Understanding Nutrition 17th edition Whitney Test Bank

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Understanding Nutrition (17th)

ISBN 9780357974278 | Chapter 1: An Overview of Nutrition

Total Questions: 100

Multiple Choice (80)

Q1. *[Multiple Choice]*

What is the number one reason most people choose certain foods?

a) Habit
b) Taste ✓ correct
c) Health
d) Availability

Q2. *[Multiple Choice]*

At a party with friends, Amal drinks wine and eats hors d'oeuvres, even though she is not hungry. This is an example of a food choice based on which factor?

a) habit
b) social interaction ✓ correct
c) emotions
d) positive association

Q3. *[Multiple Choice]*

Paul is hungry but has only five minutes to make it to his next class. He passes a vending machine on campus and looks at the options. He chooses a granola bar and eats it as he walks to class. Which factor was least likely to influence Paul's decision to eat a granola bar?

a) Taste
b) Convenience
c) Availability
d) Cultural values ✓ correct

Q4. *[Multiple Choice]*

Ang loves going to see movies at the theater and always eats a big bucket of buttery popcorn when he goes. What factor has the greatest influence on Ang's decision to eat popcorn at the movie theater?

a) Marketing
b) Health
c) Family values
d) Positive association ✓ correct

Q5. *[Multiple Choice]*

Which individual is making a food choice based on values?

a) A woman who avoids gluten due to allergies
b) A child who spits out his mashed potatoes because they taste too salty
c) A man who eats oatmeal each day without exception
d) A woman who fasts on Fridays to honor a religious custom ✓ correct

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Q6. *[Multiple Choice]*

A dietitian is working with a client who was born in Jamaica. Many of the foods this client consumes are unfamiliar to the dietitian. What is the best way for the dietitian to use cultural competence in this scenario?

a) Educate the client about typical foods in the standard American diet.

b) Ask the client about traditional Jamaican foods to determine where they fit. ✓ correct

c) Encourage the client to share meals with people who eat the standard American diet.

d) Educate the client about food groups and where standard American foods fit.

Q7. *[Multiple Choice]*

Today, in Nadia's nutrition class, the instructor led a discussion on how nutrition and food choices impact one's health and the development of chronic diseases. Nadia tried to take notes during the discussion, but she had trouble keeping up. Because of this, she's worried that all of her notes may not be accurate. Some of her notes are provided in the answer choices below. Which one is a correct statement about the relationship between food choices and health?

a) "People who make healthy food choices at every meal do not get chronic diseases."

b) "Food choices have a cumulative effect over time that can improve or impair overall health." ✓ correct

c) "Later adulthood, when one starts aging, is the time period when it is most crucial to make healthy food choices."

d) "For every year that one makes less healthy food choices, three months should be subtracted from their expected lifespan."

Q8. *[Multiple Choice]*

Certain nutrients can influence the brain's chemistry, which may influence mood and emotions. Which of the following foods tends to have a calming effect?

a) Tuna

b) Eggs

c) Whole-grain bread ✓ correct

d) Coffee

Q9. *[Multiple Choice]*

Which processed food is the most nutrient-dense?

a) Frozen broccoli in cheese sauce

b) Canned chicken noodle soup

c) Frozen beef enchiladas made with grass-fed beef

d) Canned black beans ✓ correct

Q10. *[Multiple Choice]*

Antonio is trying to understand how to distinguish processed food items that are convenient, nutritious choices from those that are less healthy due to ultra-processing. Since you are taking a nutrition course, he asks you for help. Which of the following tips would you give him?

a) "Added ingredients are not important if the product still resembles a whole food."

b) "Choose fresh food items when possible. They are always healthier than frozen and canned items."

c) "Look to see if the product's ingredient list is minimal and only consists of items found in a home kitchen. If so, this is a good indicator that the food may be a nutritious choice." ✓ correct

d) "Look at the product's expiration date. Healthier processed food items tend to have significantly longer shelf-lives due to their high nutrient content."

Q11. *[Multiple Choice]*

Amber recently returned from a week-long vacation to Italy. While away, she ate creamy pasta dishes and cheesy pizzas every day. She also treated herself to gelato, an Italian dessert similar to ice cream, every night. She's now home and returned to work. Today, there was a birthday celebration in the employee breakroom, where pizza and ice cream were served. Amber has some of each but doesn't enjoy them like she normally would. The pizza doesn't taste as salty and savory as it usually does, and the ice cream doesn't taste as sweet as she remembers.

What is the best explanation for Amber's decreased enjoyment of these foods?

a) Taste fatigue ✓ correct
b) Overindulgence syndrome
c) Decreased appetite
d) Jetlag

Q12. *[Multiple Choice]*

Andre has signed up for a series of five cooking classes in January. He hopes that by the last class, he will have significantly increased his cooking knowledge so that he can surprise his girlfriend with a home-cooked meal on Valentine's Day. He is also excited about being able to prepare more meals so he can save money by not eating out as much. In addition to saving money, what else will likely result from Andre taking cooking classes and cooking more meals at home?

a) Better quality sleep due to eating less fast food
b) A decrease in cravings due to increased activity associated with preparing meals himself
c) A more content feeling after eating due to increased meal satisfaction
d) Overall improvements to his diet due to healthier food choices ✓ correct

Q13. *[Multiple Choice]*

Which of the following is an energy-yielding nutrient?

a) Protein ✓ correct
b) Vitamins
c) Water
d) Minerals

Q14. *[Multiple Choice]*

What nutrient(s) is organic and facilitate(s) the release of energy from food?

a) Water
b) Carbohydrates
c) Minerals
d) Vitamins ✓ correct

Q15. *[Multiple Choice]*

Haley is preparing a presentation on minerals for her nutrition class. In her slide presentation, she makes the statements listed in the answer choices below. Which statement is incorrect?

a) "Minerals do not directly provide energy to the human body."
b) "From a chemistry perspective, minerals are considered inorganic."
c) "Minerals may be bound to substances that assist in their absorption." ✓ correct
d) "To prevent minerals from being destroyed, vegetables should be cooked as little as possible."

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Q16. *[Multiple Choice]*

Marco weighs 170 pounds. Approximately how much of his body weight is water?

a) 17 pounds
b) 34 pounds
c) 77 pounds
d) 102 pounds ✓ correct

Q17. *[Multiple Choice]*

Jonas is a healthy 18-year-old male. He learned in his nutrition class that a young adult male's body is comprised of approximately 20percentfat. If Jonas weighs 150 pounds, approximately how many pounds of his body is fat?

a) 10 pounds
b) 20 pounds
c) 30 pounds ✓ correct
d) 40 pounds

Q18. *[Multiple Choice]*

Paige is comparing the energy density of two snack options at work.
Option 1: A bag of pretzels and a mozzarella cheese stick (88 g, 330 kcal)
Option 2: A package of trail mix with nuts, raisins, and chocolate candies (110 g, 360 kcal)

If she wants to pick the one with the lower energy density, which one should she choose?

a) Option 1 because it has an energy density of 3.75 kcal/g.
b) Option 1 because it has an energy density of 0.27 kcal/g.
c) Option 2 because it has an energy density of 3.27 kcal/g. ✓ correct
d) Option 2 because it has an energy density of 0.31 kcal/g.

Q19. *[Multiple Choice]*

How many kcalories are in a meal that contains 36 g fat, 49 g carbohydrate, and 28 g protein?

a) 632 kcal ✓ correct
b) 592 kcal
c) 452 kcal
d) 772 kcal

Q20. *[Multiple Choice]*

David purchased frozen beef and bean burritos at the grocery store. The label claims that the burritos are healthier than competitors' products because each burrito contains two servings of vegetables, only 20percentfat, and 495 kcal. How many grams of fat does one burrito contain?

a) 25 g
b) 99 g
c) 11 g ✓ correct
d) 18 g

Q21. *[Multiple Choice]*

Maria got a double cheeseburger from a fast-food restaurant after class. She noticed that the menu said the burger contains 590 kcalories. What percentage of these calories are from protein if the burger provides 65 g protein?

a) 22percent
b) 26percent
c) 44percent ✓ correct
d) 77percent

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Q22. *[Multiple Choice]*

One serving of pizza is two slices, which contains a total of 660 kcalories. How many grams of carbohydrate does one serving contain if the pizza is 18% protein and 45percentfat?

a) 37g
b) 27g
c) 43g
d) 61g ✓ correct

Q23. *[Multiple Choice]*

Maurice goes to a restaurant and orders a margarita. The menu says the margarita contains 360 kcalories and 62g carbohydrate. How many grams of alcohol are in the margarita?

a) 16g ✓ correct
b) 112g
c) 51g
d) 28g

Q24. *[Multiple Choice]*

Dustin and Jayla are studying for a quiz on nutrients. When reviewing the information on alcohol, Jayla tells Dustin that any substance that contains calories is considered a nutrient, which means alcohol is a nutrient, too. Dustin doesn't think this is correct. Who is right, and why?

a) Dustin is correct. Alcohol does not yield energy, so it is not considered a nutrient.
b) Dustin is correct. Alcohol provides energy, but it is not considered a nutrient because it does not promote or maintain health. ✓ correct
c) Jayla is correct. Alcohol is a nutrient because it contains 7 kcal/g. Any substance that provides energy is classified as a nutrient.
d) Dustin is correct. Alcohol provides energy and meets the criteria to be considered a nutrient. However, it is not classified this way since alcohol consumption is associated with health risks.

Q25. *[Multiple Choice]*

To help her study, Laila made a chart of the nutrients found in food and the different terms that are used to classify or describe each. Part of her chart is provided below.

Water: organic, non-energy-yielding, essential.
Vitamins: essential, organic, energy-yielding, micronutrient.
Minerals: micronutrient, inorganic, essential, non-energy-yielding.

What information is incorrect in Laila's chart?

a) Water should also be classified as a micronutrient. Vitamins are not energy-yielding.
b) Vitamins are not organic. Minerals are not essential.
c) Water should be classified as a macronutrient, and it is not organic.
d) Water is not organic, and vitamins are not energy-yielding. ✓ correct

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Q26. *[Multiple Choice]*

Your friend has heard that carrots are a good source of vitamin C and the mineral potassium. She decides to cook carrots for dinner by boiling them in water. What should she know about how the nutrient content of the carrots may change after cooking?

a) Because vitamins are easily destroyed by heat, the vitamin C content of cooked carrots tends to be lower than raw carrots. ✓ correct

b) Cooking will allow the vitamin C and potassium in the carrots to be more easily absorbed by the body.

c) High heat will break minerals like potassium down into smaller substances, which leach out into the cooking water.

d) Food containing minerals must be handled carefully, so the carrots should be cooked using a different method that uses a lower heat to prevent the potassium from being destroyed.

Q27. *[Multiple Choice]*

Which term refers to the science of how nutrients affect the activities of genes and how genes affect the activities of nutrients?

a) Biochemical nutrition

b) Nutritional genomics ✓ correct

c) Genetic metabolomics

d) Molecular genetics

Q28. *[Multiple Choice]*

Which of the following statements describes a double-blind experiment?

a) The experimental and control groups take turns getting each treatment.

b) Both subject groups know whether they are in the control or experimental group, but the researchers do not know.

c) Neither group of subjects knows whether they are in the control or experimental group, but the researchers do know.

d) Neither subjects nor researchers know which subjects are in the control group and which are in the experimental group. ✓ correct

Q29. *[Multiple Choice]*

A group of researchers has been examining the diets in certain regions of East Asia and the health of those populations. They find that while the traditional diet in most of these regions is high in sodium, these populations appear to have a lower risk of developing hypertension (prolonged high blood pressure) compared to regions in North America that also consume diets high in sodium. The researchers note that a large portion of the sodium content in East Asian diets is from fermented foods, while most sodium in North American diets comes from ultra-processed foods. When summarizing the study findings, the researchers suggest that the type of high-sodium foods consumed in a population's diet may have a greater influence on the risk for hypertension than total sodium intake. What type of study did the researchers conduct?

a) Cross-sectional study ✓ correct

b) Cohort study

c) Experimental study

d) Case-control study

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Q30. *[Multiple Choice]*

Preliminary data suggest that taking a vitamin D supplement prior to flu season may decrease the risk of getting the flu. To test this, researchers collect a group of healthy adults to use as subjects and follow over the next 12 months. Half of the subjects are told to take a daily pill containing 2,000 IU of vitamin D. The other half of the subjects are given a placebo pill that does not contain any vitamin D.

What type of study is this?

a) Cohort study
b) Epidemiological study
c) Blind experiment ✓ correct
d) Case-control study

Q31. *[Multiple Choice]*

Starting in 1976, the Nurses' Health Study asked a group of nurses to complete a set of questionnaires on their health status and lifestyle habits. The researchers have followed up every two years with the subjects to gather updated health and lifestyle information from the subjects. Analysis of this data has allowed for several associations between lifestyle and disease to be made, such as a link between regular cigarette smoking and an increased risk of heart disease. What type of study is the Nurses' Health Study?

a) It is a clinical trial because the subjects are human.
b) It is an epidemiological study because it identifies smoking as the cause of heart disease using population data.
c) It is an experimental study because the data gathered have allowed for identification of cause-and-effect relationships.
d) It is a cohort study because it collects data from a group of people over time, which helps identify variables that may increase disease risk. ✓ correct

Q32. *[Multiple Choice]*

During class, Carrie's nutrition instructor mentions that several research groups across the United States are conducting studies examining the use of GLP-1 antagonist medications (such as Ozempic and Wegovy) as a treatment for alcoholism. Carrie doesn't understand why multiple researchers are conducting studies on the same topic. After class, Carrie asks the instructor why one group of researchers doesn't conduct the study to save time and money. How would you expect the instructor to respond?

a) "In order to have validity, multiple studies must be conducted on the same variables using a similar method."
b) "Study findings are more meaningful when those findings are confirmed or disproven through replication and analysis." ✓ correct
c) "It is considered best practice for clinical trials involving prescription drugs to have multiple studies conducted simultaneously."
d) "Multiple studies with similar results allow for the findings to be generalized to all humans, not just those in the population being studied."

Q33. *[Multiple Choice]*

James is looking for recently published articles on vegan diets. One study summarizes the effects that vegan diets appear to have on mental health by compiling and analyzing findings from previous studies on the topic to give a statistical summary of evidence. Which type of article is this?

a) Case study
b) Meta-analysis ✓ correct
c) Systematic review
d) Peer-reviewed

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Q34. *[Multiple Choice]*

Researchers at a local university are planning a study that will examine the relationship between magnesium supplementation and sleep quality. A research assistant for the study recruits 20 subjects for the study, but the lead researcher insists that the study cannot begin until more subjects are recruited. What is the most likely reason why the researcher will not start the study until they have more subjects?

a) A larger sample size eliminates any placebo effect.

b) The study is a blind experiment, which requires a larger sample size than a double-blind experiment.

c) Having a larger sample size makes differences between the experimental and control groups less likely to affect results. ✓ correct

d) A larger sample size is more likely to produce positive correlations.

Q35. *[Multiple Choice]*

The findings of a new research study suggest that "consuming more vitamin D is associated with a lower risk for depression." What do these findings suggest?

a) no correlation

b) a positive correlation

c) a negative correlation ✓ correct

d) a placebo effect

Q36. *[Multiple Choice]*

You have been asked to help a top nutrition researcher conduct human double-blind experiments on zinc. After the subjects take their seats in the laboratory, you distribute all the zinc pill bottles to individuals seated on the left side of the room and all the placebo pill bottles to individuals seated on the right side of the room. The researcher instantly informs you that there are two errors in your research practice. What steps should you have taken to conduct your experiment correctly?

a) You should have allowed the subjects to decide whether they take zinc or the placebo and then given them the opposite of what they requested.

b) You should have distributed the bottles after randomly assigning the subjects and then told them what they were getting.

c) You should have told the subjects which group they were in while preventing yourself from knowing the contents of the pill bottles.

d) You should have prevented yourself from knowing what was in the pill bottles and distributed the bottles randomly to the subjects. ✓ correct

Q37. *[Multiple Choice]*

A research study examined the effect that fruit and vegetable intake had on blood pressure in individuals diagnosed with hypertension (ongoing high blood pressure) for a month. At the end of that month, the study found that the more fruit and vegetable servings an individual consumed each day, the greater the reduction in blood pressure. In fact, those who ate six or more daily servings lowered their systolic blood pressure by an average of 10 mmHg.

Which of the following is a correct interpretation of these findings?

a) Eating six or more servings of fruits and vegetables will prevent hypertension.

b) Eating three servings of fruits and vegetables will lower systolic blood pressure by an average of 5 mmHg.

c) Eating more fruits and vegetables may be a tool to help manage or reduce high blood pressure. ✓ correct

d) Everyone who eats six or more servings of fruits and vegetables will have a 10 mmHg decrease in systolic blood pressure.

Q38. *[Multiple Choice]*

Cameron wants to ensure that his research study design prevents bias. He asks you what type of study is the most reliable for preventing bias. What should you tell him?

a) Case-control
b) Blind experiment
c) Epidemiological study
d) Double-blind experiment ✓ correct

Q39. *[Multiple Choice]*

Mark wrote an article that summarizes the findings of a study he conducted on collagen supplementation and joint health. He's hoping to have the article published in a peer-reviewed journal, but the submission process for this type of publication requires the article to be written in a specific format. Editing his article to meet these specifications will take him several days. Instead, he's considering submitting his article to an online magazine since the submission process is much easier. What information about scientific article publication should he know?

a) Publication in a peer-reviewed journal indicates that reviewers consider the findings to be well-supported by the data gathered in the study. ✓ correct
b) Studies published in online magazines get greater notoriety among peers in the nutrition field because they are typically shared on social media.
c) If Mark decides to submit his article to an online news outlet for publication rather than a peer-reviewed journal, it is important that his colleagues like the article and leave comments supporting the study's findings to increase its validity.
d) Results from any scientific study are always meaningful and valid regardless of where they are published.

Q40. *[Multiple Choice]*

Rory's nutrition course is discussing the benefits and weaknesses of epidemiological studies. Which of the following is a benefit associated with doing an epidemiological compared to an experimental study?

a) Findings from clinical trials can be generalized to all human beings.
b) Results from animal studies can be applied to human beings.
c) Cause and effect can be proven.
d) Findings can help to narrow the list of possible causes for a disease. ✓ correct

Q41. *[Multiple Choice]*

The Estimated Average Requirement (EAR) for a nutrient meets the needs of about _____ of the population.

a) 25percent
b) 50percent ✓ correct
c) 75percent
d) 98percent

Q42. *[Multiple Choice]*

What DRI value represents the amount of a nutrient that appears to lower chronic disease risk?

a) EAR
b) UL
c) RDA
d) CDRR ✓ correct

Q43. *[Multiple Choice]*

Adrienne consumes 57percentof her daily kilocalories from carbohydrates and 12percentfrom protein. What percentage of her daily kcalories come from fat?

a) 33percent
b) 24percent
c) 31percent ✓ correct
d) 18percent

Q44. *[Multiple Choice]*

A 520-kcalorie meal contains 34 grams of protein. What percentage of the meal's kcalories come from protein?

a) 26percent ✓ correct
b) 34percent
c) 46percent
d) 59percent

Q45. *[Multiple Choice]*

Omar has decided to take a zinc supplement. What DRI value can help him determine the highest amount of zinc that is considered safe to consume?

a) CDRR
b) UL ✓ correct
c) RDA
d) AI

Q46. *[Multiple Choice]*

Kennedy's intake of vitamin D regularly falls below the EAR value for her age and sex. What assumption can be made about her intake?

a) Her intake is probably inadequate, and the possibility of developing a vitamin D deficiency is likely. ✓ correct
b) Her intake falls short of the RDA but is likely adequate to prevent a deficiency.
c) Her intake is less than the CDRR, which puts her at risk for developing a chronic disease such as osteoporosis.
d) Her intake falls short of the EAR and RDA but is probably adequate since those values are set higher to meet the needs of almost all people.

Q47. *[Multiple Choice]*

Zehra is reading about vitamin K needs. She wants to compare her daily intake to the RDA value for her age and sex, but finds that an RDA for vitamin K does not exist. What value should she use as a nutrient intake goal instead?

a) EAR
b) CDRR
c) AI ✓ correct
d) EER

Q48. *[Multiple Choice]*

Which of the following is a correct statement about the RDA?

a) Consuming small amounts greater than the RDA is not harmful, but consuming amounts less than the RDA may lead to health problems. ✓ correct
b) The RDA should be considered the minimum amount that the average person needs in their diet.
c) The RDA represents the optimal amount that the average person should consume to prevent disease and prolong the lifespan.
d) The RDA should be used as an intake goal to come close to meeting but never exceed.

Q49. *[Multiple Choice]*

Which of the following is a characteristic of EER values that is NOT shared with RDA and AI values?

a) EER calculations are based on age and biological sex.
b) EER recommendations do not address the specific needs of the LGBTQ community.
c) EER recommendations consider physical activity. ✓ correct
d) EER values represent the minimum requirement needs for health.

Q50. *[Multiple Choice]*

Chloe keeps a food journal for three days. When she analyzes the journal, she discovers the following about her diet:
Average daily kcal intake = 2,220 kcal
Average daily carbohydrate intake = 232g
Average daily protein intake = 179g
Average daily fat intake = 64g

Based on this, what is a correct statement about Chloe's daily macronutrient intake in comparison to the AMDR recommendations?

a) Chloe's average protein intake is above the AMDR recommendation.
b) Chloe's average carbohydrate and fat intakes fall within the AMDR recommendations.
c) Chloe's average carbohydrate, fat, and protein intakes all fall within the AMDR recommendations.
d) Chloe's average carbohydrate intake is below the AMDR recommendation. ✓ correct

Q51. *[Multiple Choice]*

Wyatt saw a registered dietitian nutritionist (RDN) for guidance on planning a healthy diet. The RDN estimated his energy needs to be approximately 2,700 kcal/day. She suggested he aim to consume this energy amount each day by getting 50percentof kcal from carbohydrate, 22percentof kcal from protein, and 28percentof kcal from fat.

Based on this, how many grams of each nutrient should Wyatt aim to consume?

a) 193 (carbohydrates), 85 (protein), 89 (fat)
b) 338 (carbohydrates), 149 (protein), 84 (fat) ✓ correct
c) 224 (carbohydrates), 66 (protein), 114 (fat)
d) 338 (carbohydrates), 149 (protein), 189 (fat)

Q52. *[Multiple Choice]*

Which of the following statements about nutrient recommendations worldwide is FALSE?

a) Fewer than 50 nations have nutrient standards similar to those in the United States. ✓ correct
b) Standards in other countries may reflect differences in data interpretation.
c) Food habits and physical activities of people in other countries affect their published nutrient standards.
d) Nutrient recommendations from international groups are considered sufficient to maintain health in healthy people worldwide.

Q53. *[Multiple Choice]*

Which of the following defines a subclinical deficiency?

a) A primary nutrient deficiency
b) A nutrient deficiency caused by something like a disease condition or drug reaction that reduces absorption, accelerates use, hastens excretion, or destroys the nutrient
c) A deficiency in the early stages, before the outward signs have appeared ✓ correct
d) A deficiency that exhibits conflicting outward signs, requiring laboratory diagnosis

Q54. *[Multiple Choice]*

What is the purpose of the Healthy People program?

a) To establish the DRI

b) To identify national trends in food consumption

c) To identify leading causes of death in the United States

d) To set goals to improve the nation's health over the next 10 years ✓ correct

Q55. *[Multiple Choice]*

Angel met with a registered dietitian nutritionist (RDN). During the first appointment, the RDN asked Angel about her drug history. Angel did not understand why this information was needed as part of the nutrition assessment and felt like the RDN was trying to pry into her personal life. Which of the following explains why an RDN may want to include information about a patient's drug history in an initial nutrition assessment?

a) To assess for possible interactions that lead to nutrient deficiencies ✓ correct

b) To identify conditions with a genetic component

c) To identify past addictions that may still interfere with nutrient absorption

d) To assess for possible drug abuse or misuse

Q56. *[Multiple Choice]*

Ana is extremely thin and knows she has lost muscle along with fat tissues. She's also noticed that she seems to catch every illness that her friends have had this fall. Which term best describes Ana's condition?

a) undernutrition ✓ correct

b) overnutrition

c) nutrient excess

d) subclinical deficiency

Q57. *[Multiple Choice]*

Malik is a nutrition intern at a local hospital. His preceptor asked him to gather anthropometric data on a patient. Which of the following is one way for Malik to get this data?

a) Have a blood sample drawn to determine the patient's blood glucose and cholesterol levels.

b) Visually inspect the patient's skin and hair.

c) Make a list of past health issues that may influence current nutritional status using the patient's medical chart.

d) Measure the patient's waist circumference. ✓ correct

Q58. *[Multiple Choice]*

During a physical examination, you notice that a patient's tongue appears to be red and inflamed and that his skin appears pale. You know that both of these symptoms are associated with a deficiency in vitamin B_{12}. Which of the following would NOT be an appropriate next step?

a) Have the patient take weekly vitamin B_{12} injections until the symptoms resolve. ✓ correct

b) Take a diet history to determine the possibility of a vitamin B_{12} deficiency.

c) Get laboratory values to confirm or disprove a potential vitamin B_{12} deficiency.

d) Review the patient's medical history to determine if there may be a medical cause for a vitamin B_{12} deficiency.

Q59. *[Multiple Choice]*

Sabrina is reviewing the notes she took in her nutrition class this week and sees that she wrote, "Obesity is a form of malnutrition" in her notes. This doesn't make sense to Sabrina, and she wonders if she wrote this sentence down incorrectly. Since you are in her class, Sabrina asks you if the statement is correct. What should you tell her?

a) "Your notes are correct. People with obesity don't eat nutrient-dense foods, so you can assume they have nutrient deficiencies."

b) "Malnutrition is caused by energy or nutrient intakes that lead to an excess, deficiency, or imbalance of energy or nutrients, so your notes are correct." ✓ correct

c) "Your notes are not correct unless an individual with obesity also displays overt signs of a nutrition deficiency."

d) "A sign of malnutrition is weight loss, so your notes are incorrect."

Q60. *[Multiple Choice]*

Haidy's healthcare provider diagnosed her as having an iron deficiency and has prescribed her an iron supplement to take. What assumption can be made about her symptoms or diagnosis?

a) Haidy's provider should have drawn labs several months ago. Had that been done, the deficiency may have been detected in the very early stages.

b) Haidy probably didn't experience fatigue or weakness until later in the deficiency's development. ✓ correct

c) Haidy's low iron stores were confirmed by the anthropometric data collected.

d) Haidy's provider needed to wait for overt symptoms, as well as labs, to accurately diagnose an iron deficiency.

Q61. *[Multiple Choice]*

National nutrition surveys identify changes in diet habits and nutrient intakes. The data gathered is then used by various groups. Which of the following is NOT a correct statement about how the data is used and what the effects are?

a) Food companies may use survey data to identify and capitalize on food trends, which may result in the creation of new snack products.

b) Researchers can identify nutrients of concern for the population, which results in a review of the DRI recommendations to determine if they are adequate.

c) Community organizations may use the data to determine the focus of health initiatives, which guarantees programs lead to positive health outcomes. ✓ correct

d) Survey data is used to determine what nutrition and health issues are most crucial, which may determine research priorities.

Q62. *[Multiple Choice]*

What is the most prominent risk factor in the United States contributing to one of every six deaths each year?

a) Poor dietary habits

b) Physical inactivity

c) Alcohol consumption

d) Tobacco use ✓ correct

Q63. *[Multiple Choice]*

Which of the following is*not* a modifiable risk factor for chronic diseases?

a) Genetic predisposition ✓ correct

b) Vaping

c) High blood pressure

d) Consuming foods that contain added sugars

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Q64. *[Multiple Choice]*

Tiana does not smoke or drink alcohol and considers herself pretty healthy. She wants to know how she can further reduce her chronic disease risk. She asks you what health factor influences her risk of chronic disease the most. What do you tell her?

a) Activity

b) Diet ✓ correct

c) Stress

d) Sleep

Q65. *[Multiple Choice]*

Dontrell does not use tobacco or drink alcohol in excess. He goes to the gym regularly and eats a pretty healthy diet that includes lots of plant foods like fruits, vegetables, nuts, and seeds. Dontrell is of a healthy body size, and labs at his most recent check-up were all in normal ranges. If he continues with his health habits, what statement correctly summarizes Dontrell's risk of developing a chronic disease in the future?

a) His habits decrease his risk of developing a chronic disease due to lifestyle and also prevent genetics from influencing his disease risk.

b) He has only a 1 to 2percentrisk of developing a chronic disease due to his healthy lifestyle practices.

c) His lifestyle practices decrease the likelihood of developing a chronic disease, but they cannot guarantee he will never develop one. ✓ correct

d) If he develops a risk factor associated with a chronic disease, his lifestyle practices will synergistically work to negate that risk.

Q66. *[Multiple Choice]*

Health initiatives rarely focus on the role that genetics and aging play in the development of chronic diseases. Which of the following is the*best*explanation for this?

a) Genetics and aging have little to no influence on chronic disease development.

b) Genetic testing to determine disease risk is expensive and not an option for everyone, so recommendations focus on risks associated with personal behaviors instead.

c) Health recommendations focus on factors that are modifiable, and genetics and aging cannot be modified. ✓ correct

d) A faster rate of aging increases disease risk. Modifying lifestyle behaviors is an effective way to slow the aging process, which, in turn, decreases disease risk.

Q67. *[Multiple Choice]*

Which of the following scenarios highlights the positive synergistic effects that one health change can trigger?

a) Frequently connecting with close friends improves Metta's mental outlook, even though it often leads to her drinking more alcoholic beverages.

b) Since adopting a vegetarian diet, Mina's intake of foods containing added sugars, fat, and sodium has increased.

c) Ryan had a car accident and wasn't wearing a seatbelt. He was sore, which limited his activity for the next few days.

d) Malika added a walk into her daily routine to increase her activity level, which has subsequently helped her manage stress and sleep better. ✓ correct

Q68. *[Multiple Choice]*

Kalene's grandmother recently died due to a stroke, which is a type of cardiovascular disease. Kalene doesn't understand how this happened. Her grandmother never had any risk factors associated with cardiovascular disease, like high blood pressure or high cholesterol. In fact, her grandmother was in good health; the only chronic disease she had been diagnosed with was osteoporosis. What is the best way to explain why Kalene's grandmother died from a chronic disease for which she had no apparent risk factors?

a) Osteoporosis is caused by a chronic lack of calcium; this deficiency likely caused her grandmother to develop cardiovascular since calcium is an important electrolyte for the heart.

b) Risk factors only predict which individuals have an elevated disease risk. While the likelihood is lower, a person can develop a disease even if they have no apparent risk factors. ✓ correct

c) Even though it is not a cardiovascular disease, osteoporosis is a chronic disease. Once an individual develops one chronic disease, their body is automatically conditioned to silently develop more within the next 6 to 12 months.

d) Kalene's grandmother never had genetic testing. Had she done this, she would have learned she had a genetic predisposition for cardiovascular disease and changed her diet.

Q69. *[Multiple Choice]*

Christian is a 20-year-old college student who was recently diagnosed with hypertension (ongoing high blood pressure). He feels like this diagnosis will gradually lead to the development of additional risk factors for chronic diseases like high blood cholesterol and high blood glucose. The diagnosis is also concerning to him because of his family's medical history: two of his grandparents died from cardiovascular diseases, and his father has diabetes. What is the best advice to give Christian?

a) To minimize his risk, he should start making diet and lifestyle changes to try to reduce his blood pressure. ✓ correct

b) Once diagnosed, risk factors tend to persist because they are highly resistant to lifestyle changes and medication.

c) He should expect to have high blood pressure for the rest of his life. While lifestyle interventions won't change this, they can prevent the development of other risk factors.

d) Being diagnosed with hypertension in early adulthood indicates genetics are the underlying cause, so he shouldn't expect diet and lifestyle changes to reverse his diagnosis.

Q70. *[Multiple Choice]*

Which of the following is a correct statement about risk factors?

a) Risk factors are used as a way to predict the increased likelihood of developing a disease. ✓ correct

b) Risk factors can also be considered to be proven causes of a disease.

c) Most risk factors for diseases today cannot be changed or modified.

d) Diseases will not develop if an individual has no risk factors.

Q71. *[Multiple Choice]*

The following are nutrition concerns that are being considered for future research studies. Which one is *least* likely to be chosen based on the focus of nutrition and health research that has shifted over the past few decades?

a) The effect that sitting for extended periods has on cardiovascular risk

b) Factors that influence teens to start vaping

c) Best practices for treating a thiamin deficiency ✓ correct

d) Determining if frequently eating out in early adult years increases one's likelihood of disability later in life

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Q72. *[Multiple Choice]*

Mrs. Morales' nutrition class is discussing disease prevalence and leading causes of death in the United States, as well as worldwide. Which of the following statements is inaccurate and*not*something Mrs. Morales would include in the lecture?

a) Even with the knowledge of how to prevent them, nutrient deficiency diseases are still a major health problem in developing countries.

b) Nutrition-related health issues used to largely result from deficiencies, but today, most result from excesses.

c) In the United States, chronic diseases make up 90percentof healthcare costs.

d) Chronic disease development due to overconsumption of unhealthy foods tends to be a problem limited to wealthy and more highly developed countries. ✓ correct

Q73. *[Multiple Choice]*

Who is the*best*source for accurate and current nutrition information?

a) General practice doctor

b) Nutrition scientist

c) Registered dietitian nutritionist ✓ correct

d) Certified nutritionist

Q74. *[Multiple Choice]*

Sofia is an RDN and is employed by her local health department. Most of her job duties are centered around WIC (Women, Infants, and Children) activities, a federal food assistance program designed to support the health of pregnant and breastfeeding women, infants, and young children. Sofia loves her job because her duties vary each day. Some days, she conducts healthy cooking classes or helps new mothers with breastfeeding issues, while other days, she ensures that participants take advantage of the nutrient-dense foods provided by the department. What type of RDN is Sofia?

a) Public health nutritionist ✓ correct

b) Wellness dietitian

c) Food service manager

d) Wellness dietitian

Q75. *[Multiple Choice]*

Which title does Amrit have if he graduated with an associate's degree from an accredited university and assists the registered dietitians within the hospital?

a) dietetic clerk

b) nutritional assistant

c) dietetic technician ✓ correct

d) public health dietitian

Q76. *[Multiple Choice]*

The following marketing terms are commonly seen on dietary supplement labels. All of them raise "red flags," suggesting the claims may not be based on accurate information or are being used to promote sales*except*which one?

a) "A blend of botanicals designed to be your natural solution for better sleep"

b) "Contains 100percentDV for calcium" ✓ correct

c) "Get your money back if you don't see results in the first 30 days"

d) "Instantly reduces stress and muscle tension"

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Q77. *[Multiple Choice]*

Which of the following websites is LEAST likely to be a site for reliable and accurate nutrition information?

a) www.nejm.org/nutrition-in-medicine
b) www.med.stanford.edu/nutrition.html
c) recipes.heart.org/
d) www.shape.com/healthy-eating/diet-tips ✓ correct

Q78. *[Multiple Choice]*

A news outlet that isn't known for always fact-checking or accurate science reporting publishes an online article with the following headline: "New study confirms that drinking milk is bad for you."
All of the following are concerns related specifically to the publication of this article EXCEPT which one?

a) Consumers will believe the headline and stop drinking milk.
b) Reports on a single study don't provide consumers with perspective which may lead to inaccurate beliefs about the topic.
c) The findings conflict with what a consumer read last week, which can lead to distrust of all nutrition sources, including reliable ones.
d) Consumers must have Wi-Fi access to read the article and stay on top of the latest nutrition information. ✓ correct

Q79. *[Multiple Choice]*

Nevaeh is majoring in nutrition and is wondering what the requirements are to become a registered dietitian nutritionist. Which of the following is*not* a requirement?

a) Graduating with a minimum of an associate's degree from an accredited college or university.
b) Holding a certification in a specialized area of nutrition, such as sports nutrition, weight management, or diabetes education. ✓ correct
c) Passing a national examination.
d) Completing an accredited and supervised practice program to gain experience.

Q80. *[Multiple Choice]*

Khia has recently seen several ads for a new product that "solves any gut or digestive issue." The product is only sold online, and it has over 20,000 five-star reviews from people who have purchased it. The company offers a money-back guarantee if a buyer isn't satisfied, so she is considering purchasing the product. What should Khia know prior to purchasing?

a) Online sales have stricter regulations in comparison to products sold at a store location.
b) Products sold online may come from other countries that have different laws regarding the sale of and the ingredients in dietary supplements. ✓ correct
c) Products offering money-back guarantees tend to be safer and more effective than those that do not offer them.
d) A significant number of positive reviews signifies that there is scientific evidence to support the product's claims.

True/False (10)

Q81. *[True/False]*

A diet is defined as a restrictive food plan designed for weight loss.

a) true
b) false ✓ correct

Correct answer: False

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Q82. *[True/False]*
Phytochemicals are categorized as nonnutrient compounds found in plants.

a) true ✓ correct
b) false

Correct answer: True

Q83. *[True/False]*
A food containing 11 grams of carbohydrate, 4 grams of protein, and 10 grams of fat provides 150 kcalories.

a) true ✓ correct
b) false

Correct answer: True

Q84. *[True/False]*
If the results of one large, well-planned study finding a significant result association between two variables are published in a peer-reviewed journal, the study's findings can be accepted into the body of nutrition knowledge.

a) true
b) false ✓ correct

Correct answer: False

Q85. *[True/False]*
Subjects receiving the placebo are in the control group.

a) true ✓ correct
b) false

Correct answer: True

Q86. *[True/False]*
It is possible for a nutrient to have both an RDA and an AI.

a) true ✓ correct
b) false

Correct answer: True

Q87. *[True/False]*
The RDA is set higher than the EAR to meet the needs of most healthy people.

a) true ✓ correct
b) false

Correct answer: True

Q88. *[True/False]*
A sufficient intake of a nutrient does not guarantee that this amount is adequate for every individual. Similarly, an insufficient intake does not mean every individual will develop a deficiency.

a) true ✓ correct
b) false

Correct answer: True

Q89. *[True/False]*
Chronic diseases associated with the overconsumption of unhealthy foods are considered "rich countries' problems" because they are only prevalent in highly developed, wealthy countries.

a) true
b) false ✓ correct

Correct answer: False

Q90. *[True/False]*

Consumers may be misled or confused by the abundance of nutrition information available today.

a) true ✓ correct

b) false

Correct answer: True

Essay (10)

Q91. *[Essay]*

Think of a food that you consumed in the past 24 to 48 hours. What was that food, and what influenced your decision to choose it? Then, think about another food you consumed recently that was influenced by different factors. Share that food and what influenced your choice based on what you learned in Chapter One.

Suggested answer: *Specific foods and/or beverages will vary by student. Factors that influenced those choices may include taste; habit; availability; convenience; cost; marketing or advertisements; cultural background or heritage; emotions; social interactions; positive or negative associations; values or beliefs related to religion, politics, the environment, or health; nutrition or nutrition goals.*

Q92. *[Essay]*

Nutritional analysis of Celia's food journal indicates she ate 212g carbohydrate, 86g protein, and 78g fat yesterday. How many total kcalories did Celia consume? What percentage of kcalories came from carbohydrates, protein, and fat?

Suggested answer: *Celia consumed 1,894 total kcalories which have a macronutrient breakdown that is 45percentcarbohydrate, 18percentkcal protein, and 37percentkcal fat.*

212g x 4 kcal/g = 848 kcal from carbohydrates
86g x 4 kcal/g = 344 kcal from protein
78g x 9 kcal/g = 702 kcal from fat
848 kcal + 344 kcal + 702 kcal = 1,894 total kcal

848 kcal / 1,894 kcal = 0.447 rounded to 0.45 = 45percentcarbohydrate
344 kcal / 1,894 kcal = 0.181 rounded to 0.18 = 18percentprotein
702 kcal / 1,894 kcal = 0.37 = 37percentfat

Q93. *[Essay]*

Characteristics of the six classes of nutrients are described using the following terms: macronutrient, micronutrient, energy-yielding, organic, and inorganic. Explain what each of the five terms means and which nutrients they apply to.

Suggested answer: Macronutrient:*Refers to nutrients needed in relatively large amounts (grams) each day. Carbohydrates, protein, and fats are considered macronutrients.*
Micronutrient:*Refers to nutrients required in only small amounts (milligrams or micrograms) each day. Vitamins and minerals are micronutrients.*
Energy-yielding:*Refers to nutrients that yield energy (measured in kcal) when broken down by the body. Carbohydrates, proteins, and fats are the only three energy-yielding nutrients.*
Organic:*Refers to substances or molecules that contain carbon in chemistry. Carbohydrates, proteins, fat, and vitamins are organic.*
Inorganic:*Refers to substances or molecules that do not contain carbon in chemistry. Water and minerals are inorganic.*

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Q94. *[Essay]*

Ask a question about nutrition that could be studied with an epidemiological or experimental study. Identify which type of research design you would use and explain why.

Suggested answer: *Answers will vary by student but should clearly identify if the study will be epidemiological or experimental, the research design of that epidemiological or experimental study, and the reasons for selecting the study type and design. Possible research designs for epidemiological studies include cross-sectional studies, case-control studies, and cohort studies. Research design options for experimental studies include laboratory-based studies (animal-based or in vitro) and human intervention or clinical trials.*

Q95. *[Essay]*

DRI recommendations are designed for different purposes. Give a real-life example of when you might use the RDA, UL, and EAR, and explain why that DRI value is appropriate in each example.

Suggested answer: *Specific examples will vary by student, but the reasoning behind using the RDA, UL, and EAR should align with each of the DRI's purposes and significance.*
The RDA is used as a nutrient intake goal for healthy individuals; it is helpful when determining how much of a specific nutrient an individual should aim to consume and if they are regularly meeting this intake.
The UL represents the maximum amount of a nutrient that can be safely consumed; it is helpful for avoiding overconsumption of a nutrient, which can occur with high intake of dietary supplements or frequent consumption of fortified foods.
The EAR represents the average amount of a nutrient needed to maintain health. It is used for comparison purposes in research studies, but it can also provide a general gauge of whether an individual's intake is adequate. If intake falls below the EAR, it is most likely inadequate, and the possibility of a deficiency is likely.

Q96. *[Essay]*

Jake is a soccer player, and he recently met with a sports dietitian to see how he might improve his performance through diet. At that initial meeting, the dietitianasked him to keep a detailed food record of everything he ate and drank for five days. The dietitian asked Jake to email his food record once complete so it could be reviewed and analyzed prior to their next meeting. At their second meeting, the RDN shares the results with Jake. He learns that approximately 45percentof his total daily kcalories are from fat, 18percentare from protein, and 37percentare from carbohydrate. How does Jake's macronutrient intake compare to the AMDR? What changes do you think he needs to make to his macronutrient intake?

Suggested answer: *Jake's protein intake (18percent) falls in line with AMDR recommendations for protein intake (10 to 35percentof total kcal). However, his fat and carbohydrate intakes do not. He is consuming more fat (45percent) than recommended by the AMDR (20 to 35percentof total kcal), and he is consuming too little carbohydrate (37percent) in comparison to the AMDR (45 to 65percentof total kcal). Suggested changes will vary by student but should address decreasing fat intake and increasing carbohydrate intake.*

Q97. *[Essay]*

Explain why a nutrient deficiency may not present symptoms or be detectable until the later stages of its development.

Suggested answer: *Answers may vary slightly by student but should focus on the fact that Internal changes caused by a nutrient deficiency will always precede outward signs and symptoms. Because of this, symptoms may not present themselves until the deficiency has progressed. Additionally, the deficiency may or may not be detectable through laboratory tests until the later stages of development.*

Q98. *[Essay]*

Explain how some risk factors are the result of "too much" while others are the result of "too little."

Suggested answer: *Answers will vary by student. Examples of things consumed or done "too much" that contribute to the development of risk factors are sodium, sugar-sweetened beverages, processed meats, alcohol, and stress. Things consumed or done "too little" that contribute to the development of risk factors may include fruits, vegetables, omega-3 fatty acids, nuts and seeds, and physical activity.*

Q99. *[Essay]*

Despite evidence linking certain behaviors, such as overconsumption of unhealthy foods, inactivity, and smoking, to chronic disease risk, many Americans continue to engage in them. Why do you think this is? What factors in today's environment may be impeding or preventing individuals from making healthier choices and lifestyle changes?

> ***Suggested answer:*** *Answers will vary by student in their thoughts on why more individuals do not make changes and what factors may be serving as roadblocks.*

Q100. *[Essay]*

Imagine that a friend tells you she was watching her favorite morning news program on television and saw a segment featuring a story on "surprising new findings" about the health benefits of a new over-the-counter product. She found the product at her local drugstore and shows you the package. What advice would you give her regarding her latest discovery?

> ***Suggested answer:*** *Answers will vary by student and should reference common "red flags" that may signal nutrition quackery and misinformation, such as using terms like "natural" to suggest a product is safe or effective, offering a "satisfaction guaranteed" promise, claiming a product is "time-tested" or a newfound solution, and suggesting the product can cure a variety of health issues.*

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Instructor Manual

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Chapter 1: An Overview of Nutrition

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Purpose and Perspective of the Chapter

The purpose of this chapter is to introduce and educate students on how their food choices play a significant role in determining their overall health and well-being throughout their lifetime. Nutritious food choices support healthy bodies. As students read this chapter, have them consider how their current food choices are influencing their health and risk of chronic diseases.

Chapter Objectives

The following objectives are addressed in this chapter:

1.1 Describe how various factors influence personal food choices.

1.2 Describe the essential nutrients required by the body.

1.3 Explain the scientific method and how scientists use various types of research studies and methods to acquire nutrition information.

1.4 Explain the purposes of the various categories of the Dietary Reference Intakes (DRI).

1.5 Describe the nutrition assessment methods used to detect energy and nutrient deficiencies and excesses.

1.6 Identify the relationships between dietary factors and chronic diseases.

1.7 Recognize nutrition misinformation.

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Complete List of Chapter Activities and Assessments

The following table organizes activities and assessments by objective so that you can see how all this content relates to objectives and make decisions about which content you would like to emphasize in your class based on your objectives. For additional guidance, refer to the Teaching Online Guide.

Chapter Objective	Activity/Assessment	Source (i.e., PPT slide, if applicable)	Duration
1.1-1.7	Knowledge check	MindTap, PPT slides 1-57	5 min
1.1-1.2	Check Your Understanding: 1.1 - 1.2	MindTap, PPT slides 4-17	5 min
1.3-1.4	Check Your Understanding: 1.3 - 1.4	MindTap, PPT slides 18-38	5 min

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1.5-1.6	Check Your Understanding: 1.5 - 1.6	MindTap, PPT slides 39-50	5 min
1.7		PPT slides 49-54	
	Video Quiz: How Much Sodium (Salt) Per Day Do You Need?	MindTap	7 min
	A Closer Look: The Food Environment and Food Choices	MindTap	10–15 min
	Debunk the Junk: CLAIM Method	MindTap	10 min
	Case Study: Reducing Disease Risk	MindTap	10 min
	Global Nutrition Watch: What are Superfoods?	MindTap	10 min
1.1-1.7	Chapter Quiz	MindTap, PPT slides 1-57	15 min
1.1-1.7	Diet and Wellness Plus: Create Your Profile	MindTap, PPT slides 1-57	5 min
1.1-1.7	Diet and Wellness Plus Skill Building: Calories	MindTap, PPT slides 1-57	10-15 min
1.1-1.7	Nutrition in Your Life: Diet and Wellness Plus Activity	MindTap, PPT slides 1-57	15 min
1.1-1.7	Practice Test	MindTap, PPT slides 1-57	15 min
1.1	Discussion #1	PPT slide 7	5 min
1.2	Poll 1	PPT slide 14	1 min
1.3	Knowledge Check 1	PPT slide 25	1 min
1.4	Reflection 1	PPT slide 31	5 min
1.4	Reflection 2	PPT slide 34	5 min
1.4	Case Study Activity	PPT slide 37	5 min
1.5	Knowledge Check 2	PPT slide 43	1 min
1.6	Discussion #2	PPT slide 49	5 min
1.7	Knowledge Check 3	PPT slide 54	1 min
1.1-1.7	Additional Discussion Questions	Instructor's Manual	30 min
1.1	Worksheet 1-1- Influences on Food Choices	Instructor's Manual	30 min
1.3	Worksheet 1-2- Evaluation of Published Nutrition Information	Instructor's Manual	30 min
1.5	Using the DRI to assess the dietary intake of an individual	Instructor's Manual	30 min

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Key Terms

Acceptable Macronutrient Distribution Ranges (AMDR): ranges of intakes for the energy nutrients that provide adequate energy and nutrients and reduce the risk of chronic diseases for healthy individuals.

Adequate Intake (AI): the average daily amount of a nutrient that appears sufficient to maintain a specified criterion; a value used as a guide for nutrient intake when a RDA cannot be determined.

Anecdotes: personal accounts of an experience or event; not reliable scientific information.

Anthropometric (AN-throw-poe-MET-rick): relating to measurement of the physical characteristics of the body, such as height and weight.

- **anthropos** = human
- **metric** = measuring

Calories or kcalories: a measure of heat energy. Energy provided by foods and beverages is measured in kilocalories (1,000 calories equal 1 kilocalorie), abbreviated as kcalories or kcal. One kcalorie is the amount of heat necessary to raise the temperature of 1 kilogram (kg) of water by 1°C. The scientific use of the term "kcalorie" is equivalent to the popular use of the term "calorie".

Chronic diseases: Diseases characterized by a slow progression and long duration. Examples include heart disease, diabetes, and some cancers.

Chronic Disease Risk Reduction Intakes (CDRR): nutrient intakes associated with a low risk of chronic disease.

Covert (KOH-vert): hidden, as if under covers.

- **couvrir** = to cover

Cultural competence: having an awareness and acceptance of cultures and the ability to interact effectively with people across diverse cultures.

Deficient: inadequate; a nutrient amount that fails to meet the body's needs and eventually results in deficiency symptoms.

Diet: the foods and beverages a person eats and drinks.

Diet history: a record of a person's eating behaviors and the foods they eat.

Dietary Reference Intakes (DRI): a set of nutrient intake values for healthy people in the United States and Canada. These values are used for planning and assessing diets and include:

- Estimated Average Requirements (EAR)

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- Recommended Dietary Allowances (RDA)

Drug history: a record of all the drugs, over-the-counter and prescribed, that a person takes routinely.

Energy: the capacity to do work. The energy in food is stored in the form of chemical energy. The body can convert this chemical energy to mechanical, electrical, or heat energy.

Energy density: a measure of the energy a food provides relative to a unit of mass of the food (kcalories per gram).

Energy-yielding nutrients: the nutrients that break down to yield energy the body can use:

- carbohydrate
- fat
- protein

Essential nutrients: nutrients that a person must obtain from food because the body cannot make them for itself in sufficient quantities to meet physiological needs; also called indispensable nutrients. About 40 nutrients are currently known to be essential for human beings.

Estimated Average Requirement (EAR): the average daily amount of a nutrient that will maintain a specific biochemical or physiological function in half of the healthy people of a given age and gender group.

Estimated Energy Requirement (EER): the average dietary energy intake that maintains energy balance and good health in a person of a given age, biological sex identification, weight, height, and level of physical activity.

Foods: products derived from plants or animals that are taken into the body to yield energy and nutrients for the maintenance of life and the growth and repair of tissues.

Genome (GEE-nome): the complete set of genetic material (DNA) in an organism or a cell. The study of genomes is called genomics.

Global cuisine: foods associated with particular cultural groups.

Health history: an account of a person's current and past health status and disease risks.

Healthy People: a national public health initiative under the jurisdiction of the U.S. Department of Health and Human Services (DHHS) that identifies the most significant preventable threats to health and focuses efforts towards their elimination.

Inorganic: not containing carbon nor pertaining to living organisms. The two classes of inorganic nutrients are minerals and water.

- **in** = not

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Malnutrition: any condition caused by an excess or deficiency of food energy or nutrient intake, or by an imbalance of nutrients.

- **mal** = bad

Minerals: inorganic elements. Some minerals are essential nutrients required in small amounts by the body for health.

Meta-analysis: an objective and statistical summary of evidence gathered from multiple selected studies to develop a quantitative review; often derived from a systematic review.

Nutrients: chemical substances obtained from food and used within the body to provide energy, structural materials, and regulating agents to support growth, maintenance, and repair of the body's tissues. Nutrients may also reduce the risk of some diseases.

Nutrition: the science of the nutrients in foods and their actions within the body. A broader definition includes the study of human behaviors related to food and eating.

Nutrition assessment: a comprehensive analysis of a person's nutrition status that uses health, socioeconomic, drug, and diet histories. Anthropometric measurements, physical examinations, and laboratory tests are components of nutrition assessment.

Nutritional genomics: the science of how nutrients affect the activities of genes (nutrigenomics) and how genes affect the activities of nutrients (nutrigenetics).

Organic: in chemistry, substances or molecules containing carbon-carbon bonds or carbon-hydrogen bonds that are characteristic of living organisms. The four classes of organic nutrients are carbohydrates, lipids (fats), proteins, and vitamins.

Overnutrition: an excess of energy or nutrients.

Overt (oh-VERT): out in the open and easy to observe.

- **ouvrir** = to open

Phytochemicals (FIE-toe-KEM-ih-cals): non-nutrient compounds found in plants. Some phytochemicals exhibit biological activity in the body.

- **phyto** = plant

Primary deficiency: a nutrient deficiency caused by inadequate dietary intake of that nutrient.

Processed foods: foods that have been intentionally changed by the addition of substances, or through a method of cooking, preserving, milling, and so on.

Recommended Dietary Allowance (RDA): the average daily amount of a nutrient considered adequate to meet the known nutrient needs of practically all healthy people; a goal for dietary intake by individuals.

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Requirement: the lowest continuing intake of a nutrient that will maintain a specified criterion of adequacy.

Risk factor: a condition or behavior associated with an elevated frequency of a disease, yet not one that has been proven to be causal. Leading risk factors for chronic diseases include obesity, cigarette smoking, high blood pressure, high blood cholesterol, physical inactivity, and a diet high in added sugar and saturated fats and low in vegetables, fruits, and whole grains.

Secondary deficiency: a nutrient deficiency caused by something other than an inadequate intake, such as a disease condition or drug interaction that reduces absorption, accelerates use, hastens excretion, or destroys the nutrient.

Subclinical deficiency: a deficiency in the early stages, before the outward signs have appeared.

Systematic review: a critical and integrative summary of evidence gathered from multiple selected studies to answer a specific question and develop a qualitative review.

Tolerable Upper Intake Level (UL): the maximum daily amount of a nutrient that appears safe for most healthy people and beyond which there is an increased risk of adverse health effects.

Ultra-processed foods: foods that have been made from substances that are typically used in food manufacturing but not consumed as foods by themselves (such as oils, fats, flours, refined starches, and sugars) nor found in a typical home kitchen. During the processing, additives, preservatives, flavors, or colors are added to increase shelf life and/or appearance.

Undernutrition: a deficiency of energy or nutrients.

Vitamins: organic, essential nutrients required in small amounts by the body for health. Vitamins regulate body processes that support growth and maintain life.

- **vita** = life
- **amine** = vitamins were originally thought to contain an amino acid

Whole foods: fresh foods such as fruits, vegetables, grains, meats, and milk that are unprocessed or minimally processed.

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Chapter Outline

In the outline below, each element includes references (in parentheses) to related content. "LO.##" refers to the chapter objective; "PPT Slide #" refers to the slide number in the PowerPoint deck for this chapter (provided in the PowerPoints section of the Instructor Resource Center).

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I. **Food Choices (LO 1.1) (PPT Slides 4-7):** Food choices can not only help support good health, but an understanding of nutrition can also allow one to make food choices that can help prevent the many risk factors for chronic disease and aid in overall health and well-being.
    i. **Preferences:** The number one reason most people choose certain foods is taste. Sugar, salt, and fat are universally common preferences. There is evidence to suggest that taste may have a genetic component. When high-sodium or high-sugar foods are frequently consumed, people tend to develop taste fatigue.
    ii. **Habit:** We are predominantly creatures of habit and this is no different when it comes to making food choices. Additionally, certain habits can help in eliminating uncomfortable decisions when making food choices.
    iii. **Ethnic Heritages and Regional Cuisines:** This may be one of the strongest determining factors when it comes time to making food choices. Most often, people tend to prefer foods they grew up eating. Occasionally, many of us are willing to try different foods when travelling.
    iv. **Social Interactions:** Social interactions can encourage people to indulge in foods and beverages regardless of appetite signals. Often, such interactions can pose a challenge for those people who are required to manage their overall food intake- as in the case of those dealing with certain chronic health disorders.
    v. **Marketing:** This is a major influencing factor when making food choices. Often, companies are appealing to not just our sense of taste, but also the convenience factor, as in the case of widely available ready-to-eat meals.
    vi. **Social Media Influence:** Social media influences food choices, especially in young adults, leading them to eat unhealthy foods. Another concern is the amount of misinformation promoted through social media platforms.
    vii. **Availability, Convenience, and Economy:** People often prefer foods that are readily available, financially economical, and requires minimum effort to prepare.
    viii. **Positive and Negative Associations:** Food choices are often made in relation to positive or negative associations (Refer to Chapter 1 of the textbook for examples).
    ix. **Emotions:** Some people may have a difficult time eating when upset, while others may gravitate toward certain foods when emotionally upset.
    x. **Values:** Everything from religious beliefs, political views, or environmental concerns can affect food choices.
    xi. **Health Beliefs:** People choose and/or avoid certain foods based on their beliefs about how those foods will improve their overall

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health. If their choices are based on strong science, these can be beneficial to health. Refer to later discussions of eating disorders (Highlight 8) and dietary supplements commonly used by athletes (Highlight 14) to ensure the choices being made are based on science and are not merely fads.

xii. **Nutrition:** Lastly, choices made based on the nutritional content of the foods consumed will not only help with achieving the goal of being healthy, it can also help include more whole foods such as fruits, nuts, and whole grains, among others, in the diet.

xiii. **Activity:** Complete Worksheet 1-1- Influences on Food Choices.

II. **The Nutrients (LO 1.2) (PPT Slides 8-15):** The ongoing growth, maintenance, and repair of the body's tissues depend on the energy and the nutrients obtained from foods. Biologically, consumption of food is how we receive nourishment.

a. Nutrients in the Food and in the Body - Foods offer energy, nutrients, and phytochemicals to support the body's functions and maintain its health.
   i. Nutrient Composition of Foods
   ii. Nutrient Composition of the Body
   iii. Chemical Nature of Nutrients
   iv. Essential Nutrients

b. The Energy-Yielding Nutrients: Carbohydrate, Fat, and Protein – The three organic nutrients that provide energy are carbohydrate, fat, and protein. In contrast, vitamins, minerals, and water do not yield energy in the human body.
   i. Energy Measured in kCalories
   ii. Energy From Foods
   iii. Energy in the Body
   iv. Other Roles of Energy-Yielding Nutrients

c. The Vitamins – Vitamins are organic and do not provide energy. Vitamins facilitate the release of energy from carbohydrate, fat, and protein.

d. The Minerals - Because minerals are inorganic, they are indestructible and need not be handled with the special care that vitamins require. There are 16 minerals that are known to be essential in human nutrition but do not contain any kcalories.

e. Water – Water is involved in all of life processes. It participates in many metabolic reactions and supplies the medium for transporting vital materials to cells and carrying waste products away from them.

III. **The Science of Nutrition (LO 1.3) (PPT Slides 16-24):** Scientists learn about nutrition by conducting experiments that follow the protocols and standards of scientific research.

a. Conducting Research – Researchers conduct research studies to collect data that will test a hypothesis.

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i. Controls
ii. Sample Size
iii. Placebos
iv. Double Blind

b. Analyzing Research Findings – Refer to examples of various types of research designs as presented in Figure 1-4.
   i. Correlations and Causes
   ii. Cautious Conclusions
c. Publishing Research - The findings from a research study are submitted to a board of reviewers composed of other scientists who rigorously evaluate the study to ensure that the scientific method was followed, a process known as peer review.
d. Activity: Complete Worksheet 1-2- Evaluation of Published Nutrition Information

IV. **Dietary Reference Intakes (LO 1.4) (PPT Slides 25-37):** The Dietary Reference Intakes (DRI) are a set of nutrient intake values that can be used to plan and evaluate diets for healthy people.
   a. Establishing Nutrient Recommendations - These recommendations apply to healthy people and may not be appropriate for people with diseases that change nutrient needs.
      i. Estimated Average Requirements (EAR)
      ii. Recommended Dietary Allowances (RDA)
      iii. Adequate Intakes (AI)
      iv. Tolerable Upper Intake Levels (UL)
      v. Chronic Disease Risk Reduction Intakes (CDRR)
   b. Establishing Energy Recommendations – The recommendations for energy are not generous.
      i. Estimated Energy Requirements (EER)
      ii. Acceptable Macronutrient Distribution Ranges (AMDR)
   c. Using Nutrient Recommendations – Nutrient recommendations can be confusing for many people.
   d. Comparing Nutrient Recommendations - Recommendations have also been developed by two international groups: the FAO (Food and Agriculture Organization) and the WHO (World Health Organization).

V. **Nutrition Assessment (LO 1.5) (PPT Slides 38-44):** People become malnourished when they get too little or too much energy or nutrients. Deficiencies, excesses, and imbalances of nutrients lead to malnutrition diseases.
   a. Nutrition Assessment of Individuals – Overnutrition and undernutrition lead to malnutrition.
      i. Food/Nutrition-Related History
      ii. Anthropometric Measurements
      iii. Physical Examinations

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iv. Laboratory Tests
v. Iron, for Example

b. Nutrition Assessment of Populations – Data collected from various population are used to develop national health goals.
   i. National Nutrition Surveys
   ii. National Health Goals
   iii. National Trends

VI. **Diet and Health (LO 1.6) (PPT Slides 45-48):** Within the range set by genetics, a person's choice of diet influences long-term health, especially the development of chronic diseases. Diet has no influence on some diseases, but is linked closely to others. Personal life choices, such as engaging in physical activity or using tobacco or alcohol can affect health positively or negatively.
   a. Chronic Diseases - Table 1-4 lists the 10 leading causes of death in the United States.
   b. Risk Factors for Chronic Diseases – A strong association between a **risk factor** and a disease means that when the factor is present, the likelihood of developing the disease increases.
      i. Risk Factors Persist
      ii. Risk Factors Cluster
      iii. Risk Factors in Perspective
      iv. Health Behaviors in the United States
   c. **Case Study 1-1- Reducing Disease Risk:** Maria is a 57-year-old operating room nurse who works full-time at a local hospital. She is 65 inches tall and weighs 160 pounds. She has a family history of diabetes and heart disease and was recently diagnosed with high blood cholesterol. She has declined the cholesterol-lowering medication her doctor prescribed and says she would like to explore other methods for lowering her cholesterol first. For the past few weeks, Maria has been taking a tablespoon of coconut oil every day after reading on the Internet that this will lower her cholesterol. She admits she has little time or energy to exercise. Her diet history reveals she often skips breakfast or has a donut or bagel with cream cheese at work. She drinks several cups of coffee each morning with cream and sugar. Lunch in the hospital cafeteria is a salad with crackers and iced tea with sugar. She occasionally drinks one or two glasses of wine in the evening, especially after a stressful day at work. She lives alone and relies on frozen dinners or other convenience foods in the evening. An analysis of her diet reveals an average daily intake of 200 g carbohydrate, 50 g protein, and 80 g fat.
      1. Taking into account her current lifestyle and personal food preferences, what food habits might be difficult for Maria to change?
      2. How might her emotions contribute to her food and drink choices?

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3. Using Table 1-2, calculate Maria's average daily kcalorie intake from carbohydrate, protein, and fat. Add these figures together to arrive at her total daily kcaloric intake.
4. What percentage of her daily kcalories is provided by carbohydrate? Protein? Fat?
5. Compare the composition of Maria's diet with the Acceptable Macronutrient Distribution Range (AMDR).
6. How would you use the information above to make dietary recommendations for Maria?
7. What are some credible sources of nutrition information from Table H1-1 that Maria could consult to learn how to lower her blood cholesterol?

VII. Highlight 1: Nutrition Information and Misinformation (LO 1.7) (PPT slides 49-54
   a. Nutrition on the internet – When evaluating nutrition information on the internet, you must determine whether information is balanced, accurate, and credible has become an increasing challenge in recent years.
   b. Nutrition in the news – Nutrition information in the news may often present nutrition information found on tv, in magazines and on the internet incorrectly in their attempt to get the consumer to buy their publication and products.
   c. Identifying nutrition experts – When you need sound nutrition advice and information a reliable person to ask is a registered dietitian nutritionist (RDN).
   d. Physicians and other healthcare professionals - Most physicians and other health-care professionals understand connections between health and nutrition. Few, however, have the education, time, or experience to provide adequate nutrition care.
   e. Dietitians and other dietary employees – Refer to Photo H1-2 for possible career pathways for an RDN and to Table H1-1 for credible sources of nutrition information.
   f. Identifying fake credentials – Many people with a nutrition credential other than RDN lack the established credentials and training of an RDN.
   g. Red flag of nutrition quackery – Refer to Figure H1-1 Red Flags of Nutrition Quackery.

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Additional Discussion Questions

You can assign these questions several ways: in a discussion forum in your LMS; as whole-class discussions in person; or as a partner or group activity in class.

1. Take a moment to reflect on the factors that influence your personal food choices following reading Chapter 1 in the textbook. Which factors most influence your daily food choices? Which factors least influence your daily food

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choices? Based on your understanding of the stated food choice factors in this textbook, provide evidence that identifies potential advantages and disadvantages for each food selection factor.

Answer: The following factors influence personal food choices: preferences; habit; ethnic heritage and regional cuisine; social interactions; availability, convenience, and economy; positive and negative associations; emotions; values; body weight and image; and nutrition and health benefits. The taste of a food is perhaps the most recognized attribute of preference. If it tastes good, then individuals will eat it. Taking medications can alter taste perception, thus affecting one's potential food intake. An example of the effect of habit is food selection patterns related to time of day—that is, foods associated with breakfast, lunch, or dinner. Ethnic heritage and regional cuisine food choices may be viewed as an advantage in that they form a strong foundation for food choices influenced by family demographics and environment. Thus, they allow for the progression of cultural diversity over the life cycle. The advantage of social interaction is that it allows for increased communication between individuals. The disadvantage of food intake in the context of social interactions may become evident if the food/drink consumption activity becomes a fixed behavioral pattern. For example, meeting someone for a drink after work. Marketing has a major influence on our food choices by competing for our dollars, trying to get us to eat more, and more often. Availability, convenience, and economy are significant factors that can influence personal food choice. In terms of advantages, if a particular food choice is readily available, convenient to prepare, and inexpensive, then this food choice is typically viewed as desirable. However, these attributes can also be associated with disadvantages. Foods that are readily available and easily prepared may represent unhealthy food choices, such as highly processed or fast foods. In the case of food consumption, emotions may influence how food is perceived. Food may be viewed as a stimulus for a certain response, either providing comfort or eliciting distress. How one perceives value in food may be associated with religious, political, and/or environmental concerns. These associations may be viewed positively if they help define a person's cultural/religious beliefs, providing comfort and spirituality. The idea of body weight and image can influence personal food choice practices. If the basis of the food choice is sound and evidenced-based, then it would be viewed as an advantage. However, not all body weight and image practices are based on healthful lifestyle behaviors. Dietary patterns may be based on fad practices, which are promoted by extensive marketing. If people choose foods based on sound clinical evidence, then there is a clear advantage. However, reliance on suspect or fraudulent information sources can result in disadvantageous choices.

2. Discuss the differences between an essential and a nonessential nutrient in terms of dietary consumption. Can the body survive without the provision of essential and nonessential nutrients? If an individual utilizes basic diet-

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planning principles, can he or she be sure that they will be able to obtain all of the necessary essential nutrients? Why or why not?

Answer: Essential nutrients are those that must be brought into the body from outside; they provide basic structural elements and raw materials for energy metabolism. Nonessential nutrients are equally important to the health and well-being of the body, but the body can meet its needs for them through its own physiological mechanisms. The body must have both essential and nonessential nutrients in order to maintain physiological health.

3. Nutrition assessment includes several component parts so that a comprehensive analysis of an individual's nutrition status can be conducted. Discuss how each factor contributes to the overall determination of health and well-being.

   Answer: The component parts of a nutrition assessment include historical information, anthropometric measurements, physical examination, and laboratory testing. Each of these component parts helps the health practitioner obtain an understanding of the baseline nutritional health status of the individual. Historical information refers to the collection of subjective data from the individual. It reflects dietary patterns of behavior, health history (details of past medical/surgical history), social/family history, and medications (over-the-counter and prescription) used. Based on the information provided in the history section, the practitioner focuses on the physical examination, which includes visual inspection, auscultation, and palpation of body parts. Additionally, anthropometric measurements can be taken that will be used for comparison to standardized sex/age charts. Data from the physical assessment and anthropometric measurements will help to provide a baseline for comparison for the individual. Finally, certain lab tests provide baseline measurements of the individual's nutrition status. Test values will be compared to normal-range values that are age- and sex-specific. The presence of abnormal results will lead to further inquiry, whereas the confirmation of normal results will support a finding of adequate nutrition status. (Refer to "Nutrition Assessment of Individuals" on p. 22–24).

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Additional Activities and Assignments

1. Complete Worksheet 1-1- Influences on Food Choices.
   Worksheet 1-1- Influences on Food Choices Answer Key.

   Answers will vary.

2. Complete Worksheet 1-2- Evaluation of Published Nutrition Information.
   Worksheet 1-2- Evaluation of Published Nutrition Information Answer Key.

   Answers will vary.

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3. Review **Handout 1-1- Using the DRI to Assess the Dietary Intake of a Healthy Individual**.

Worksheet 1-1- Influences on Food Choices

We decide what to eat, when to eat, and even whether to eat for a variety of reasons. Examine the factors that influence your food choices by keeping a food diary for 24 hours. Record the times and places of meals and snacks, the types and amounts of foods eaten, and a description of your thoughts and feelings when eating. Now examine your food record and reflect on your choices.

24-Hour Food Diary					
Meal	Time/ Place	Food Items	How Much	How do You Feel While Eating?	Do You Feel This Was a Good Meal?
Breakfast		Grains Fruits Dairy Protein Fat			
Snack					
Lunch		Grains Fruits Dairy Vegetables Protein Fat			
Snack					
Dinner		Grains Fruits Dairy Vegetables Protein Fat			
Snack					

1. Which, if any, of your food choices were influenced by emotions (happiness, boredom, or disappointment, for example)?
2. Was social pressure a factor in any food decisions?
3. Which, if any, of your food choices were influenced by marketing strategies or food advertisements?
4. How large of a role does availability, convenience, and economy play in your food choices?
5. Does your age, ethnicity, or health influence your food choices?
6. How many times did you eat because you were truly hungry? How often did you think of health and nutrition when making food choices? Were those food choices different from others made during the day?

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Compare the choices you made in your 24-hour food diary to the USDA My Plate™ Food Plan Recommendation. To obtain a set of personalized recommendations, you can enter your age, sex, height, weight, and activity level after clicking on "Get Your My Plate Plan" at **https://www.choosemyplate.gov/resources/MyPlatePlan**

Food Group	Suggested Amounts	Amounts Consumed
Grains		
Vegetables		
Fruits		
Dairy		
Protein Foods		

7. Do you eat the suggested amounts from each of the five food groups daily?
8. Do you try to vary your choices within each food group from day-to-day?
9. What dietary changes could you make to improve your chances of enjoying good health?

Worksheet 1-2- Evaluation of Published Nutrition Information

Literature Critique: Critical Evaluation of Published Nutrition Information—"Should I Believe What I Just Read?" Assignment for discussion: Carefully read a journal article and answer the following questions on a separate sheet of paper.

1. Summarize the basic idea of the article in a short paragraph.
   a. What are the credentials of the author(s)? What do the abbreviations after the name(s) mean? Do they enhance the authors' credibility? Explain.
   b. Is the author affiliated with an organization or institution? Does this affiliation with the organization or institution enhance the authors' credibility? Briefly explain.
   c. Does the periodical have an editorial board? Do the editors' credentials enhance the article's credibility? Where does one look in a periodical for the editorial board?

2. Is scientific research being presented or discussed? Is the research current?
   a. If so, what specific kinds of research or data are presented or cited to support the ideas?
   b. Were references listed to allow readers to investigate the information's original source? Were full citations provided?

3. What is the underlying hypothesis (if/then, cause/effect, etc.)?
   a. What are the article's conclusions/recommendations?
   b. Are the conclusions or recommendations supported by the research discussion? Explain briefly why or why not.

4. Design and describe in-depth additional research that could more decisively test the hypothesis identified. Pay particular attention to experimental strategy and controls.
   a. Indicate what will be measured.

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b. State the type of experimental design and types of methods to be used.

5. Identify the statements in the article that you believe and those that you do not believe and discuss why or why not for each.

6. What sources other than those listed in the periodical would you refer to if you were to research the article's topic further?

Source: Adapted with permission of Deborah Fleurant, MOE Thesis, University of New Hampshire, 1989 (Thesis Advisor Sam Smith)

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Additional Resources

Cengage Video Resources

- Introduction to Vitamins and Minerals, https://www.youtube.com/watch?v=TBNCqRCsSvY
- Using the Scientific Method in the Nutrition Field, https://www.youtube.com/watch?v=U9pNx03Xcww
- Increasing Equity Impact in Community-Based Nutrition Research, https://www.youtube.com/watch?v=BsZS8xi8nhc
- Nutrition Essentials, https://www.youtube.com/watch?v=TlXZeu0kjFY
- Binge Eating, https://www.youtube.com/watch?v=ZfNYQ8n_guY
- Fundamentals of Nutrition, https://www.youtube.com/watch?v=aSWId0v7YgE
- Myth Busting for the Female Athlete, https://www.youtube.com/watch?v=W0FV_W-KUC8
- Role of GLP-1 Receptor Agonists for Weight Loss, https://www.youtube.com/watch?v=awixIpF-mEg
- Measuring Height and Weight | Medical Assisting Lesson | How To Check Height and weight, https://www.youtube.com/watch?v=bvfeK05NxsA

Answer Key for Critical Thinking Questions

A. How would you judge the accuracy or validity of nutrition information? (LO 1.7)

Answer: Always first consider the source of the nutrition information you are evaluating. Ask yourself, is the person providing the information qualified to speak on nutrition? Is the information based on valid scientific research? Think about the "red flags of nutrition quackery" and determine if the information is

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too good to be true, does it include personal testimonials, or does the product make paranoid accusations. If you are looking at information on a website ask yourself *who* is providing this information and are they qualified nutrition professionals, *when* was the site last updated, *where* is the information coming from (e.g., .gov, .edu, or .org usually are sites that can be trusted). Also consider *why* is this site providing this information? If they will earn money from the information be very cautious about the information they provide. Finally, what information are they providing and does it agree with other reliable sources.

B. You have just received an e-mail forwarded by a friend warning that the artificial sweetener aspartame is a TOXIN that causes muscle spasms, leg numbness, stomach cramps, vertigo, dizziness, headaches, tinnitus, joint pain, depression, anxiety, slurred speech, blurred vision, and memory loss. It goes on to say that this DEADLY POISON causes blindness, multiple sclerosis, brain tumors, and cancer! The message alleges that aspartame remains on the market because of a conspiracy between the FDA and the manufacturer to keep these dangers hidden from the public. How can you determine whether these claims are legitimate warnings or an irresponsible hoax? (LO 1.7)

Answer: I would begin by determining the source of the information. The internet, social media, television programs, and podcasts, offer endless opportunities to obtain high-quality information, but it also delivers an abundance of incomplete, misleading, and inaccurate information. Always investigate the person, organization, or company publishing the information. An URL address that ends in .edu, .gov, or .org are likely to be internet sites that can be trusted. A person who is licensed as a registered dietitian nutritionist (RDN) is someone who can be trusted to relay valid information. Examples of organizations that can be trusted to publish credible information are the American Heart Association (AHA), Center for Disease Control and Prevention (CDC), and the American Medical Association (AMA). Be aware of “red flags” that would indicate that the information is not legitimate. This includes such things as meaningless medical jargon, personal testimony, paranoid accusations, new found treatment, one product that does it all, satisfaction guaranteed, quick and easy fixes, and natural ingredients (natural is not necessarily better or safer).

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