

Test Bank Chapter: 1

Nutrition: Food for Health

Question type: Multiple Choice

1) What is the science that studies the interactions between living organisms and food?

- a) digestion
- b) metabolism
- c) nutrition
- d) organic chemistry

Answer: c

Difficulty: Easy

Learning Objective: Describe the modern Canadian food supply.

Section Reference: 1.1 Nutrition and the Canadian Diet

2) What are the chemical substances in foods that provide energy and structure and help regulate the body processes?

- a) hormones
- b) nutrients
- c) enzymes
- d) phytochemicals

Answer: b

Difficulty: Easy

Learning Objective: Describe the modern Canadian food supply.

Section Reference1: 1.1 Nutrition and the Canadian Diet

3) Which statement best describes a processed food?

- a) it has more than five ingredients.
- b) it requires heating or cooking before it can be eaten.
- c) it has had preservatives added.
- d) it has been specifically treated or changed from its natural state.

Answer: d

Difficulty: Medium

Learning Objective: Describe the modern Canadian food supply.

Section Reference: 1.1 Nutrition and the Canadian Diet

4) Which of the following statements about the typical Canadian diet is TRUE?

- a) Two out of three Canadians eat plant-based proteins
- b) One in three Canadians eat enough fruits and vegetables
- c) The intake of whole grain products is above the recommended level for most Canadians, especially those over age 51
- d) Over 2/3 of the calories Canadians eat come from processed food

Answer: b

Difficulty: Medium

Learning Objective: Describe the modern Canadian food supply.

Section Reference: 1.1 Nutrition and the Canadian Diet

5) Which statement best describes the Canadian Community Health Survey (CCHS)?

- a) The survey started two years ago and continues annually
- b) It is a health-related survey with a focus on determining the risk factors for cardiovascular disease
- c) It recorded exclusively food intake of Canadians to see how well dietary recommendations were being followed
- d) It is a health-related survey that collects information from Canadians, including food intake

Answer: d

Difficulty: Hard

Learning Objective: Describe the modern Canadian food supply.

Section Reference: 1.1 Nutrition and the Canadian Diet

6) When compared to freshly prepared foods, how do processed foods generally differ?

- a) they provide more kcalories
- b) they contain fewer nutrients
- c) they are higher in fat, sugar, or salt
- d) All of the answer choices are correct

Answer: d

Difficulty: Medium

Learning Objective: Describe the modern Canadian food supply.

Section Reference: 1.1 Nutrition and the Canadian Diet

7) According to the textbook “Convenience has its costs.” What does this mean?

- a) Fast foods are expensive and higher in kcalories than comparable foods prepared at home.
- b) Fast foods are expensive, but are usually lower in kcalories than comparable foods prepared at home.
- c) Fast foods should never be consumed as they are expensive and unhealthy.
- d) Fast foods are typically high in fat and sugar but not in kcalories.

Answer: a

Difficulty: medium

Learning Objective: Describe the modern Canadian food supply.

Section Reference: 1.1 Nutrition and the Canadian Diet

8) According to the Canadian Community Health Survey, which food of the following groupings do Canadians consume in sufficient amounts?

- a) Plant-based foods
- b) Fruits and vegetables
- c) Whole grains
- d) None of these

Answer: d

Difficulty: Medium

Learning Objective: Describe the modern Canadian food supply.

Section Reference: 1.1 Nutrition and the Canadian Diet

9) Which of the followings is a substance in plant foods which cannot be made by the body and is NOT necessary to sustain life, but has healthful benefits?

- a) a herbal supplement
- b) a phytochemical
- c) an enzyme
- d) sodium

Answer: b

Difficulty: Easy

Learning Objective: List the six classes of nutrients. Section Reference: 1.2 Food Provides Nutrients

10) Nutrients are classified as macronutrients and micronutrients. Which of the following is NOT considered a macronutrient?

- a) carbohydrates

- b) lipids
- c) proteins
- d) vitamins

Answer: d

Difficulty: Easy

Learning Objective: List the six classes of nutrients.

Section Reference: 1.2 Food Provides Nutrients

11) Which of the following either cannot be synthesized in the body or cannot be made in sufficient quantities to meet needs and, therefore, must be provided in the diet?

- a) essential nutrients
- b) zoochemicals
- c) phytochemicals
- d) fortified foods

Answer: a

Difficulty: Easy

Learning Objective: List the six classes of nutrients.

Section Reference: 1.2 Food Provides Nutrients

12) Which of the following provides energy but is NOT considered a nutrient?

- a) alcohol
- b) carbohydrate
- c) fat
- d) protein

Answer: a

Difficulty: Easy

Learning Objective: List the six classes of nutrients. Section Reference: 1.2 Food Provides Nutrients

13) The energy, provided by carbohydrates, proteins, and lipids, is measured in what units?

- a) kilojoules
- b) kilocalories
- c) thermal requirements
- d) Both a & b

Answer: d

Difficulty: Easy

Learning Objective: List the six classes of nutrients.

Section Reference: 1.2 Food Provides Nutrients

14) Which of the following nutrients is an organic molecule?

- a) fatty acids
- b) iron
- c) water
- d) sodium

Answer: a

Difficulty: Medium

Learning Objective: List the six classes of nutrients.

Section Reference: 1.2 Food Provides Nutrients

15) Metabolic processes take place in the body to maintain body temperature, heart rate, and blood sugar relatively constant. What is this stable state called?

- a) anabolic processes
- b) catabolic processes
- c) homeostasis
- d) metabolism

Answer: c

Difficulty: Easy

Learning Objective: List the six classes of nutrients. Section Reference: 1.2 Food Provides Nutrients

16) Which of the following roles do all six classes of nutrients perform?

- a) providing energy
- b) forming structures
- c) regulating body processes
- d) All of the answer choices are correct

Answer: c

Difficulty: Hard

Learning Objective: List the six classes of nutrients.

Section Reference: 1.2 Food Provides Nutrients

17) Which of the following conditions does NOT represent a form of malnutrition?

- a) weight loss as a result of increasing physical activity while meeting nutrient requirements (except for Calories)
- b) vitamin A toxicity as a result of excessive intake of vitamin supplements
- c) osteoporosis as a result of inadequate intake of calcium and Vitamin D over an extended period of time
- d) overweight as a result of regular overconsumption of large portions of meat, grains, and dairy foods

Answer: a

Difficulty: Hard

Learning Objective: List the six classes of nutrients.

Section Reference: 1.2 Food Provides Nutrients

18) Which is NOT considered undernutrition?

- a) starvation
- b) diets high in saturated fat
- c) deficient intake of individual nutrients
- d) inability to absorb a particular nutrient

Answer: b

Difficulty: Medium

Learning Objective: List the six classes of nutrients.

Section Reference: 1.2 Food Provides Nutrients

19) What is most likely to cause an adverse or toxic reaction?

- a) overconsumption of vitamin and/or mineral supplements
- b) inability to absorb nutrients efficiently in the gut
- c) consumption of a diet that lacks variety
- d) overconsumption of a favourite food

Answer: a

Difficulty: Medium

Learning Objective: List the six classes of nutrients. Section Reference: 1.2 Food Provides Nutrients

20) Which of the following statements regarding diet-gene interaction is FALSE?

- a) Genetic makeup can influence the impact of nutrients on health
- b) Risk factors for chronic diseases are unrelated to an individual's DNA
- c) Diet and lifestyle are two contributing factors to the development of nutrition-related diseases
- d) Genetic variation can affect the function of proteins needed to metabolize nutrients

Answer: b

Difficulty: Hard

Learning Objective: List the six classes of nutrients. Section Reference: 1.2 Food Provides Nutrients

21) Amino acids supplements, vitamins and minerals supplements, and herbal remedies are examples of what type of product?

- a) micronutrients
- b) natural health products
- c) processed foods
- d) zoochemicals

Answer: b

Difficulty: Medium

Learning Objective: List the six classes of nutrients. Section reference: 1.2 Food Provides Nutrients

22) “Diets that include the consumption of large amounts of red and processed meats may increase the risk of colon cancer.” What is being described?

- a) undernutrition
- b) sodium toxicity
- c) overnutrition
- d) protein toxicity

Answer: c

Difficulty: Medium

Learning Objective: List the six classes of nutrients.

Section reference: 1.2 Food Provides Nutrients

23) “Some individuals need to consume more orange juice, because their body synthesizes an atypical protein that degrades vitamin C more rapidly than usual. Orange juice is an excellent source of vitamin C.” What is being described?

- a) a risk factor for chronic disease
- b) a strategy to prevent the common cold
- c) an example of how nutrition can be personalized
- d) overnutrition

Answer: c

Difficulty: Medium

Learning Objective: List the six classes of nutrients. Section reference: 1.2 Food Provides Nutrients

24) Which of the followings is likely to limit food availability?

- a) socioeconomic status
- b) health status
- c) where a person lives
- d) All of the answer choices are correct.

Answer: d

Difficulty: Medium

Learning Objective: List factors other than nutrition that affect food choices.

Section Reference: 1.3 Food Choices for a Healthy Diet

25) Eating turkey on Thanksgiving is an example of making a food preference based on what factor?

- a) cultural and family background
- b) personal preference
- c) availability
- d) psychological and emotional factors

Answer: a

Difficulty: Medium

Learning Objective: List factors other than nutrition that affect food choices. Section Reference: 1.3 Food Choices for a Healthy Diet

26) Which statement best describes the concept of eating a variety of foods?

- a) choosing at least one food from each food grouping in Canada's Food Guide each day
- b) including low kcalorie food choices to balance high kcalorie foods at each meal
- c) choosing an assortment of different foods from within food groupings as well as from among the food groupings
- d) making sure portion sizes are matched to energy needs

Answer: c

Difficulty: Medium

Learning Objective: List factors other than nutrition that affect food choices.

Section Reference: 1.3 Food Choices for a Healthy Diet

27) "A measure of the nutrients that a food provides compared to its energy content." What is being described?

- a) Healthy Food Index
- b) glycemic index
- c) Dietary Reference Intake
- d) nutrient density

Answer: d

Difficulty: Medium

Learning Objective: List factors other than nutrition that affect food choices.

Section Reference: 1.3 Food Choices for a Healthy Diet

28) Which is an effective strategy for selecting nutrient dense foods?

- a) select foods that have been minimally processed.
- b) select foods with a high nutrient content compared to the kcalories provided.
- c) select foods low in added fats and sugars in the diet.
- d) All of the answer choices are effective strategies.

Answer: d

Difficulty: Medium

Learning Objective: List factors other than nutrition that affect food choices. Section Reference: 1.3 Food Choices for a Healthy Diet

29) What is meant by the recommendation to eat in moderation?

- a) select foods from each food grouping in the diet
- b) select a variety of foods
- c) select appropriate portion sizes
- d) select foods with sufficient levels of vitamins and minerals.

Answer: c

Difficulty: Medium

Learning Objective: List factors other than nutrition that affect food choices.

Section Reference: 1.3 Food Choices for a Healthy Diet

30) Which food is more nutrient dense with respect to calcium?

Product A (50 g): calcium content: 100mg Kcalories: 200

Product B (50 g): calcium content: 100 mg Kcalorie: 150

- a) Product B
- b) Product A

- c) Both products have the same nutrient density with respect to calcium
- d) It is not possible to calculate nutrient density

Answer: a

Difficulty: Hard

Learning Objective: List factors other than nutrition that affect food choices. Section reference: 1.3 Food Choices for a Healthy Diet

31) A popular company has begun packaging nuts in bags containing 100 kcal. This is an example of what?

- a) portion distortion
- b) a food in the fruit and vegetable food grouping
- c) subpackaging
- d) grain product

Answer: c

Difficulty: Hard

Learning Objective: List factors other than nutrition that affect food choices. Section reference: 1.3 Food Choices for a Healthy Diet

32) In the 1960s a single-serving soft drink bottle contained 250 ml and about 100 kcal; today single-serving bottles contain 600 ml. This is an example of what phenomenon?

- a) portion control
- b) portion distortion
- c) inadequate intakes
- d) subpackaging

Answer: b

Difficulty: Hard

Learning Objective: List factors other than nutrition that affect food choices.
Section Reference: 1.3 Food Choices for a Healthy Diet

33) Which of the followings is the correct sequence of steps in the scientific method?

- a) Conduct an experiment, develop a hypothesis, form a theory, and make an observation
- b) Develop a hypothesis, conduct an experiment, make an observation, and form a theory
- c) Form a theory, conduct an experiment, develop a hypothesis, and make an observation
- d) Make an observation, develop a hypothesis, conduct an experiment, and form a theory

Answer: d

Difficulty: Medium

Learning Objective: List the steps of the scientific method. Section Reference: 1.4 Understanding Science Helps Us Understand Nutrition

34) Which of the following statements regarding the differences between a hypothesis and a theory is TRUE?

- a) A hypothesis is an educated guess and a theory is a scientific explanation
- b) Hypotheses are never tested, but theories are tested
- c) Theories are the foundations of hypotheses
- d) A hypothesis is tested using quantifiable data and theories are tested using subjective data

Answer: a

Difficulty: Hard

Learning Objective: List the steps of the scientific method.
Section Reference: 1.4 Understanding Science Helps Us Understand Nutrition

35) On what does the acceptance of a scientific theory depend?

- a) the ability of other scientists to duplicate the original research and results
- b) increased funding for the research
- c) the number of years since the development of the theory
- d) how the hypothesis was formed

Answer: a

Difficulty: Medium

Learning Objective: List the steps of the scientific method. Section Reference: 1.4 Understanding Science Helps Us Understand Nutrition

36) Which of the followings is NOT a component of a valid nutrition experiment?

- a) opinions of the researchers
- b) controls suitable to the experiment
- c) appropriate type and number of subjects
- d) careful interpretation of experimental results

Answer: a

Difficulty: Easy

Learning Objective: Chapter 1 Summary
Section Reference: Chapter 1 Summary

37) Which is an example of anecdotal information?

- a) Runners have their blood glucose levels measured following a race
- b) A runner reports having more endurance after eating an energy bar
- c) Runners are timed before and after eating one energy bar a day for a month
- d) People take a written test before and after eating energy bars for a month; the results are scored

Answer: b

Difficulty: Easy

Learning Objective: List the steps of the scientific method.

Section Reference: 1.4 Understanding Science Helps Us Understand Nutrition

38) Researchers compared the effect of a typical Canadian diet and a vegetarian diet on blood cholesterol levels and found that the vegetarian diet resulted in lower cholesterol levels that were not due to chance. What does this mean?

- a) There was a **no** statistically significant difference between the two diets.
- b) There was a statistically significant difference between the two diets and vegetarian diets may **decrease** the risk of heart disease.
- c) There was a statistically significant difference between the two diets and vegetarian diets may **increase** the risk of heart disease.
- d) There was **no** statistically significant difference between the two diets but vegetarian diets may still **decrease** the risk of heart disease.

Answer: b

Difficulty: Hard

Learning Objective: List the steps of the scientific method.

Section reference: 1.4 Understanding Science Helps Us Understand Nutrition

39) What is the relationship between serum cholesterol levels (levels of cholesterol in the blood) and cardiovascular disease?

- a) serum cholesterol is a biomarker that reflects the risk of cardiovascular disease; risk increases as serum cholesterol **decreases**.
- b) serum cholesterol is a biomarker that reflects the risk of heart attack or stroke; risk increases as serum cholesterol **increases**.
- c) cardiovascular disease is a biomarker that correlates with levels of serum cholesterol in the blood.
- d) serum cholesterol is a biomarker that reflects the risk of stroke but is unrelated to the risk of damage to coronary arteries.

Answer: b

Difficulty: Hard

Learning Objective: List the steps of the scientific method.

Section reference: 1.4 Understanding Science Helps Us Understand Nutrition

40) After an experiment is completed, the scientist writes up his results and submits it to a journal. Before being accepted for publication the study will undergo peer review. What does this mean?

- a) the abstract of the paper is written by researchers not involved in the study.
- b) experts, not involved in the research, read the study and decide whether it was well-conducted and the results were properly analyzed.
- c) experts, involved in the research, carefully proofread their writing to ensure no errors are present in the study.
- d) the results are subjected to rigorous statistical analysis.

Answer: b

Difficulty: Hard

Learning Objective: List the steps of the scientific method.

Section reference: 1.4 Understanding Science Helps Us Understand Nutrition

41) In some experiments, why are biomarkers used instead of the presence or absence of disease (also known as disease outcomes)?

- a) Biomarkers more accurately reflect disease risk than actual disease outcomes.
- b) Biomarkers respond to diet more slowly than actual disease outcomes.
- c) Although biomarkers are **not** as conclusive as directly measuring disease outcomes, they respond to changes in diet more rapidly
- d) Biomarkers are as conclusive as disease outcome and they are easier to measure

Answer: c

Difficulty: Hard

Learning Objective: List the steps of the scientific method.

Section reference: 1.4 Understanding Science Helps Us Understand Nutrition

42) Approximately 1,000 college students were asked to keep a record of the types and amounts of supplemental vitamins they consumed and how many colds they had over the course of a year. The amount of vitamin C consumed was compared with the students' incidences of colds. What types of study was this?

- a) clinical trial
- b) observational study
- c) intervention trial
- d) laboratory study

Answer: b

Difficulty: Medium

Learning Objective: Differentiate between the different types of nutrition studies.

Section Reference: 1.5 Nutrition Research

43) One group of subjects is asked to eat a diet high in fruits, vegetables, and dairy foods while a second group is asked to eat a diet with low amounts of fruits, vegetables, and dairy foods. The two groups' blood pressure readings are monitored and compared. What type of study was this?

- a) case-control study
- b) observational study
- c) intervention trial
- d) *in vitro* study

Answer: c

Difficulty: Medium

Learning Objective: Differentiate between the different types of nutrition studies.

Section Reference: 1.5 Nutrition Research

44) A study compares the amount of a specific nutrient consumed with the amount of the nutrient excreted. What type of study is it?

- a) balance study
- b) collection study
- c) depletion-repletion study
- d) observational study

Answer: a

Difficulty: Medium

Learning Objective: Differentiate between the different types of nutrition studies.

Section Reference: 1.5 Nutrition Research

45) Which of the followings is NOT a true statement about nutritional studies using animals?

- a) Animal studies can be more easily controlled than human studies
- b) The digestive system of some animals is quite different from humans, making these animals inappropriate choices for some studies
- c) The choice of the animal studied may influence the outcome of the study
- d) Results from animal studies can be generalized to the human population

Answer: d

Difficulty: Medium

Learning Objective: Differentiate between the different types of nutrition studies.

Section Reference: 1.5 Nutrition Research

46) In a controlled experiment, the group that does NOT receive treatment is called the

- a) control group.
- b) double-blind group.
- c) experimental group.
- d) placebo effect.

Answer: a

Difficulty: Easy

Learning Objective: Differentiate between the different types of nutrition studies.

Section Reference: 1.5 Nutrition Research

47) Researchers examine whether caffeine has any effect on short-term memory. In the first part of the study, two groups of subjects are given capsules that look identical. Group A receives caffeine and Group B receives a harmless neutral substance. What was group B given?

- a) catalyst
- b) placebo
- c) stimulant
- d) simulation factor

Answer: b

Difficulty: Medium

Learning Objective: Differentiate between the different types of nutrition studies.

Section Reference: 1.5 Nutrition Research

48) Which is the BEST reason for using a placebo as part of the experimental design?

- a) Because it makes it impossible for researchers to know who is receiving an intervention and who is not
- b) Because the only way to know if the treatment works is to compare it to a placebo
- c) Because it prevents subjects from knowing whether or not they are receiving the treatment
- d) Because it allows the incorporation of a larger number of subjects in the experiment

Answer: c

Difficulty: Medium

Learning Objective: Differentiate between the different types of nutrition studies. Section Reference: 1.5 Nutrition Research

49) How do you describe a clinical trial, in which subjects do not know which treatment they are receiving, but the researchers do?

- a) anecdotal
- b) collaboration
- c) double-blind
- d) single-blind

Answer: d

Difficulty: Easy

Learning Objective: Differentiate between the different types of nutrition studies.

Section Reference: 1.5 Nutrition Research

50) How do you describe an intervention trial, in which neither the subjects nor the investigators know which subjects are receiving the treatment?

- a) double-blind study
- b) single-blind study
- c) variable study
- d) undirected study

Answer: a

Difficulty: Easy

Learning Objective: Differentiate between the different types of nutrition studies.

Section Reference: 1.5 Nutrition Research

51) Which of the followings is a process that is part of strict safety and ethical regulations governing human subject research?

- a) peer review
- b) double-blind
- c) retrospective authorization
- d) informed consent

Answer: d

Difficulty: Medium

Learning Objective: Differentiate between the different types of nutrition studies.

Section Reference: 1.5 Nutrition Research

52) What is the short paragraph that summarizes a published experiment and its main findings?

- a) an abstract
- b) an introduction
- c) a discussion
- d) a database

Answer: a

Difficulty: Easy

Learning Objective: Differentiate between the different types of nutrition studies.

Section Reference: 1.5 Nutrition Research

53) Which of the following statements regarding Pubmed is FALSE?

- a) It is a database supported by the National Institutes of Health (NIH) in the United States
- b) It is a free online resource for accessing published scientific reports
- c) It is a password-protected site
- d) It can be accessed on the Internet by anyone

Answer: c

Difficulty: Medium

Learning Objective: Differentiate between the different types of nutrition studies.

Section Reference: 1.5 Nutrition Research

54) A scientific study recorded the dietary intake of 60,000 men and tracked the health of these men for 8 years. The study concluded that there is an inverse association between the consumption of green tea and the occurrence of prostate cancer. Which statement best describes the study and its conclusion?

- a) This is an intervention trial which demonstrates that consuming green tea may increase the risk of prostate cancer.
- b) This is an intervention trial which demonstrates that consuming green tea reduces the risk of prostate cancer.
- c) This is an observational study that demonstrates that green tea causes an increase in the risk of prostate cancer.
- d) This is an observational study that demonstrates that green tea may reduce the risk of prostate cancer.

Answer: d

Difficulty: Hard

Learning Objective: Differentiate between the different types of nutrition studies. Section reference: 1.5 Nutrition Research

55) Dr Q is conducting an experiment to determine if vitamin Z can reduce blood pressure in a group of middle-aged adults. Dr Q asks a colleague, who is not involved in the study, to use a computer programme that assigns the students to one or two groups, purely on the basis of chance. One group receives a capsule of vitamin Z and the other group receives a vitamin-free pill that tastes and looks identical to the vitamin Z capsule. Neither Dr Q nor the participants know who is receiving the vitamin and who is receiving the vitamin-free pill. Which statement best describes the experiment?

- a) This is a double-blind intervention trial that is randomized, has a treatment group that is receiving a placebo and is designed to show a causal relationship between vitamin Z and blood pressure.
- b) This is a double-blind intervention trial that is randomized, has a control group that is receiving a placebo and is designed to show a causal relationship between vitamin Z and blood pressure.
- c) This is an observational study that is randomized, has a control group that is receiving a placebo and is designed to show a causal relationship between vitamin Z and blood pressure.
- d) This is an intervention trial that includes a control group that is receiving a placebo and a treatment group receiving Vitamin Z, but participants were not randomly assigned to the control or the treatment group.

Answer: b

Difficulty: Hard

Learning Objective: Differentiate between the different types of nutrition studies.

Section reference: 1.5 Nutrition Research

56) A scientist is interested in the relationship between diet and breast cancer and decides to do a case-control study. He is able to find a group of women who have breast cancer and collects dietary intake information from them. What is the next step in this study?

- a) The scientist must assemble a group of healthy women (the controls) who are the same age and ethnicity as the women who have breast cancer (the cases).
- b) The scientist must assemble a group of healthy women (the cases) who are the same age and ethnicity as the women who have breast cancer (the controls).
- c) The scientist must assemble a group of healthy women (the controls), measure their dietary intake, and track them for several years to see if they develop breast cancer.
- d) The scientist must assemble a group of women who have breast cancer from another country, measure their dietary intake, and see if it differs from the first group of women.

Answer: a

Difficulty: Hard

Learning Objective: Differentiate between the different types of nutrition studies.

Section reference: 1.5 Nutrition Research

57) What is the most powerful tool(s) in promoting health and nutrition messages?

- a) dietitians
- b) mass media
- c) physicians
- d) talk radio

Answer: b

Difficulty: Medium

Learning Objective: Describe the first question to consider when assessing nutrition information. Section Reference: 1.6 Sorting Out Nutrition Information

58) Which of the following is an example of anecdotal evidence?

- a) double-blind studies
- b) results from a minimum of three experiments
- c) single-blind studies
- d) individual testimonies

Answer: d

Difficulty: Medium

Learning Objective: Describe the first question to consider when assessing nutrition information. Section Reference: 1.6 Sorting Out Nutrition Information

59) Which of the followings would be the LEAST reliable source of information about herbal supplements?

- a) government-supported publication
- b) dietitian
- c) pamphlet published by a health food store
- d) peer-reviewed article available on the Internet

Answer: c

Difficulty: Medium

Learning Objective: Describe the first question to consider when assessing nutrition information. Section Reference: 1.6 Sorting Out Nutrition Information

60) When determining the strength of experimental research, which is the LEAST important factor?

- a) the design of the study
- b) how many people conducted the study
- c) how the study was funded
- d) where the study was published

Answer: b

Difficulty: Medium

Learning Objective: Describe the first question to consider when assessing nutrition information. Section

Reference: 1.6 Sorting Out Nutrition Information

61) Which of the followings is the most reliable source of information about the effectiveness of a nutritional supplement?

- a) The results of a randomized double-blind intervention trial that compared the nutritional supplement to a placebo.
- b) Two hundred people describing their use of the nutritional supplement and how it improved their health.
- c) A study that compared the health of users of the nutritional supplement with non-users, corrected for confounding factors.
- d) A study that compared the health of users of the nutritional supplement with non-users, uncorrected for confounding factors.

Answer: a

Difficulty: Hard

Learning Objective: Describe the first question to consider when assessing nutrition information.?

Section reference: 1.6 Sorting Out Nutrition Information

62) You are reviewing a website that describes a diet plan to improve the function of the immune system. Which characteristic of this website, described below, causes you to be concerned about the website's reliability?

- a) The website claims that diet can influence immune function.
- b) The website claims that a university study has proven the effectiveness of the diet plan, but the study has not been published.
- c) The website was recently updated with support from peer reviewed research.
- d) The claims of the website are confirmed by other peer reviewed studies.

Answer: b

Difficulty: Medium

Learning Objective: Describe the first question to consider when assessing nutrition information. Section

reference: 1. 6 Sorting Out Nutrition Information

Question type: Essay

63) Canadians are replacing more and more home cooked meals with meals from fast food restaurants.

- a) What are the nutritional impacts of this trend?
- b) How does this trend influence disease risk?

$$\frac{28 \times 4 = 112}{165 \text{ kcalories}}$$

Difficulty: Easy

Learning Objective: List the six classes of nutrients.

Section Reference: 1.2 Food Provides Nutrients

67) Describe the three general functions of nutrients.

Answer:

Providing energy: carbohydrates, proteins, and lipids undergo biochemical reactions that provide energy for synthesis, basic body functions, and physical activity.

Forming structures: bones, muscles, and cells are formed from proteins, lipids, and minerals.

Regulating body processes: metabolism helps to maintain a stable environment in the body.

Difficulty: Easy

Learning Objective: List the six classes of nutrients.

Section Reference: 1.2 Food Provides Nutrients

68) People's food choices are affected by many factors other than the nutritional value of the food. Select two of the factors that affect food choices and explain how you would use this factor to help reinforce a dietary change an individual is trying to make for nutritional reasons.

Answer: The factors to choose from are: (actual responses will vary)

Availability

Cultural and Family Background

Social Acceptability

Personal Preference

Psychological and Emotional Factors

Health Concerns

Media

Difficulty: Medium

Learning Objective: List factors other than nutrition that affect food choices.

Section Reference: 1.3 Food Choices for a Healthy Diet

69) Describe the steps involved in conducting a valid experiment using the scientific method.

Answer: Make an observation and ask questions.

Propose a hypothesis-an explanation of the observations.

Design an experiment to test the hypothesis that provides objective data.

Establish a theory based on the experimental data.

Difficulty: Easy

Learning Objective: List the steps of the scientific method. Section Reference: 1.4 Understanding Science Helps Us Understand Nutrition

70) What is the difference between a depletion-repletion study and a balance study? How is each used in the field of nutrition?

Answer: Depletion-repletion is used to study the function and/or requirements of a nutrient. Subjects are fed a diet without the nutrient until symptoms appear; then the nutrient is added back to the diet until symptoms disappear. A balance study also looks at functions and requirements, but compares the amount of a nutrient that enters the body with what is excreted. When the amount consumed equals the amount excreted, the body is in balance. This technique measures the minimum amount of nutrient needed to replace losses.

Difficulty: Medium

Learning Objective: Differentiate between the different types of nutrition studies.

Section Reference: 1.5 Nutrition Research

71) What are two advantages of using animals instead of humans in nutrition experiments? What are two disadvantages?

Answer:

Advantages

May be less costly

Short life span so nutrition changes develop rapidly

Easy to control food intake and measure excretions

Disadvantages

The best models are expensive and have long life span

May not be identical to humans in how they develop disease or use nutrients

Difficulty: Easy

Learning Objective: Differentiate between the different types of nutrition studies.

Section Reference: 1.5 Nutrition Research

72) Mrs. Sandoz's fourth grade class spent several class periods learning about nutrition. They learned about Canada's Food Guide and how eating a healthy diet could benefit them. Mr. Danner's fourth grade class, in the same building, did not have a unit on nutrition. After the nutrition unit was finished in Mrs. Sandoz's class, researchers looked at the selections students made in the cafeteria and how much food was consumed and thrown away by each class to see if the nutrition education had an effect on the students' eating habits.

- a) What type of study was this?
- b) Which classroom was the control classroom?
- c) Which classroom was the experimental group?
- d) What other factors affect students' choice of food, besides what they know about health and food?

Answer:

- a) Intervention trial
- b) Mr. Danner's
- c) Mrs. Sandoz's
- d) Availability, Cultural and Family Background, Social Acceptability, Personal Preference, Psychological and Emotional Factors, Health Concerns, Media

Difficulty: Medium

Learning Objective: Differentiate between the different types of nutrition studies. Section Reference: 1.5 Nutrition Research

73) What is epidemiology? Compare the type of information obtained from observational studies to that obtained from human intervention studies.

Answer: Epidemiology observes the relationships between diet and health among different population groups and identifies patterns or associations among patterns and disease. Human intervention studies test hypotheses that arise from epidemiological studies. Intervention studies use experiments to intervene in individual lives and test a hypothesis so that a theory may be developed.

Difficulty: Medium

Learning Objective: Differentiate between the different types of nutrition studies.
Section Reference: 1.5 Nutrition Research

74) Describe what is meant by the term *control group* and explain why a well-designed experiment includes a control group.

Answer: A group of participants in a study who are treated the same as subjects in an experimental group, except that no experimental treatment is implemented. The control group would receive a placebo to control bias and is used as a basis of comparison.

Difficulty: Easy

Learning Objective: Differentiate between the different types of nutrition studies. Section Reference: 1.5 Nutrition Research

75) What is the difference between a single-blind and a double-blind study? Why are double-blind techniques used?

Answer: Single – the subject or researcher does not know who is receiving the intervention.
Double – neither the participants nor the researcher knows who is in the experimental group and who is in the control group. The double-blind technique is used so that neither the subjects' nor the researchers' expectations bias the results of the experiment.

Difficulty: Medium

Learning Objective: Differentiate between the different types of nutrition studies.
Section Reference: 1.5 Nutrition Research

76) Name reliable sources of nutrition information.

Answer: Dietitians, physicians, government recommendations, non-profit educational organizations, peer-reviewed journals, and universities.

Difficulty: Easy

Learning Objective: Describe the first question to consider when assessing nutrition information. Section

Reference: 1.6 Sorting Out Nutrition Information

77) Recently Trevor received an e-mail forwarded to him by a friend. The e-mail warns all recipients of the dangers of an artificial sweetener, which according to the original author, is responsible for several types of cancer, mental illness, and several other serious ailments. The author uses several anecdotal stories as the basis for her assertions. Curious, Trevor does a search on the Internet for the author, but cannot find any information about her.

- a) What do you think of unsolicited e-mail as a source of nutrition advice?
- b) How likely is it that one product causes or cures several different diseases?
- c) What else makes you wonder about the validity of the information?
- d) How might you use the Internet to get more information about the artificial sweetener in question?
- e) How can you tell if nutrition information in a letter, in an article, or on television is accurate?

Answer:

- a) It is an unreliable source.
- b) Unlikely – an artificial sweetener would have to undergo extensive testing to demonstrate safety before being marketed.
- c) As above, the product would have to undergo extensive testing. It is unlikely that a product available for use would cause such a variety of problems.
- d) Go to the Health Canada website to search for the product testing history; conduct a search in a database that references peer-reviewed published research; look for websites that have .gov, or .edu for information about the product.
- e) References and resources that provide an objective evidence base are provided. The person speaking has the education and experience to speak with authority.

Difficulty: Medium

Learning Objective: Describe the first question to consider when assessing nutrition information.

Section Reference: 1.6 Sorting Out Nutrition Information

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