***Culinary Essentials* Chapter 11 Reading Guide**

**Culinary Nutrition**

**11.1**

1. An important factor in meeting a body’s need for food and maintenance of life is a food’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

2. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a chemical compound that helps the body to carry out its functions.

3. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the body’s main source of energy.

4. The three types of carbohydrates are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

5. Sugars provide little more than \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ carbohydrates are starches such as pasta, grains, cereals, and legumes.

7. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the seed or pod from certain plants. Some examples are beans, lentils, and peas.

8. Foods that are high in complex carbs contain many other nutrients that your body needs, such as vitamins and minerals. Your body breaks down simple and complex carbs into a usable energy source known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. This gives your body the energy it needs to work properly.

9. A unique form of complex carbohydrates that does not provide energy is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

10. The two types of fiber are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which dissolves in water and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fiber, which absorbs water.

11. Fiber’s main advantage is that it cannot be digested. As it passes through the body, fiber helps remove \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

12. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fiber is found in the outer coating (Bran) of whole grains.

13. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fiber is found in foods such as oat bran and grains. Soluble fiber has been linked with the prevention of heart disease and some cancers.

14. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a nutrient that builds, maintains, and repairs body tissues. It is essential for healthy \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. It plays an important role in fighting disease. If a person does not eat enough carbohydrates and fat, the body will use protein for energy.

15. Proteins are made up of smaller units called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

16. There are 22 amino acids. Some can be made by the body, while some cannot. A protein source that provides all the amino acids is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Most animal sources of food provide all of the essential amino acids.

17. Most plant foods lack some of the amino acids is called a(n)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Most plant foods lack some of the essential amino acids. By combining nuts or dry beans and grains, a person can access all of the essential amino acids. This is important for people who do not eat animal products.

18. \_\_\_\_\_\_\_\_\_\_ regulates bodily functions and helps carry vitamins through the system. It is also a source of stored \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for body organs. Fat adds \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to foods.

19. There is strong evidence that a diet higher than \_\_\_\_\_\_\_\_\_\_\_\_ % in fat and cholesterol can put one at risk for heart disease and cancer.

20. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a process in which hydrogen is added under pressure to polyunsaturated fats. Hydrogenation changes liquid oil to a solid fat. An unsaturated fat that goes through the hydrogenation process becomes a \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_, also called a trans fat. Some examples are stick margarine and vegetable shortening.

21. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a fatlike substance found in all body cells and in all animal foods, such as meat, egg yolks, and dairy products. The body can manufacture its own cholesterol because it is needed to produce cell membranes, hormones, vitamin D, and bile acids, which help digest fats.

22. Some cholesterol circulates in the body in a chemical package called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. There are two types, a high density lipoprotein,\_\_\_\_\_\_\_\_\_\_\_\_, and a low density lipoprotein, \_\_\_\_\_\_\_\_\_\_\_\_.

23. Too much \_\_\_\_\_\_\_\_\_\_\_\_\_, or bad cholesterol, can contribute to cardiovascular problems, as it can build up inside artery walls, preventing the flow of blood to the heart and other vital organs. Higher \_\_\_\_\_\_\_\_\_\_, or good cholesterol, helps lower the amount of total cholesterol in the blood.

24. A fat that is solid at room temperature and tends to increase the amount of cholesterol in the blood is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fat. Some examples are butter, lard, whole milk products, and the visible fat on meats. These and trans fatty acids have been linked to an increased risk of heart disease.

25. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fat is usually liquid at room temperature. Unsaturated fats are considered more healthful because they do not raise cholesterol levels. Olive oil and peanut oil are examples of monounsaturated fats. Foods that contain monounsaturated fats, such as avocados, can help lower the total cholesterol in your body as well as lower the risk of heart disease. A\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fat is also liquid at room temperature.

26. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a substance that helps regulate or control many bodily functions. They also help other nutrients to do their jobs. There are two types of vitamins, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ soluble and \_\_\_\_\_\_\_\_\_\_\_\_\_ soluble.

27. Water soluble vitamins \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in water. They must be eaten every day because the body loses them in waste fluids. Water soluble vitamins include Vitamin \_\_\_\_\_\_\_\_ and all the \_\_\_\_\_\_\_ vitamins.

28. Unlike water-soluble vitamins, \_\_\_\_\_\_\_ - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ vitamins are stored in the body’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Vitamins \_\_\_\_\_, \_\_\_\_\_\_, \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ are the fat-soluble vitamins. Because they are stored, they can build up in the body of they are taken in very large quantities for a long period of time. This can cause disease or even death.

29. Milk is often fortified with vitamin \_\_\_\_\_\_\_\_\_ because it helps the body absorb the calcium already in the milk.

30. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are an essential part of your bones and teeth. They also regulate body processes, such as nerve function. They are needed in very small amounts. Minerals are divided into two types, \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

31. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is essential to sustain life. It makes up about \_\_\_\_\_\_\_\_\_\_% of an adult’s body weight. It cleans toxins from the body, cushions joints, and increases the body’s ability to transport nutrients. Healthy adults need to consume \_\_\_\_\_ to \_\_\_\_\_ ounces of water each day.

32. An \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a substance added to a food to improve it in some way. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ food additives are added to a food specifically to enhance or change it. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ food additives become part of the food product because of the way it is processed.

33. Some additives, such as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_, have been used for centuries. Some are natural, while others are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ produced. See figure 11.5 for additives that are commonly used.

34. The \_\_\_\_\_\_\_\_\_\_\_\_ is responsible for regulating additives that are put into foods to make sure that they are safe to eat. \_\_\_\_\_\_\_\_\_\_\_ additives have permanent FDA approval.

**11.2**

35. For 100 years the government has provided dietary guidelines and recommendations to help consumers make healthful food choices. These can help you create well-balanced meals. Factors that influence a person’s dietary needs include \_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

36. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are developed by the Food and Nutrition Board of the National Academy of Sciences. The RDA shows the amount of each essential nutrient that will meet the nutritional needs of the majority of healthy Americans for a day. RDAs are updated every \_\_\_\_\_\_\_\_\_\_\_\_\_\_ years.

37. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ gives information on serving size, calories, and nutrients, which are measured in grams and in daily value percentages.

38. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a nutrient is the amount of that nutrient that a person needs every day. It is based on a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ calorie diet. This number is only a guide, because each person’s calorie needs are different.

39. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are published by the USDA and the U.S. Dept. of Health and Human Services. First published in 1980, they are updated periodically. They offer information on proper eating habits for healthy Americans who are \_\_\_\_\_\_\_\_\_\_\_ years of age or older.

40. The guidelines cover 9 general topics:

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41. The Guidelines form the basis for the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ food guidance system, which was first created in 2005 to replace the Food Guide Pyramid. It shows the recommended proportions of foods from each food group. The food groups are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_,\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ &\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. \_\_\_\_\_\_\_\_\_\_ are also represented.

42. Different times in the lifespan, such as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, are all periods of growth that require extra nutrients.

43. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ food is a food low in calories, but rich in nutrients.

44. An infant grows more during the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ year than at any other time. Generally, babies only need breast milk or formula for the first 6 months. New foods are introduced slowly. Small children need a wide variety of foods in small portions. Since their stomachs cannot hold much food at once, they need frequent snacks and meals to supply the nutrients they need.

45. Older adults have less muscle and bone mass and their metabolism moves more slowly. Other factors that can influence the nutritional needs include \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

46. Athletes need more carbohydrates for energy. In addition, it is important to drink plenty of water to avoid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, a serious fluid imbalance in the body. Dehydration can lead to heat stroke or heat exhaustion.

47. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ does not eat meat or other animal based foods.

48. A \_\_\_\_\_\_\_\_\_\_\_\_\_-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ eats or drinks dairy products, but does not eat eggs.

49. An \_\_\_\_\_\_-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ eats eggs in addition to foods from plant sources.

50. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_-\_\_\_\_\_-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ eats both dairy products and eggs.

51. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_ eats no meat or animal products at all.

52. A \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ eats only unprocessed vegan foods that have not been heated above 115 degrees.

53. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a diet that includes unprocessed foods, and organically grown fruits and vegetables.

54. Over time, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the system can block arteries that carry blood. This can cause a stroke or heart attack. \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ can also have an impact on the development of cardiovascular disease. Large amounts of \_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ over time can increase blood pressure.

55. A \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_is an allergic reaction triggered by the immune system in response to a particular food.

56. A \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a reaction to a particular food that does not involve the immune system. Lactose intolerance is an example.

57. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is an illness that affects the body’s ability to convert blood sugar to energy. \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_ diabetics do not produce insulin in their bodies. \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ diabetics either do not produce enough insulin, or their bodies’ cells ignore the insulin. Diabetes can cause long-term problems with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

58. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the uncontrolled division and growth of cells that interferes with normal body functions. It is the second leading cause of death in U.S.

59. Natural chemicals such as those found in plants, fruits, vegetables, grains, and dry beans are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Phytochemicals may help protect the body against cancers, heart disease, stroke, high blood pressure, and other chronic health conditions.

**11.3**

60. A food’s nutrients can be lost through improper \_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The techniques that destroy nutrients can also destroy a food’s color, texture, and flavor.

61. Certain cooking techniques are better than others at keeping a food’s nutritional value. These techniques include \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

62. One way to lessen food storage problems is to use \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the process of preparing small amounts of food several times throughout a food service period.

63. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the temperature at which an oil will smoke in a pan. Figure 11.9 lists the most common cooking oils and their uses.

64. Reduce fat and cholesterol with these suggestions:

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65. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a food in which one or more of the ingredients have been ground in a food processor or blender.

65. Some other options to cook with less fat are:

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` 5.