

Chapter 02 - Evaluating Nutrition Information

Chapter 02
Evaluating Nutrition Information

Multiple Choice Questions

1. A group of registered dietitians is planning to conduct a scientific study to investigate the effects of eating honey on school-age children's behavior. At first, the researchers will
- A. analyze the hypothesis.
 - B. make observations.**
 - C. identify relationships between variables.
 - D. gather data.

Bloom's Level: 1. Remember

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

2. A medical researcher reads an article in "Today's Health-Conscious Woman" magazine about the benefits of using the phytochemical capsaicin to treat knee pain. She asks 10 people with arthritic knees to rub a cream that contains the phytochemical on their knee joints for two weeks. At the end of the two weeks, the researcher asks the subjects whether their knee pain improved, stayed about the same, or worsened during the treatment period. After collecting responses from the people, the researcher reports the results of her study during a popular TV show that is hosted by a doctor. Based on this information, which of the following statements is false?

- A. This study's design followed conventional scientific methodology for research involving human subjects.**
- B. The researcher failed to review scientific literature regarding the use of capsaicin to treat knee pain.
- C. The number of subjects enrolled in the study was not large enough to reduce the possibility that the results occurred by chance.
- D. The researcher did not divide the subjects of her study into control and treatment groups.

Bloom's Level: 4. Analyze

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

3. A nutrition scientist has heard anecdotes about the usefulness of taking megadoses of vitamin C to prevent the common cold. The researcher decides to test the hypothesis that consuming such large doses of vitamin C are an effective way to prevent colds. He provides dietary supplements that contain 10 times the physiological dose of vitamin C in each pill to a group of 12 adults, and he instructs the people to take one pill daily for a year. After a year, the scientist asks the subjects to recall the number and duration of colds they experienced during the previous 12 months. After collecting and analyzing the subjects' responses, the researcher determines that taking megadoses of vitamin C each day is an effective way to prevent cold infections. Based on this information, which of the following statements is true?
- A. This study's design followed conventional scientific methodology for research involving epidemiological studies.
 - B.** The results could have occurred by chance because there were not enough subjects involved in the research.
 - C. After collecting and analyzing data from the subjects, the researcher should submit his study design to a human subjects review committee for their approval.
 - D. None of these is correct.

Bloom's Level: 4. Analyze

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

4. A group of scientists conducts a scientific study to investigate dietary factors that influence the development of obesity. Which of the following activities is not likely to be a component of their research efforts?
- A. Making observations and formulating a hypothesis
 - B. Submitting an article describing the study to a peer-reviewed journal
 - C.** Posting findings at the main researcher's Internet web site
 - D. Collecting data and analyzing results

Bloom's Level: 1. Remember

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

5. According to the observations of a nutrition scientist, laboratory mice are healthier when their diet contains physiological levels of vitamin D than when their diet lacks the micronutrient. The scientist hypothesizes that mice will be less likely to develop cancer when they consume a diet that supplies megadoses of vitamin D. Based on this information, the scientist is ready to
- A. plan a retrospective study involving at least 5,000 laboratory mice to test the vitamin D and cancer hypothesis in mice.
 - B. design a double-blind study to test the vitamin D and cancer hypothesis in mice.
 - C.** conduct a controlled laboratory experiment to test the vitamin D and cancer hypothesis in mice.
 - D. set up an experimental epidemiological study to test the vitamin D and cancer hypothesis in mice.

Bloom's Level: 3. Apply

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

6. A medical researcher observes that 6-year-old children prefer to drink chocolate-flavored whole milk than plain whole milk. The researcher hypothesizes that 6-year-old children can reduce their intakes of animal fat by being offered chocolate-flavored fat-free milk instead of the chocolate-flavored whole milk. Based on this information, the scientist is ready to take the next step, which is
- A. conduct a retrospective study involving at least 1,000 6-year-old children who drink chocolate milk.
 - B. conduct a double-blind study to test the willingness of children to drink chocolate-flavored fat-free milk.
 - C. contact the parents of several hundred 6-year-old children who attend three local elementary schools and invite them to enroll their children in the study.
 - D.** design the study and submit the design to his institution's human subjects review committee.

Bloom's Level: 3. Apply

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

7. Researchers at a major American university plan a scientific study to investigate lifestyle factors that contribute to heart disease. Which of the following activities is likely to be a component of their research efforts?

- A. Obtaining FDA and FTC approval to conduct research on human subjects
- B. Submitting an article describing the study to a peer-reviewed journal**
- C. Posting significant findings at the main researcher's Internet web site
- D. None of these is correct.

Bloom's Level: 1. Remember

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

8. Scientists enroll 500 healthy adults in a study and collect dietary and other lifestyle information about the group. After 6 years, the scientists determine that study participants who ate at least 5 servings of fruits and vegetables daily were less likely to develop high blood pressure than participants who ate fewer than 5 servings of these foods daily. This study is an example of a(n) _____ study.

- A. prospective**
- B. nutritive
- C. retrospective
- D. introspective

Bloom's Level: 2. Understand

Bloom's Level: 4. Analyze

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

9. A scientist adds 5 mcg of the mineral cadmium to the daily diet of 100 4-week-old laboratory mice. After twelve weeks, the researcher weighs and takes blood samples from each mouse. According to her findings, the mice lost weight during the 12-week period and they have abnormal levels of certain hormones in their blood. Based on this information and your knowledge of scientific research, what would you tell the researcher about her findings?

A. Her results are very interesting and she should report her findings to nutrition scientists, so they can repeat her study and confirm the results.

B. The findings are not meaningful or valid because of the way she designed her study.

C. She needs to conduct more tests on the animals' blood, because her findings are incomplete.

D. The findings need to be summarized in a research article for submission to a peer-reviewed nutrition journal.

Bloom's Level: 4. Analyze

Learning Outcome: 2.03 Explain the importance of having controls when performing experiments.

Section: 2.01

Topic: Nutrition Basics

10. A nutrition researcher adds 30 mg of the mineral iron to the daily diet of 50 4-week-old laboratory mice. After ten weeks, the scientist takes blood samples from each mouse. According to his findings, the mice developed abnormal levels of certain enzymes in their red blood cells. Based on this information and your knowledge of scientific research, what would you tell him?

A. He should report his findings to other nutrition scientists, so they can repeat his study and confirm the results.

B. He should call a press conference and report his findings to the public, so they can avoid consuming excess iron.

C. He should consider his findings as an observation and redesign the study to include a control group.

D. He should prepare a research article that describes his study and its results for submission to a peer-reviewed nutrition journal.

Bloom's Level: 4. Analyze

Learning Outcome: 2.03 Explain the importance of having controls when performing experiments.

Section: 2.01

Topic: Nutrition Basics

11. Over a 2-year period, a team of scientists records the eating behaviors and physical activity patterns of a group of healthy 8-year-old children to determine whether these factors are associated with weight gain. This study is an example of a(n) ____ study.

- A. case-control
- B. retrospective
- C. prospective**
- D. in-vitro

Bloom's Level: 2. Understand

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

12. A group of nutrition researchers interviews 100 adults who have chronic high blood pressure to determine whether there is an association between consuming diets low in calcium during adolescence and developing high blood pressure in adulthood. This study is an example of a ____ study.

- A. case-control
- B. retrospective**
- C. prospective
- D. macrosomatic

Bloom's Level: 2. Understand

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

13. Which of the following kinds of studies would be the best to use when designing a scientific investigation to determine whether there is an association between consuming diets high in sodium during adolescence and developing high blood pressure in adulthood?

- A. Single-blind study
- B. Experimental study
- C. Double-blind study
- D. Observational study**

Bloom's Level: 3. Apply

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Section: 2.01

Topic: Nutrition Basics

14. A nutrition researcher would like to determine whether women who take fish oil supplements during pregnancy give birth to babies who score higher on basic intelligence tests when they are 5 years of age than the 5-year old children that were born to women who did not take the fish oil supplements during pregnancy. This kind of research is a _____ study.

- A. double-blind
- B. prospective**
- C. case-control
- D. None of these is correct.

Bloom's Level: 4. Analyze

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

15. Which of the following kinds of studies would be the best to use to identify lifestyle factors that may be related to the development of liver cancer in an adult population?

- A. Single-blind study
- B. Experimental study
- C. Retrospective study**
- D. Double-blind study

Bloom's Level: 3. Apply

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

16. Scientists who investigate lifestyle factors that influence the prevalence of obesity among different population groups are conducting a(n) _____ study.

- A. epidemiological**
- B. technological
- C. pathological
- D. in-vitro

Bloom's Level: 2. Understand

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

17. Which of the following kinds of studies would be the best to use when investigating whether cigarette smoking influences weight gain?

- A.** Cohort
- B. Single-blind
- C. Double-blind
- D. Conventional

Bloom's Level: 2. Understand

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

18. Scientists in a Central American country are studying factors that may be associated with delayed physical growth among a group of low-income children. The children live in a region of the nation that has high levels of lead in drinking water. This study is an example of a(an) _____ study.

- A.** epidemiological
- B. uncontrollable
- C. introspective
- D. conventional

Bloom's Level: 3. Apply

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

19. Scientists would like to conduct a study to identify lifestyle factors that are associated with delayed physical growth among a group of low-income American children. Which of the following research designs would be the best for the researchers to use when designing their study?

- A. Human in-vivo experimental
- B.** Epidemiological
- C. Double-blind
- D. Interventional

Bloom's Level: 3. Apply

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Section: 2.01

Topic: Nutrition Basics

20. A group of scientists would like to determine lifestyle factors that are associated with the development of asthma among American children. Based on this information, the researchers should design a (an) _____ study.

- A. conventional
- B. in-vivo
- C. double-blind
- D.** epidemiological

Bloom's Level: 3. Apply

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

21. Generally, epidemiological studies

- A. establish causation without experimentation.
- B. prove positive correlations.
- C.** cannot determine cause-and-effect relationships.
- D. involve in-vitro experimentation.

Bloom's Level: 1. Remember

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

22. Derek takes protein supplements before and after his workouts. He told his workout partner that he became 200% stronger within a couple of months after he added the supplements to his diet. His report about the effects of the supplements is an example of a(an)

- A. factoid.
- B.** anecdote.
- C. variable.
- D. case report.

Bloom's Level: 2. Understand

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Section: 2.01

Topic: Nutrition Basics

23. Zack takes 500 mg of vitamin C daily. He advises his friends to take vitamin C supplements because, he claims, the vitamin protects him from cold viruses. His claim about the usefulness of the vitamin is an

- A. in-vivo report.
- B. in-vitro assumption.
- C. introspection.
- D.** anecdote.

Bloom's Level: 2. Understand

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Section: 2.01

Topic: Nutrition Basics

24. Emily has brittle fingernails that crack and split easily. Emily's mother advises her daughter to take gelatin pills 3 times/day, because she has heard the practice strengthens fingernails. The mother's nutrition-related advice about the benefit of taking gelatin pills is an example of a(n)

- A. hypothesis.
- B. testimonial.
- C.** anecdote.
- D. placebo.

Bloom's Level: 2. Understand

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Section: 2.01

Topic: Nutrition Basics

25. Dylan takes garlic pills to lower his blood cholesterol level, and he recommends the pills to his friends, because he thinks the supplement is helpful. Dylan's nutrition-related advice to his friends is an example of a(an)

- A. introspection.
- B. subjective bias.
- C. peer review.
- D.** anecdote.

Bloom's Level: 2. Understand

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Section: 2.01

Topic: Nutrition Basics

26. Having a control group enables researchers to
- A. provide specific treatments to participants of the group.
 - B. compare findings of the control group with those of the experimental group.**
 - C. avoid using harmful interventions when testing control subjects' responses.
 - D. explore possible hypotheses for future research efforts.

Bloom's Level: 1. Remember

Learning Outcome: 2.03 Explain the importance of having controls when performing experiments.

Section: 2.01

Topic: Nutrition Basics

27. Phil is a participant in a study designed to examine the effects of taking a dietary supplement on muscle tissue development. Phil suspects he is in the experimental group, because he is certain his muscles are bigger and stronger as a result of taking the product supplied by the researchers. When the study is completed, Phil learns that he did not receive the dietary supplement. Phil thinks the researchers made a mistake—he is certain his muscle mass increased while he took the supplement. According to this information, Phil's belief that his physical condition improved while he participated in the study is an example of
- A. the placebo effect.**
 - B. an anecdotal report.
 - C. human subject bias.
 - D. participant fatigue.

Bloom's Level: 2. Understand

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Section: 2.01

Topic: Nutrition Basics

28. The host of a radio program makes a "red flag" claim about a nutrition-related product, because the claim is generally an indication that the information about the product is unreliable. The radio program host said,
- A. "According to the FDA, this product is classified a dietary supplement, because it contains vitamins."
 - B. "All ingredients in this product have been scientifically tested and clinically proven."**
 - C. "This product contains sugar and certain artificial color and flavor additives."
 - D. "The ingredients in this product are listed on the label."

Bloom's Level: 3. Apply

Learning Outcome: 2.05 Describe how to identify questionable sources of nutrition information.

Section: 2.02

Topic: Nutrition Basics

29. A physician who hosts a popular TV show makes several nutrition related claims during one of the programs. He states that vitamin C is an essential nutrient; niacin cures pellagra; a type of bacterium is often associated with the development of stomach ulcers; and dietary supplements that contain the herb kava have been clinically proven to cure migraine headaches. Which of the doctor's claims is a "red flag" of unreliable information?

- A. Kava cures migraine headaches.
- B. A bacterium is often involved in the development of stomach ulcers.
- C. Niacin cures pellagra.
- D. Vitamin C is an essential nutrient.

Bloom's Level: 4. Analyze

Learning Outcome: 2.05 Describe how to identify questionable sources of nutrition information.

Section: 2.02

Topic: Nutrition Basics

30. An article in a popular men's magazine includes several health-related claims, such as regular exercise prevents stomach ulcers; herbal supplements are essential for optimal health; and niacin cures pellegra. Which of these claims is supported by scientific evidence?

- A. Herbal supplements are essential for optimal health.
- B. Niacin cures pellegra.
- C. Regular exercise prevents stomach ulcers.
- D. None of these is correct.

Bloom's Level: 4. Analyze

Learning Outcome: 2.05 Describe how to identify questionable sources of nutrition information.

Section: 2.02

Topic: Nutrition Basics

31. A physician who hosts a popular TV show makes several nutrition-related claims during one of the programs. According to the physician, melatonin may be effective for treating certain sleep disorders; white sugar causes stomach ulcers; and niacin cures pellagra. Which of the doctor's claims is a "red flag" for unreliable information?

- A. Melatonin may be a useful treatment for certain sleep disorders.
- B. Niacin cures pellagra.
- C. White sugar causes stomach ulcers.
- D. All of these are correct.

Bloom's Level: 3. Apply

Learning Outcome: 2.05 Describe how to identify questionable sources of nutrition information.

Section: 2.01

Topic: Nutrition Basics

32. Bonita is a biochemist for a manufacturer that uses tomato seed extract to make a dietary supplement. According to the results of her research, people who take the dietary supplements do not report a reduction in the number of upper respiratory tract infections they experience, including the common cold. However, Bonita's boss does not encourage her to publish the findings in scientific literature. The boss's lack of enthusiasm for spreading the news about Bonita's research is an example of

- A. whistleblowing.
- B. denial.
- C. quackery.
- D. bias.**

Bloom's Level: 2. Understand
Learning Outcome: 2.04 Define research bias.
Section: 2.01
Topic: Nutrition Basics

33. Which of the following observations is an example of an inverse correlation?

- A. When members of a population increase their consumption of milk and milk products, their risk of bone fractures decreases.**
- B. As children increase their physical activity level, they develop greater muscle mass than children who are less active.
- C. When pregnant women gain more weight than average, they are more likely to give birth to babies who are heavier than average.
- D. None of these is correct.

Bloom's Level: 3. Apply
Section: 2.01
Topic: Nutrition Basics

34. Which of the following observations is an example of a positive correlation?
- A. When members of a population consume fewer fruits and vegetables, their risk of high blood pressure increases.
 - B. When a group of children increases their physical activity levels, the percentage of the children who contract cold infections decreases.
 - C. When women gain less weight than average during pregnancy, the birthweights of their babies tend to be lower than average.
 - D. When a population's intake of green tea increases, the percentage of lung cancer cases in that population decreases.

Bloom's Level: 3. Apply
Section: 2.01
Topic: Nutrition Basics

35. Which of the following observations is an example of an inverse correlation?
- A. When population increases its daily consumption of whole grain products, the population's frequency of daily bowel movements increases.
 - B. Children who consume 3 cups of vitamin D milk daily develop stronger bones than children who drink fewer than 3 cups of vitamin D milk each day.
 - C. Women who smoke 5 or more cigarettes each day during pregnancy are more likely to give birth to underweight babies than women who smoke fewer than 5 cigarettes a day during pregnancy.
 - D. As a population's intake of beta carotene increases, the population's tissue levels of vitamin A increase.

Bloom's Level: 4. Analyze
Section: 2.01
Topic: Nutrition Basics

36. Which of the following observations is an example of a positive correlation?

- A. When teenage girls increase their intake of iron-rich foods, the percentage of the girls who have iron-deficiency decreases.
- B. When a population consumes more fruits and vegetables, the percentage of people in that population with scurvy decreases.
- C. When older adults increase their daily intake of vitamin D, the percentage of the adults that develops infections decreases.
- D.** When a group of 6-year-old children increase their physical activity level to 60 minutes a day, the percentage of the children in the group who lose excess body fat increases.

Bloom's Level: 3. Apply

Section: 2.01

Topic: Nutrition Basics

37. Which of the following observations is an example of a positive correlation?

- A.** When a population's vitamin D intake decreases, the percentage of people in the population that have healthy immune systems decreases.
- B. When a population's intake of plant foods decreases, the percentage of obese people in that population increases.
- C. When a population's level of vitamin C in white blood cells increases, the percentage of people in the population who develop scurvy decreases.
- D. When a population's level of physical activity increases, the percentage of people who develop heart disease decreases.

Bloom's Level: 2. Understand

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Section: 2.01

Topic: Nutrition Basics

38. Scientists study 200 adults who have type 2 diabetes and 200 adults who have similar characteristics but do not have the disease. For 18 months, the researchers collect lifestyle information on all the study participants. According to the study's findings, the adults with type 2 diabetes were 25% less physically active than their counterparts who did not have type 2 diabetes. This is an example of a(n) _____ study.

- A. inverse relationship
- B. anecdotal
- C. prospective
- D.** case-control

Bloom's Level: 2. Understand

Section: 2.01

Topic: Nutrition Basics

39. A researcher wants to identify lifestyle factors that increase the risk of stomach cancer in men. His study design involves enrolling 250 adult men who have stomach cancer and 250 men who are cancer-free but have similar characteristics and backgrounds as the men who have stomach cancer. The researcher collects and analyzes information about each participant's lifestyle. Based on this information, what kind of study is the researcher conducting?

- A.** Case-control
- B. Cohort
- C. Experimental
- D. In-vivo

Bloom's Level: 4. Analyze

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Section: 2.01

Topic: Nutrition Basics

40. Which of the following observations is an example of a negative (an inverse) correlation?

- A. When a group of adults reduces their intake of fruits and vegetables, the percentage of people in the group who have high blood pressure increases.
- B. When a group of people increases their physical activity levels, the percentage of people in the group with type 2 diabetes decreases.
- C. When a group of older adults increases their intake of high-fiber foods, the percentage of people in the group who develop cancer decreases.
- D.** All of these are correct.

Bloom's Level: 3. Apply

Section: 2.01

Topic: Nutrition Basics

41. A group of scientists suspects that certain dietary practices are partially responsible for different rates of hypertension among different ethnic/racial groups. To test their hypothesis, the researchers examine data concerning the different population groups' hypertension rates and their past dietary practices. This research is a(n) _____ study.

- A.** retrospective
- B. case-control
- C. prospective
- D. hypothetical

Bloom's Level: 2. Understand

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Section: 2.01

Topic: Nutrition Basics

42. Scientists conduct a study in which 100 adults with chronic diarrhea are divided into 2 groups of 50 people. One group is given a supply of yogurt that contains a certain kind of bacteria and the other group is given yogurt that is bacteria free. The study's participants and researchers do not know which group of subjects has the bacteria in the yogurt and which group does not. The scientists instruct the participants to eat the entire 8 ounces of yogurt once a day for a month and record their bowel habits. This is an example of a(n) _____ study.

- A. introspective
- B.** double-blind
- C. uncontrolled
- D. hypothetical

Bloom's Level: 2. Understand

Section: 2.01

Topic: Nutrition Basics

43. A group of researchers wants to determine whether certain dietary factors are associated with the risk of attention deficit hyperactivity disorder (ADHD). The scientists follow a group of 500 healthy newborn babies for 10 years and collect health information as well as dietary practices for each child. At the end of the study period, the scientists analyze the data for correlations between the children's dietary practices and their likelihood of being diagnosed with ADHD. This is an example of a _____ study.

- A. retrospective
- B. factorial
- C.** prospective
- D. hypothetical

Bloom's Level: 2. Understand

Section: 2.01

Topic: Nutrition Basics

44. Scientists are conducting research to determine the effects of an herbal supplement on the emotional health of 100 adults. The researchers give pills that contain the herb to 50 of the subjects. The remaining subjects receive pills that look, smell, and taste like the herbal pills but contain no active ingredients. Neither the researchers nor the subjects know whether their pills contain the herb. This is an example of a(n) _____ study.

- A. intervention
- B. double-blind**
- C. case-control
- D. None of these is correct.

Bloom's Level: 2. Understand

Section: 2.01

Topic: Nutrition Basics

45. Researchers are conducting a study to determine the effects of vitamin C on the human immune system. The study involves providing pills that contain vitamin C to one group of human subjects and pills that do not contain vitamin C or other active ingredients to another group of people. The pills that do not contain the vitamin are

- A. antidotes.
- B. supplements.
- C. placebos.**
- D. probiotics.

Bloom's Level: 1. Remember

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Section: 2.01

Topic: Nutrition Basics

46. Researchers are conducting a study to determine the effects of vitamin D supplements on the human immune system. The study involves providing pills that contain vitamin D to one group of human subjects and pills that do not contain the vitamin or other active ingredients to another group of people. The pills that do not contain vitamin D are

- A. placebos.**
- B. antidotes.
- C. distractors.
- D. interventions.

Bloom's Level: 1. Remember

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Section: 2.01

Topic: Nutrition Basics

47. Researchers are conducting a study to determine the effects of zinc supplements on the human immune system. The study involves providing pills that contain zinc to one group of human subjects and pills that do not contain zinc or other active ingredients to another group of people. The pills that do not contain zinc are

- A. probiotics.
- B. supplements.
- C. antidotes.
- D.** placebos.

48. A researcher would like to test the effects of injecting 5 ml of a solution that contains vitamin C and distilled water into the knees of 50 people who have arthritic knee joints. Based on this information, the researcher should

- A.** inject distilled water into the knees of 50 case-control subjects.
- B. tell the subjects that he will prove that injections of the vitamin solution are a safe and effective treatment for arthritic knees.
- C. inform the subjects that his previous tests of the herbal solution did not provide any data to support his hypothesis.
- D. None of these is correct.

Bloom's Level: 3. Apply

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Learning Outcome: 2.03 Explain the importance of having controls when performing experiments.

Section: 2.01

Topic: Nutrition Basics

49. Which of the following statements is true?

- A. In the United States, scientists can conduct studies on humans without telling the participants about the risks involved in the research.
- B.** Before scientists begin their research, they develop a hypothesis to guide their study.
- C. A study that examines the effects of consuming different amounts of sugar on the health of rats is an in-vitro experiment.
- D. All of these are correct.

Bloom's Level: 1. Remember

Learning Outcome: 2.02 Explain the basic steps of the scientific method.

Section: 2.01

Topic: Nutrition Basics

50. Which of the following periodicals features peer-reviewed articles?

- A. *Ladies Home Journal*
- B. *National Geographic Magazine*
- C. *Journal of Nutrition***
- D. All of these are correct.

Bloom's Level: 1. Remember

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Learning Outcome: 2.06 Identify reliable sources of nutrition information.

Section: 2.01

Topic: Nutrition Basics

51. The government agency that enforces consumer protection laws by investigating false or misleading health-related claims is the

- A. Federal Trade Commission (FTC).**
- B. Environmental Protection Agency (EPA).
- C. Agricultural Research Service (ARS).
- D. Centers for Disease Control and Prevention (CDC).

Bloom's Level: 1. Remember

Learning Outcome: 2.06 Identify reliable sources of nutrition information.

Section: 2.02

Topic: Nutrition Basics

52. The package of a new functional food displays the following claim: "Eating two cups of 'NutraTerraMino' each day cures the hair loss associated with the aging process." Based on this information, the

- A. U.S. Bureau of Health Fraud should expose the dishonest practices of the product's manufacturer.
- B. the EPA should demand that the product be recalled by the manufacturer and not marketed until it is properly labeled.
- C. manufacturer of the product should design an epidemiological study to test the product's usefulness in preserving hair.
- D. None of these is correct.**

Bloom's Level: 3. Apply

Learning Outcome: 2.05 Describe how to identify questionable sources of nutrition information.

Section: 2.02

Topic: Nutrition Basics

Chapter 02 - Evaluating Nutrition Information

53. Actress Lotta Talent appears in commercials endorsing the herbal supplement hoodia for weight loss. Her endorsement is an example of a(n)

- A. purport.
- B. testimonial.**
- C. anecdote.
- D. factoid.

Bloom's Level: 1. Remember

Learning Outcome: 2.05 Describe how to identify questionable sources of nutrition information.

Section: 2.02

Topic: Nutrition Basics

54. The professional football star Andre "The Man" McGraw claims the dietary supplement AminoProFix helped him build muscle mass quickly and safely. His endorsement of the product is an example of

- A. unbiased reporting.
- B. a scientifically valid claim.
- C. a testimonial.**
- D. peer review.

Bloom's Level: 1. Remember

Learning Outcome: 2.05 Describe how to identify questionable sources of nutrition information.

Section: 2.02

Topic: Nutrition Basics

55. Which of the following web sites is most likely a source of biased and unreliable nutrition information?

- A. purdue.edu
- B. dietsnomore4u.com**
- C. eatright.org
- D. choosemyplate.gov

Bloom's Level: 3. Apply

Learning Outcome: 2.05 Describe how to identify questionable sources of nutrition information.

Section: 2.02

Topic: Nutrition Basics

56. A popular fitness magazine has an article about the health benefits of high-fiber diets. If the article's author has the credentials _____ after his or her name, the article is likely to be a reliable source of nutrition information.

- A. R.D.
- B. M.S.
- C. D.N.
- D. M.D.

Bloom's Level: 1. Remember

Learning Outcome: 2.05 Describe how to identify questionable sources of nutrition information.

Section: 2.02

Section: 2.03

Topic: Nutrition Basics

57. A popular women's magazine has an article about the health benefits of consuming calcium-rich foods. If the article's author has the credentials _____ after his or her name, the article is likely to be a reliable source of nutrition information.

- A. D.N.
- B. Ph.D.
- C. R.D.
- D. M.D.

Bloom's Level: 1. Remember

Section: 2.02

Section: 2.03

Topic: Nutrition Basics

58. Which of the following statements is false?

- A. The Internet is generally a reliable source of nutrition information, because information posted at web sites has been peer-reviewed.
- B. Web sites with .edu in their addresses are likely to provide reliable nutrition information.
- C. When evaluating claims for dietary supplements, be wary of products that include promises for quick remedies.
- D. In general, personal web sites, such as blogs, are not reliable sources of nutrition information.

Bloom's Level: 2. Understand

Learning Outcome: 2.06 Identify reliable sources of nutrition information.

Section: 2.02

Topic: Nutrition Basics

59. Which of the following statements is true?

- A. Testimonials for weight loss supplements are usually based on scientific evidence.
- B. In general, a commercial (*.com) Internet web site is a more reliable source of scientifically based health advice than a *.gov or an *.edu site.
- C.** Promoters of nutrition misinformation often exploit the general public's mistrust of scientists.
- D. None of these are correct.

Bloom's Level: 2. Understand

Learning Outcome: 2.06 Identify reliable sources of nutrition information.

Section: 2.02

Topic: Nutrition Basics

60. Which of the following statements is true?

- A. Testimonials for weight loss supplements are usually based on scientific evidence.
- B. In general, a commercial (*.com) Internet web site is a more reliable source of scientifically based health advice than a *.gov or an *.org site.
- C. To make more money, physicians usually conceal information about the health benefits of complementary and alternative medical treatments.
- D.** None of these is correct.

Bloom's Level: 2. Understand

Learning Outcome: 2.06 Identify reliable sources of nutrition information.

Section: 2.02

Section: Highlight

Topic: Nutrition Basics

61. After reviewing the results of a patient's medical tests, a physician tells the patient that her mild back pain is not caused by a serious problem, and she can try acupuncture and massage therapy to relieve the discomfort. Based on this information, the physician's advice indicates that he

- A.** practices integrative medicine.
- B. is a typical conventional medical practitioner.
- C. practices quackery.
- D. is from an Asian country.

Bloom's Level: 3. Apply

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Learning Outcome: 2.06 Identify reliable sources of nutrition information.

Section: Highlight

Topic: Nutrition Basics

62. After examining a patient and reviewing the results of his blood tests, a physician tells the patient that his mild depressive symptoms are not the result of a serious health problem. The physician suggests that the patient should try regular exercise and take the dietary supplement St. John's wort for three months. After this period, the physician will prescribe antidepressant medication, if the patient does not feel emotionally better. This advice is
- A. quackery and medically irresponsible.
 - B. typical for a conventional medical practitioner.
 - C.** an indication that the physician practices integrative medicine.
 - D. unreliable because the physician is not considering alternative methods of treating the patient's mental illness.

Bloom's Level: 4. Analyze

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Learning Outcome: 2.05 Describe how to identify questionable sources of nutrition information.

Learning Outcome: 2.07 Define "dietary supplement" and provide examples of different types of these products.

Section: Highlight

Topic: Nutrition Basics

63. Which of the following statements is false?
- A. A person with a Ph.D. who promotes drinking vinegar as the cure for lung cancer is practicing quackery.
 - B.** According to scientific research, most dietary supplements provide considerable health benefits.
 - C. The R.D. credential is legally protected.
 - D. Disclaimers are clues that a product is not likely to live up to your expectations or the manufacturer's claims.

Bloom's Level: 2. Understand

Section: 2.02

Section: 2.03

Section: Highlight

Topic: Nutrition Basics

64. Articles that appear in the *Journal of the American Medical Association* are reliable sources of health information because the
- A. editors are trained to recognize poorly designed scientific investigations, so they reject articles that describe those kinds of studies.
 - B. people who submit articles to the Journal are well-known medical researchers who have published articles in the past.
 - C. articles are submitted for peer-review.
 - D. All of these are correct.

Bloom's Level: 2. Understand

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Learning Outcome: 2.06 Identify reliable sources of nutrition information.

Section: 2.01

Topic: Nutrition Basics

65. The *Journal of Nutrition* and the *American Journal of Clinical Nutrition* are likely to be sources of reliable nutrition information, because
- A. many public libraries subscribe to them.
 - B. people with Ph.D.s are hired to write articles published in these journals.
 - C. the articles are written by well-known nutritionists.
 - D. None of these is correct.

Bloom's Level: 2. Understand

Learning Outcome: 2.06 Identify reliable sources of nutrition information.

Section: 2.01

Topic: Nutrition Basics

66. *Men's Journal* and *Family Circle* may be unreliable sources of nutrition information, because
- A. many public libraries subscribe to them.
 - B. articles in such popular magazines generally do not undergo peer-review before they are published.
 - C. registered dietitians are usually hired to write the articles about nutrition that are published in these journals.
 - D. All of these are correct.

Bloom's Level: 2. Understand

Learning Outcome: 2.06 Identify reliable sources of nutrition information.

Section: 2.01

Topic: Nutrition Basics

67. A magazine article about weight loss diets includes false information about the process of digestion that uses scientific-sounding terms to make it seem factual. The faulty information is an example of

- A. mislabeling.
- B. bias.
- C. pseudoscience.**
- D. hypothesizing.

Bloom's Level: 2. Understand

Learning Outcome: 2.05 Describe how to identify questionable sources of nutrition information.

Section: 2.02

Topic: Nutrition Basics

68. Which of the following claims is an example of pseudoscience?

- A. Melatonin may be effective for preventing jet lag and treating certain sleep disorders.
- B. Red yeast rice has been clinically proven to increase male expediency.**
- C. Ginger is an effective treatment for the mild nausea that often accompanies early pregnancy.
- D. Beta carotene is a source of vitamin A that can protect cell membranes from oxidative damage.

Bloom's Level: 3. Apply

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Section: 2.02

Topic: Nutrition Basics

69. An advertisement for a weight loss product includes _____, indicating that the ad is an unreliable source of nutrition information and the product is likely to be worthless.

- A. the statement that individual results may vary
- B. promises of a quick and easy path to weight loss
- C. vague, meaningless terms
- D. All of these are correct.**

Bloom's Level: 2. Understand

Learning Outcome: 2.05 Describe how to identify questionable sources of nutrition information.

Section: 2.02

Topic: Nutrition Basics

70. A speaker at a community health fair claims to be a nutrition expert, because he has a Ph.D. in holistic nutritional geography from Obscure University. During his presentation, he displays copies of his latest best-selling book, "The Secrets of Vitalistic Nutrition Revealed" and offers them for sale. When you ask him if he is a registered dietitian, he states, "Oh, yes. I am a registered dietitian. I obtained my certification by submitting my books for review by members of the Academy of Nutrition and Dietetics." Based on this information,

- A. the speaker is misusing the R.D. title.
- B. the speaker seems to have the appropriate qualifications to present factual nutrition information.
- C. you should buy the speaker's books and follow his advice.
- D. None of these is correct.

Bloom's Level: 4. Analyze

Learning Outcome: 2.06 Identify reliable sources of nutrition information.

Section: 2.03

Topic: Nutrition Basics

71. In the United States, the _____ investigates complaints about false or misleading health claims that appear in food advertisements.

- A. World Health Organization
- B. U.S. Department of Agriculture
- C. Academy of Nutrition and Dietetics
- D. Federal Trade Commission

Bloom's Level: 1. Remember

Learning Outcome: 2.06 Identify reliable sources of nutrition information.

Section: 2.02

Topic: Nutrition Basics

72. Which of the following statements is true?

- A. People who describe themselves as nutritionists are registered dietitians.
- B. In general, registered dietitians are reliable sources of nutrition information.
- C. Pseudoscience is the practice of medicine without proper training and credentials.
- D. In the United States, a person can obtain a Ph.D. in nutrition only by graduating from an accredited institution of higher learning.

Bloom's Level: 2. Understand

Section: 2.02

Section: 2.03

Topic: Nutrition Basics

73. A person claims his newly invented device treats cancer without surgery, medication, or other forms of conventional medical therapy. However, people who have used the device report that it was not helpful, and it may have harmed them. According to this information, the inventor's claims and his device are

- A. quackery.
- B. unbiased.
- C. intuitive.
- D. legal.

Bloom's Level: 2. Understand

Learning Outcome: 2.01 Define terms, including anecdote, variable, epidemiology, placebo, placebo effect, peer review, and quackery.

Section: 2.02

Topic: Nutrition Basics

74. Which of the following statements is true?

- A. The First Amendment of the U.S. Constitution often protects people who spread nutrition misinformation.
- B. Pseudoscience is the scientific study of the causation and treatment of chronic diseases.
- C. In the United States, only registered dietitians can provide nutrition information legally.
- D. Registered dietitians are not required to update their knowledge of nutrition and dietetics regularly.

Bloom's Level: 1. Remember

Learning Outcome: 2.06 Identify reliable sources of nutrition information.

Section: 2.02

Section: 2.03

Topic: Nutrition Basics

75. During a television interview, Dr. Ima Quack provides the following statement. "Most Americans suffer from nutritional deficiency diseases and will develop cancer within the next 10 years because they are not taking my megavitamin formula therapy." Dr. Quack's statement is an example of a(n)

- A. medical hypothesis.
- B. scare tactic.
- C. intuitive deduction.
- D. personal observation.

Bloom's Level: 2. Understand

Learning Outcome: 2.05 Describe how to identify questionable sources of nutrition information.

Section: 2.02

Topic: Nutrition Basics

76. A magazine advertisement for a weight loss product includes before and after photos of a woman who supposedly lost 50 pounds in 3 weeks while taking the product. The bottom of the ad includes the statement, "Results are not typical." This statement is an example of a(n)

- A. testimonial.
- B. anecdote.
- C. placebo.
- D.** disclaimer.

Bloom's Level: 2. Understand

Learning Outcome: 2.05 Describe how to identify questionable sources of nutrition information.

Section: 2.02

Topic: Nutrition Basics

77. A television advertisement for a protein supplement includes before and after photos of a young man. In the "before" photo, the man appears unhappy and slim, but he looks thrilled and very muscular in the "after" photo. The narrator claims the man gained 30 pounds of "solid muscle" while taking the supplement for only 2 months. At the bottom of the man's after photo, you notice a statement in small print that is difficult to read. According to the statement, "results may vary." This statement is an example of a

- A.** disclaimer.
- B. placebo.
- C. peer-review.
- D. None of these is correct.

Bloom's Level: 2. Understand

Learning Outcome: 2.05 Describe how to identify questionable sources of nutrition information.

Section: 2.02

Topic: Nutrition Basics

78. _____ can be classified as a dietary supplement.

- A. Chewing tobacco
- B.** Gingko biloba
- C. Cherry jelly
- D. Orange drink

Bloom's Level: 2. Understand

Learning Outcome: 2.07 Define "dietary supplement" and provide examples of different types of these products.

Section: Highlight

Topic: Nutrition Basics

79. A scientist synthesizes a chemical from oak leaves that he calls "Catalona." He would like to market Catalona as a dietary supplement, because it

- A. will not be promoted as a "perfect" food.
- B. contains material from plants.
- C. is taken by mouth.
- D.** All of these are correct.

Bloom's Level: 3. Apply

Learning Outcome: 2.07 Define "dietary supplement" and provide examples of different types of these products.

Section: Highlight

Topic: Nutrition Basics

80. A team of scientists extracts a chemical that they call "Zombia" from the leaves of a common houseplant. One of the scientists would like to market Zombia as a dietary supplement because it makes people sleepy, when it is injected into them. Based on this information, Zombia

- A.** cannot be marketed as a dietary supplement.
- B. can be marketed as a dietary supplement because it is from a plant.
- C. cannot be marketed as a dietary supplement because its source is widespread in nature.
- D. can be marketed as a dietary supplement, but only if it is promoted as a conventional food item.

Bloom's Level: 3. Apply

Learning Outcome: 2.07 Define "dietary supplement" and provide examples of different types of these products.

Section: Highlight

Topic: Nutrition Basics

81. A scientist extracts an organic chemical that she calls "sparketzia" from slime mold. The scientist would like to market sparketzia as a dietary supplement, because she noted that it increased the activity of her nervous system after it was rubbed on her skin. Based on this information,

- A. sparketzia can be classified as a dietary supplement, because it is derived from a natural source.
- B.** the FDA will not classify sparketzia as a dietary supplement even though it is from a natural source.
- C. sparketzia can be marketed as a dietary supplement, but only if it is promoted as a conventional food item.
- D. the FDA will approve sparketzia as a dietary supplement, after it undergoes more controlled testing on human skin.

Bloom's Level: 3. Apply

Learning Outcome: 2.07 Define "dietary supplement" and provide examples of different types of these products.

Section: Highlight

Topic: Nutrition Basics

82. A scientist discovers a chemical compound in certain rocks that she calls "stonia." She cannot market extracts that contain stonia as a dietary supplement, because it

- A. has to receive a U.S. patent before the FDA will approve its use.
- B. contains more than one kind of natural material.
- C.** does not contain dietary ingredients.
- D. All of these are correct.

Bloom's Level: 3. Apply

Learning Outcome: 2.07 Define "dietary supplement" and provide examples of different types of these products.

Section: Highlight

Topic: Nutrition Basics

83. Which of the following products is a popular dietary supplement among American adults?

- A. Aspirin
- B. Dried mango
- C.** Echinacea
- D. Poppyseed extract

Bloom's Level: 1. Remember

Learning Outcome: 2.07 Define "dietary supplement" and provide examples of different types of these products.

Section: Highlight

Topic: Nutrition Basics

84. Which of the following statements is true?

- A. According to the legal definition developed by the FDA, a "dietary supplement" is a food that influences metabolism.
- B. Physicians and dietitians do not recommend dietary supplements for their patients.
- C. Most dietary supplements can be purchased without a physician's prescription.
- D. People who develop side effects after taking dietary supplements can report their experiences to the GAO.

Bloom's Level: 2. Understand

Learning Outcome: 2.07 Define "dietary supplement" and provide examples of different types of these products.

Section: Highlight

Topic: Nutrition Basics

85. Which of the following practices is an example of complementary and alternative medicine (CAM)?

- A. Visiting a chiropractor to have a spinal treatment
- B. Consuming a probiotic yogurt to reduce the likelihood of diarrhea
- C. Using a homeopathic nasal spray to relieve a sinus infection
- D. All of these are correct.

Bloom's Level: 2. Understand

Section: Highlight

Topic: Nutrition Basics

86. Which of the following practices is an example of complementary and alternative medicine (CAM)?

- A. Taking an aspirin to relieve a headache
- B. Having surgery to repair a spinal defect
- C. Consuming St. John's wort to improve mood
- D. Using a prescription antibiotic to treat a skin infection

Bloom's Level: 2. Understand

Section: Highlight

Topic: Nutrition Basics

Chapter 02 - Evaluating Nutrition Information

87. The ____ is responsible for ensuring the safety and effectiveness of medications and other health-related products.

- A. EPA
- B. FDA**
- C. NRC
- D. FTC

Bloom's Level: 1. Remember

Learning Outcome: 2.06 Identify reliable sources of nutrition information.

Section: Highlight

Topic: Nutrition Basics

88. Which of the following statements is true?

- A. The EPA regulates the labeling of dietary supplements.
- B. Medicinal herbs must undergo testing for safety and effectiveness by the FDA before they can be marketed.
- C. Manufacturers of dietary supplements must inform the FTC about negative health reports that may have resulted from the use of their products.
- D. Dietary supplements can be recalled when the products are improperly labeled.**

Bloom's Level: 1. Remember

Learning Outcome: 2.07 Define "dietary supplement" and provide examples of different types of these products.

Section: Highlight

Topic: Nutrition Basics

89. Which of the following statements is true?

- A. Dietary supplement manufacturers are not permitted to include claims on their product labels.
- B. Consumers can report negative health reports that may have resulted from their use of dietary supplements to the FDA.**
- C. Dietary supplements can be recalled if the products contain kava, lysine, or glucosamine.
- D. Medicinal herbs must undergo testing for safety and effectiveness by the FDA before they can be marketed in the United States.

Bloom's Level: 1. Remember

Learning Outcome: 2.07 Define "dietary supplement" and provide examples of different types of these products.

Section: Highlight

Topic: Nutrition Basics