8.1 Carbohydrates, Fats, and Proteins

1. Food supplies your body with ______________, substances that the body needs to regulate bodily functions, promote growth, repair body tissues, and obtain energy.

2. Six classes of nutrients
   a. Carbohydrates
   b. Fats
   c. Vitamins
   d. Proteins
   e.
   f.

3. ____________, ____________, and fats can all be used by the body as sources of energy.

4. The foods you eat are your body’s ______________ ______________.

5. ______________ is the chemical process by which your body breaks down food to release this energy.
   a. Metabolism also involves the use of this energy for ______________ and repair of body ________.

6. The amount of energy released when nutrients are broken down is measured in units called ______________.

7. ______________ supply energy for your body’s functions.

8. Simple carbohydrates are also known as ______________.

9. ____________ carbohydrates are made up of sugars that are linked together chemically to form long chains.

10. ____________ is a type of complex carbohydrate that is found in plants.
    a. High fiber diet
       i. Helps prevent constipation
       ii.
       iii. May help prevent heart disease

11. The extra glucose is converted into a type of starch called ____________.

12. It is better to eat foods rich in ______________ carbohydrates rather than simple ______________.

13. Fats are made of ____________, ____________, and ____________.
    a. Fats supply your body with...
       i. Energy
       ii. Form your cells
       iii.
       iv. Protect your nerves

14. ______________ ________ have at least one unsaturated bond in a place where hydrogen can be added to the molecule

15. Fats that have all the hydrogen the carbon atoms can hold are called ______________ ______________.

16. Too much saturated fat in your diet can lead to ______________ ______________.
17. Nutritionists recommend that ____ to ____ percent of your calories come from fat, primarily unsaturated fat.

18. __________ is a waxy, fatlike substance that is found only in __________ ____________.
   a. Cholesterol helps the body to...
      i. Make cell membranes and nerve tissue
      ii. ____________
      iii. Substances that aid in the digestion of fat

19. __________ __________ are made when manufacturers add hydrogen to the fat molecules in vegetable oils.

20. Trans-fat are found in margarine, ___________, and commercially baked goods.

21. Proteins can serve as a source of ____________.

22. The most important function of proteins is their role in the _________ and _________ of your body’s tissues.

23. Proteins are long chains of smaller “links” that bound together ____________.

24. The smaller substances are known as ____________ ________________.

25. The nine amino acids that the body cannot manufacture are called ____________ ________________ ____________.

26. Protein from animal sources is ____________ ________________.
   a. It contains all nine essential amino acids

27. Most protein from plant sources is ____________ ________________.

28. Nutritionists recommend that _____ to ______ percent of your calories come from proteins.

8.2 Vitamins, Minerals, and Water

29. One of the first discoveries of the importance of vitamins came in the 1700’s by a Scottish doctor named ____________ ____________.

30. Nutrients that are made by living things are required only in small amounts, and that assist many chemical reactions in the body are ____________.
   a. Fat-Soluble Vitamins
      i. Fat-soluble vitamins can be ____________ by the body.
      ii. Vitamins ____, ____, ____ and ____ are fat soluble vitamins.
      iii. Sources of fat-soluble vitamins are
         1. Vegetable oils
         2. Liver
         3. ____________
         4. Certain vegetables
   b. Water-Soluble Vitamins
      i. Water-soluble vitamins cannot be stored by the body.
      ii. Examples of water-soluble vitamins are ___ and all of the ___ vitamins
      iii. Sources of water-soluble vitamins are
         1. Fruits
         2. Vegetables
         3. Whole-Grain Foods
4. And many other foods

31. Vitamins called ___________ help protect healthy cells from the damage caused by the normal aging process as well as from certain types of cancer.
   a. Vitamin ____ and ____ are two of the most powerful antioxidants.

32. Your body requires only small amounts of ____________, which are nutrients that occur naturally in rocks and soil.

33. ____________ is important in blood clotting and the functioning of your nervous system.
   a. A lack of calcium can sometimes lead to ________________, a condition in which the bones gradually weaken.

34. ____________ and _____________ work together to maintain water balance in the body.

35. ____________ is necessary for healthy red blood cells.
   a. If a person’s diet does not include enough iron, he or she may develop _________, a condition in which the red blood cells do not contain enough hemoglobin.

36. Sodium is important in several body processes, including the functioning of the __________ and _________ balance.

37. Too much sodium can cause a problem with _________________.

38. An excess, or overdose, of vitamins or minerals may damage your ____________.

39. About ____ % of your body weight is water.
   a. Nearly all of the body’s chemical reactions, including those that produce energy and build new tissues, take place in a _________ solution.

40. ________________ is the process of maintaining a steady state inside your body.
   a. Water contains dissolved substances called ________________ that regulate many processes in your cells.

41. ________________ is a serious reduction in the body’s water content.
   a. Symptoms include weakness, rapid breathing, and a weak ________________.

42. Every day, you need at least ten ___-ounce cups of water if you are a female 14-18 years old.

43. Males in the same age group need ____ cups of water per day.

44. A sports drink is not necessary if you exercise for ____ minutes or less.

8.3 Guidelines for Healthful Eating

45. The __________ ____________ for Americans is a document developed by nutrition experts to promote health.
   a. Make Smart Food Choices
      i. Choose a ___________ of foods.
      ii. Include plenty of whole-grain foods, vegetables, and ___________.
      iii. Choose low-fat or nonfat milk and milk products.
   b. Balance food and physical activity
      i. Maintaining a healthy weight is a matter of balancing the ____________ you take in with how active you are
c. Get the most nutrition out of your calories
   i. Choose foods that are _________-_________.
   ii. Nutrient-dense foods contain lots of vitamins and minerals relative to the number of calories.
d. Handle food safely

46. Make half the grains you eat__________ grains. Whole grains contain the entire grain kernel — the bran, germ, and endosperm.
   a. Examples
      i. Whole-Wheat, rye, pita, rolls, or tortillas
      ii. Macaroni, spaghetti, rice noodles

47. Vegetables
   a. Dark green vegetables: __________, kale, mustard, or collard green
   b. Orange vegetables: carrots, __________, sweet potatoes
   c. Dry beans and peas
   d. Starchy vegetables: potatoes, ________, lima beans

48. Fruits
   a. Apples, bananas, mangoes, oranges, papayas, grapes, and _________________.
   b. Limit your fruit juices

49. Oils-consume most of your fats from fish, nuts, and vegetable oils.

50. Dairy
   a. Milk, yogurt, or __________.

51. Protein
   a. Choose low-fat or lean meats and poultry.
   b. Vary your protein by choosing
      i. Fish, nuts, __________

52. Using the Food Guidelines
   a. Don’t skip breakfast. Choose whole-grain cereals, low-fat milk or yogurt, and fruit.
   b. Lunch-Focus on whole grains, fruits, and _________________.
   c. Dinner-Trim excess fat from meats. Instead of fried meats or fish, try them ____________.

53. Snacks
   a. Try satisfying your sweet tooth with ___________ instead of cookies.
   b. Make a whole-wheat bagel, not a donut, your after-school treat.

54. Eating Out
   a. Substitute low-fat milk, water, or fruit juice for __________ and _____________.
   b. Select the _______________ in place of fries or onion rings. But go easy on dressing dressings, cheese, bacon bits, and croutons.
   c. Choose a __________ chicken sandwich instead of a burger.