminal part of the GI tract extending from the sigmoid colon to the anus.
d	38	18. trachea	r. the terminal sphincter muscle of the GI tract.

b	48	1.	chylomicrons	a.	class of lipids composed of glycerol with three fatty acids attached.
f	50	2.	high-density lipoproteins	b.	the lipoproteins that transport lipids from the intestinal cells into the body.
c	48	3.	lipoprotein	c.	a cluster of lipids associated with proteins that serves as a transport vehicle for lipids in the lymph and blood.
e	50	4.	low-density lipoproteins	d.	the type of lipoproteins made primarily by liver cells to transport lipids to various tissues in the body; composed primarily of triglycerides.
a	48	5.	triglycerides	e.	the type of lipoproteins derived from VLDL as cells remove triglycerides from them; composed primarily of cholesterol.
d	50	6.	very-low-density lipoproteins	f.	the type of lipoproteins that transport cholesterol back to the liver from peripheral cells; composed primarily of protein.

Essay

38-39	1.	Outline and trace the path food follows through the digestive tract from one end to the other.
39,43-45	2.	Describe the role of the stomach in the process of digestion.
44-45	3.	Should antacids be taken to decrease the strong acidity of the stomach? Explain your answer.
45	4.	Explain what determines the rate of digestion of the energy nutrients.
45	5.	Explain the benefits of intestinal microflora to health.
50-51	6.	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?