Chapter 1: An overview of nutrition

Multiple choice

1. Food choices are strongly influenced by:
a. cultural background.
b. a person's gender.
c. innate preferences for new tastes.
d. physical activity.
ANS: a
TOP: FOOD CHOICES
DIF: Knowledge level

2. Functional foods are foods that:
a. have health benefits beyond their nutrient content.
b. are specially developed for consumers' taste preferences.
c. have essential roles in diet.
d. are genetically modified to provide essential nutrients.
ANS: a
TOP: NUTRITION AND HEALTH BENEFITS
DIF: Knowledge Level

3. 3. The human body composition for an average healthy adult is:
a. 25 per cent water, 20 per cent fat, 55 per cent protein, carbohydrate, minerals and other compounds
b. 45 per cent water, 25 per cent fat, 30 per cent protein, carbohydrate, minerals and other compounds
c. 60 per cent water , 20 per cent fat, 20 per cent protein, carbohydrate, minerals and other compounds
d. 50 per cent water , 20 per cent fat, 30 per cent protein, carbohydrate, minerals and other compounds
ANS: c
TOP: COMPOSITION OF THE BODY
DIF: Knowledge Level

4. Which of the following could be classified as inorganic nutrients?
a. Minerals and vitamins
b. Water and minerals
c. Vitamins and water
d. Lipids and minerals
ANS: b
TOP: CHEMICAL COMPOSITION OF NUTRIENTS
DIF: Application Level

5. An organic nutrient is:
a. found in plant material.
b. a nutrient derived from plants and animals that are organically farmed.
c. a nutrient that contains carbon.
d. a nutrient that contains hydrogen.
ANS: c
TOP: CHEMICAL COMPOSITION OF NUTRIENTS
DIF: Application Level

6. Which of the following nutrients are all sources of energy for the body?

a. Vitamins, carbohydrates and water
b. Minerals, phytochemicals and carbohydrates
c. Carbohydrates, protein and fat
d. Fat, protein and vitamins
ANS: c
TOP: THE NUTRIENTS
DIF: Application Level

7. 200 calories is equivalent to:
a. 400 kilojoules.
b. 840 kilojoules.
c. 420 kilojoules.
d. 840 joules.
ANS: b
TOP: THE ENERGY YIELDING NUTRIENTS
DIF: Application Level

8. The most concentrated source of energy is provided by:
a. fat.
b. carbohydrates.
c. vitamins.
d. minerals.
ANS: a
TOP: THE ENERGY YIELDING NUTRIENTS
DIF: Application Level

9. 10 grams of protein, fat, or carbohydrates would provide the following amounts of kilojoules:
a. protein: 170 Kj; fat: 370kJ; carbohydrates: 170 kJ.
b. protein: 370 Kj, fat: 270kJ, carbohydrates: 170 kJ.
c. protein: 170 Kj, fat: 170kJ, carbohydrates: 170 kJ.
d. protein: 120 Kj, fat: 250kJ, carbohydrates: 160 kJ.
ANS: a
TOP: THE ENERGY YIELDING NUTRIENTS
DIF: Application Level

10. In research, a case-control study is a study in which a group of people:
a. are randomised into those who take a certain nutrient and those who do not.
b. are randomised into taking a nutrient or a placebo.
c. are followed over a period of time to observe who did or did not develop a specific condition.
d. who did or did not develop a specific condition are matched for gender, age and other relevant factors.
ANS: d
TOP: CONDUCTING RESEARCH
DIF: Application Level

11. The Estimated Average Requirement (EAR) of a nutrient is:
a. the average amount required by an individual.
b. the average amount that meets the needs of half the population.
c. the estimated average daily requirement for an individual.
d. the estimated average weekly requirement for an individual.
ANS: b

TOP: NUTRIENT REFERENCE VALUES
DIF: Knowledge Level

12. An Adequate Intake (AI) of a nutrient:
a. is a certain quantity of a nutrient that, if consumed, will be sufficient to meet dietary requirements.
b. is a signal that there is insufficient evidence to establish an RDI.
c. is an adequate amount for half the population.
d. reflects the average intake of an individual that will meet average requirements.
ANS: b
TOP: NUTRIENT REFERENCE VALUES
DIF: Knowledge Level

13. The acceptable macronutrient distribution range for macronutrients areas is:
a. 45–65 per cent carbohydrate, 20–35 per cent fat and 15–25 per cent protein.
b. 40–60 per cent carbohydrate, 20–35 per cent fat and 20–30 per cent protein.
c. 35–60 per cent carbohydrate, 20–30 per cent fat and 25–35 per cent protein.
d. 40–65 per cent carbohydrate, 20–35 per cent fat and 20–25 per cent protein.
ANS: a
TOP: ESTABLISHING ENERGY RECOMMENDATIONS
DIF: Knowledge Level

14. Which of the following data must be collected for a nutrition assessment?
a. Historical information; anthropometric data; physical examination; and laboratory tests
b. Physical examination, anthropometry and X-rays
c. Biochemistry, social information and assessment of food knowledge
d. Historical information, drug history and anthropometry
ANS: a
TOP: NUTRITION ASSESSMENT
DIF: Application Level

15. Chronic diseases are diseases that:
a. develop over a long period of time and are always associated with excessive energy and nutrient intake.
b. develop over a long period of time and are often strongly associated with lifestyle risk factors.
c. are present over a long period of time and are always unrelated to lifestyle and nutrient intake.
d. people experience over a short period of time.
ANS: b
TOP: CHRONIC DISEASES
DIF: Application Level

16. If a person has a risk factor for a specific chronic, disease, this means that he or she:
a. is less likely to develop the disease.
b. will eventually develop the disease.
c. is more likely to develop the disease.
d. will not develop the disease if no risk factors are present.
ANS: c
TOP: RISK FACTORS AND CHRONIC DISEASE
DIF: Knowledge Level

17. Recommended dietary intakes (RDI) are:
a. the recommended intakes of intakes a person should have daily to avoid deficiencies.

b. recommended intakes of nutrients that should be consumed most of the time.
c. the average nutrient intake a person should have.
d. recommendations only, and are unnecessary to have.
ANS: b
TOP: NUTRIENT REFERENCE VALUES
DIF: Knowledge Level

18. If a person's diet is contributing 30 per cent of energy from fat and their daily intake is 10800kJ, then the amount of fat in their diet is:
a. 87.6g
b. 190.6g
c. 122.5g
d. 98g
ANS: a
TOP: CALCULATING ENERGY PROVIDED BY FOOD
DIF: Application Level

19. A study in which both the participants and the researchers do not know which treatment is being used is called:
a. the placebo effect.
b. a blind experiment.
c. a cohort.
d. a double blind experiment.
ANS: d
TOP: RESEARCH METHODS
DIF: Knowledge Level

20. If a person ate a meal containing 20 g protein, 12 g fat and 56 g carbohydrates, how much energy would it provide him or her with?
a. 1756 kJ
b. 16 87 kJ
c. 1932 kJ
d. 1736 kJ
ANS: d
TOP: Calculating energy provided by food
TOP: THE NUTRIENTS
DIF: Application Level

21. Which of the following is an example of a macronutrient?
a. Protein
b. Calcium
c. Vitamin C
d. Vitamin D
ANS: a
TOP: THE NUTRIENTS
DIF: Application Level

22. Which of the following is classified as a micronutrient?
a. Iron
b. Protein

c. Alcohol
d. Carbohydrate
ANS: a
TOP: THE NUTRIENTS
DIF: Application Level

23. Which of the following is an organic compound?
a. Salt
b. Water
c. Calcium
d. Vitamin C
ANS: d
TOP: THE NUTRIENTS
DIF: Application Level

24. Which of the following is a characteristic of an essential nutrient?
a. It cannot be found in food.
b. It cannot be degraded by the body.
c. It cannot be made in sufficient quantities by the body.
d. It cannot be used to synthesise other compounds in the body.
ANS: c
TOP: THE NUTRIENTS
DIF: Application Level

25. Which of the following most accurately describes the term ‘organic’?
a. Products sold at health food stores
b. Products grown without the use of pesticides
c. Foods with superior nutrient qualities
d. Substances with carbon–carbon or carbon–hydrogen bonds
ANS: d
TOP: THE NUTRIENTS
DIF: Application Level

26. Which of the following is an organic nutrient?
a. Fat
b. Water
c. Oxygen
d. Calcium
ANS: a
TOP: THE NUTRIENTS
DIF: Application Level

27. Approximately how many nutrients are considered indispensable in the diet?
a. 15
b. 25
c. 40
d. 55
ANS: c
TOP: THE NUTRIENTS
DIF: Knowledge Level

28. Which of the following *cannot* add fat to the body?
a. Alcohol
b. Proteins
c. Carbohydrates
d. Inorganic nutrients
ANS: d
TOP: THE NUTRIENTS
DIF: Application Level

29. Which of the following is an example of a micronutrient?
a. Fat
b. Protein
c. Vitamin C
d. Carbohydrates
ANS: c
TOP: THE NUTRIENTS
DIF: Application Level

30. Which of the following nutrients does *not* yield energy during its metabolism?
a. Fat
b. Proteins
c. Vitamins
d. Carbohydrates
ANS: c
TOP: THE NUTRIENTS
DIF: Knowledge Level

31. How much energy is required to raise the temperature of one kilogram (litre) of water by 1° C?
a. 4200 joules
b. 4.2 kilojoules
c. 42 kilojoules
d. 42000 joules
ANS: b
TOP: THE NUTRIENTS
DIF: Application Level

32. Gram for gram, which of the following provides the most energy?
a. Fats
b. Alcohol
c. Proteins
d. Carbohydrates
ANS: a
TOP: THE NUTRIENTS
DIF: Knowledge Level

33. Which of the following nutrient sources yields *more* than 17 kilojoules per gram?
a. Plant fats
b. Plant proteins
c. Animal proteins

d. Plant carbohydrates
ANS: a
TOP: THE NUTRIENTS
DIF: Application Level

34. International units of energy are expressed in:
a. newtons.
b. calories.
c. kilojoules.
d. kilocalories.
ANS: c
TOP: ENERGY YIELDING NUTRIENTS
DIF: Knowledge Level

35. Approximately how many millilitres are contained in a half-cup of milk?
a. 50
b. 85
c. 120
d. 200
ANS: c
TOP: ENERGY YIELDING NUTRIENTS
DIF: Knowledge Level

36. Which of the following occurs is a result of metabolising energy nutrients?
a. Energy is released
b. Body fat increases
c. Energy is destroyed
d. Body water decreases
ANS: a
TOP: ENERGY YIELDING NUTRIENTS
DIF: Application Level

37. A half-cup vegetable serving weighs approximately:
a. five grams.
b. 50 grams.
c. 100 grams.
d. 200 grams.
ANS: c
TOP: ENERGY YIELDING NUTRIENTS
DIF: Knowledge Level

38. A weight-reduction regimen calls for a daily intake of 5880 kilojoules that include 30 grams of fat. Approximately what percentage of the total energy is contributed by fat?
a. 8.5
b. 15
c. 19
d. 25.5
ANS: c
TOP: ENERGY YIELDING NUTRIENTS
DIF: Application Level

39. A certain diet provides a total of 9240 kilojoules, of which 40 per cent of the energy comes from fat and 20 per cent from protein. How many grams of carbohydrate are contained in this diet?
a. 217
b. 285
c. 440
d. 880
ANS: a
TOP: ENERGY YIELDING NUTRIENTS
DIF: Application Level

40. What is the kilojoule value of a meal containing 110 grams of carbohydrates, 25 grams of protein, 20 grams of fat and five grams of alcohol?
a. 1240
b. 1650
c. 2040
d. 3130
ANS: d
TOP: ENERGY YIELDING NUTRIENTS
DIF: Application Level

41. Which of the following statements most accurately describes the composition of most foods?
a. They contain only one of the three energy nutrients, although a few contain all of them.
b. They contain equal amounts of the three energy nutrients, except for high-fat foods.
c. They contain mixtures of the three energy nutrients, although only one or two may predominate.
d. They contain only two of the three energy nutrients, although there are numerous other foods that contain only one.
ANS: c
TOP: ENERGY YIELDING NUTRIENTS
DIF: Application Level

42. In the body, the chemical energy in food can be converted into any of the following, *except*:
a. heat energy.
b. light energy.
c. electrical energy.
d. mechanical energy.
ANS: b
TOP: ENERGY YIELDING NUTRIENTS
DIF: Knowledge Level

43. When consumed in excess, all of the following can be converted to body fat and stored, *except*:
a. sugar.
b. corn oil.
c. alcohol.
d. vitamin C.
ANS: d
TOP: ENERGY YIELDING NUTRIENTS
DIF: Knowledge Level

44. Which of the following is a feature of minerals as nutrients?

a. They are organic.
b. They yield 17 kilojoules per gram.
c. Some become dissolved in body fluids.
d. Some may be destroyed during cooking.
ANS: c
TOP: THE MINERALS
DIF: Knowledge Level

45. Which of the following is *not* a characteristic of vitamins?
a. Essential
b. Inorganic
c. Destructible
d. Kilojoule-free
ANS: b
TOP: THE VITAMINS
DIF: Knowledge Level

46. How many vitamins are known to be required in the diet of human beings?
a. Five
b. Eight
c. 10
d. 13
ANS: d
TOP: THE VITAMINS
DIF: Knowledge Level

47. How many minerals are known to be required in the diet of human beings?
a. Six
b. 12
c. 16
d. 24
ANS: c
TOP: THE MINERALS
DIF: Knowledge Level

48. Which of the following is *not* a characteristic of the minerals?
a. They yield no energy.
b. They are unstable in light.
c. They are stable in cooked foods.
d. They are structurally smaller than vitamins.
ANS: b
TOP: THE MINERALS
DIF: Application Level

49. Overcooking a food is *least* likely to affect which of the following groups of nutrients?
a. Vitamins
b. Minerals
c. Proteins
d. Carbohydrates
ANS: b

TOP: THE NUTRIENTS
DIF: Application Level

50. Suppose your friend, Carrie, began to take a daily supplement of vitamin C, and stated that she felt a lot better. Her experience is best described as a(n):
a. anecdote.
b. blind experiment.
c. nutritional genomic.
d. case-control experience.
ANS: a
TOP: THE NUTRIENTS
DIF: Application Level

51. The study of how a person's genes interact with nutrients is termed:
a. genetic counselling.
b. nutritional genomics.
c. genetic metabolomics.
d. nutritional nucleic acid pool.
ANS: b
TOP: THE SCIENCE OF NUTRITION
DIF: Application Level

52. What is the benefit of using controls in an experiment?
a. The size of the groups can be very large.
b. The subjects do not know anything about the experiment.
c. The subjects who are treated are balanced against the placebos.
d. The subjects are similar in all respects except for the treatment being tested.
ANS: d
TOP: CONDUCTING RESEARCH
DIF: Application Level

53. What is the benefit of using a large sample size in an experiment?
a. Chance variation is ruled out.
b. There will be no placebo effect.
c. The experiment will be double-blind.
d. The control group will be similar to the experimental group.
ANS: a
TOP: CONDUCTING RESEARCH
DIF: Application Level

54. What is the benefit of using placebos in an experiment?
a. They ensure all subjects are similar.
b. All subjects receive a treatment.
c. Neither subjects nor researchers know who is receiving treatment.
d. One group of subjects receives a treatment, while the other group receives nothing.
ANS: b
TOP: CONDUCTING RESEARCH
DIF: Application Level

55. You have been asked to help a top nutrition researcher conduct human experiments on vitamin C. As the

subjects walk into the laboratory, you distribute vitamin C pill bottles to the females and placebo pill bottles to the males. The researcher instantly informs you that there are *two* errors in your research practice. What should you have done differently?
a. Given all the males vitamin C and all the females the placebo, and told them what they were getting
b. Distributed the bottles randomly, then randomised the subjects and told them what they were getting
c. Told the subjects which group they were in, and prevented yourself from knowing the contents of the pill bottles
d. Prevented yourself from knowing what was in the pill bottles, and distributed the bottles randomly to the subjects
ANS: d
TOP: CONDUCTING RESEARCH
DIF: Application Level

56. In the scientific method, a tentative solution to a problem is called the:
a. theory.
b. prediction.
c. hypothesis.
d. correlation.
ANS: c
TOP: CONDUCTING RESEARCH
DIF: Knowledge Level

57. In nutrition research, observations of the quantities and types of foods eaten by groups of people, and the health status of those groups, are known as:
a. case-control studies.
b. epidemiological studies.
c. human intervention trials.
d. correlation-control studies.
ANS: b
TOP: Conducting research
DIF: Knowledge Level

58. What is the meaning of a double-blind experiment?
a. Both subject groups take turns getting each treatment.
b. Neither subjects nor researchers know which subjects are in the control or experimental group.
c. Neither group of subjects knows whether they are in the control or experimental group, but the researchers do know.
d. Both subject groups know whether they are in the control or experimental group, but the researchers do not know.
ANS: b
TOP: CONDUCTING RESEARCH
DIF: Knowledge Level

59. What is the major weakness of a laboratory-based study?
a. The costs are usually high.
b. It is difficult to replicate the findings.
c. The results cannot be applied to human beings.
d. Experimental variables cannot be easily controlled.
ANS: c
TOP: CONDUCTING RESEARCH

DIF: Knowledge Level

60. A clinical trial must involve:
a. tissue cells in culture.
b. rats or mice as subjects.
c. human beings as subjects.
d. computer modelling to design the study.
ANS: c
TOP: CONDUCTING RESEARCH
DIF: Knowledge Level

61. Overeating then gaining body weight is an example of a:
a. variable effect.
b. positive correlation.
c. negative correlation.
d. randomisation effect.
ANS: b
TOP: CONDUCTING RESEARCH
DIF: Application Level

62. An increase in exercise accompanied by a decrease in body weight is an example of a:
a. variable effect.
b. positive correlation.
c. negative correlation.
d. randomisation effect.
ANS: c
TOP: CONDUCTING RESEARCH
DIF: Application Level

63. Before publication in a reputable journal, the findings of a research study must undergo scrutiny by experts in the field, according to a process known as:
a. peer review.
b. cohort review.
c. intervention examination.
d. double-blind examination.
ANS: a
TOP: CONDUCTING RESEARCH
DIF: Application Level

64. All of the following sets of values are included in the Dietary Reference Values (DRV), *except*:
a. AI.
b. RDI.
c. EAR.
d. LUT.
ANS: d
TOP: NUTRIENT REFERENCE VALUES
DIF: Knowledge Level

65. Which of the following is *not* a set of values within the Nutrient Reference Values (NRV)?
a. Adequate Intakes (AI)

b. Estimated Average Allowances (EAA)
c. Upper Level of Intake (UL)
d. Recommended Dietary Intakes (RDI)
ANS: b
TOP: NUTRIENT REFERENCE VALUES
DIF: Knowledge Level

66. The smallest amount of a nutrient that is consumed over a prolonged period and maintains a specific function is called the nutrient:
a. allowance.
b. requirement.
c. tolerable limit.
d. adequate intake.
ANS: b
TOP: ESTABLISHING NUTRIENT RECOMMENDATIONS
DIF: Knowledge Level

67. A health magazine has contacted you for your expert opinion on which measure best describes the amounts of nutrients that should be consumed by the population. Your reply should be:
a. the Nutrient Reference Values (NRV), because they are a set of nutrient intake values for healthy people in Australia and New Zealand.
b. the Upper Level of Intakes (UL), because they are the maximum daily amount of a nutrient that appears safe for most healthy people.
c. the Estimated Average Requirements (EAR), because they reflect the average daily amount of a nutrient that will maintain a specific function in half of the healthy people of a population.
d. the Recommended Dietary Intakes (RDI), because they represent the average daily amount of a nutrient considered adequate to meet the known nutrient needs of practically all healthy people.
ANS: d
TOP: ESTABLISHING NUTRIENT RECOMMENDATIONS
DIF: Application Level

68. If a group of people were to consume an amount of protein equal to the Estimated Average Requirement (EAR) for their population group, what percentage of the group would receive insufficient amounts of protein?
a. Two
b. 33
c. 50
d. 98
ANS: c
TOP: ESTABLISHING NUTRIENT RECOMMENDATIONS
DIF: Application Level

69. Recommended Dietary Intakes (RDI) may be used to:
a. measure the nutrient balance of population groups.
b. assess dietary nutrient adequacy for individuals.
c. treat persons with diet-related illnesses.
d. calculate the exact food requirements of most individuals.
ANS: b
TOP: ESTABLISHING NUTRIENT RECOMMENDATIONS
DIF: Application Level

70. Recommended Dietary Intakes (RDI) are based on the:
a. lower tolerable limit.
b. upper tolerable limit.
c. subclinical deficiency value.
d. Estimated Average Requirement (EAD).
ANS: d
TOP: ESTABLISHING NUTRIENT RECOMMENDATIONS
DIF: Knowledge Level

71. The amount of a nutrient that meets the needs of about 98 per cent of a population is termed the
a. Adequate Intake (AI).
b. daily recommended value.
c. upper level of intake.
d. Recommended Dietary Intake (RDI).
ANS: d
TOP: ESTABLISHING NUTRIENT RECOMMENDATIONS
DIF: Knowledge Level

72. The Recommended Dietary Intakes (RDI) for nutrients are generally:
a. more than twice as high as anyone needs.
b. the minimum amounts of nutrients that average people need.
c. designed to meet the needs of almost all healthy people.
d. designed to prevent deficiency diseases in half the population.
ANS: c
TOP: ESTABLISHING NUTRIENT RECOMMENDATIONS
DIF: Knowledge Level

73. At what level are the Recommended Dietary Intakes (RDI) for almost all vitamin and mineral intakes set?
a. Low, to reduce the risk of toxicity
b. High, to cover virtually all healthy individuals
c. Extremely high, to cover every single person
d. At the mean, to cover most healthy individuals
ANS: b
TOP: ESTABLISHING NUTRIENT RECOMMENDATIONS
DIF: Knowledge Level

74. Which of the following is *not* a feature of the Adequate Intake (AI) or the Recommended Dietary Intake (RDI)?
a. Both values exceed the average requirements.
b. AI values are more tentative than RDI values.
c. The percentage of people covered is known for both values.
d. Both values may serve as nutrient intake goals for individuals.
ANS: c
TOP: ESTABLISHING NUTRIENT RECOMMENDATIONS
DIF: Knowledge Level

75. The Recommended Dietary Intakes (RDI) and the Adequate Intake (AI) share all of the following features, *except*:
a. both are included in the Nutrient Reference Values (NRV).
b. both serve as nutrient intake goals for individuals.
c. neither covers 100 per cent of the population's nutrient needs.

d. neither is useful for evaluating nutrition programs for groups of people.
ANS: d
TOP: ESTABLISHING NUTRIENT RECOMMENDATIONS
DIF: Knowledge Level

76. Which of the following is a purpose of both the Recommended Dietary Intake (RDI) and the Adequate Intake (AI)?
a. Setting nutrient goals for individuals
b. Identifying toxic intakes of nutrients
c. Restoring the health of malnourished individuals
d. Developing nutrition programs for schoolchildren
ANS: a
TOP: ESTABLISHING NUTRIENT RECOMMENDATIONS
DIF: Knowledge Level

77. Bob consumes about 10&&500 kilojoules per day, apportioned as 150 grams of fat, 140 grams of carbohydrates and 150 grams of protein. Of the following, what would represent the appropriate revisions to help Bob adjust his nutrient intake so that it matches the Acceptable Macronutrient Distribution Ranges (AMDR)?
a. 70 grams fat, 156 grams protein, 313 grams carbohydrates
b. 140 grams fat, 150 grams protein, 150 grams carbohydrates
c. 500 grams fat, 750 grams protein, 1250 grams carbohydrates
d. 10 grams fat, 20 grams protein, 45 grams carbohydrates
ANS: a
TOP: ESTABLISHING ENERGY RECOMMENDATIONS
DIF: Application Level

78. Which of the following represents a rationale for setting a recommendation for energy?
a. Because protein is an energy nutrient, the figures for energy intake are set in proportion to protein intake.
b. Because a large number of people are overweight, the figures are set to induce a gradual weight loss in most individuals.
c. Because the energy needs of each population group show little variation, the figure is set to meet the needs of almost all individuals.
d. Because a margin of safety would result in excess energy intake for a large number of people, the figure is set at the average energy intake.
ANS: d
TOP: ESTABLISHING ENERGY RECOMMENDATIONS
DIF: Application Level

79. What does the Upper Level of Intake (UL) of a nutrient represent?
a. The maximum amount of nutrient allowed for fortifying a food
b. A number calculated by taking twice the Recommended Dietary Intake (RDI) or three times the Adequate Intake (AI)
c. The maximum allowable amount of a nutrient available in supplement form
d. The maximum amount of a nutrient, from all sources, that appears safe for most healthy people
ANS: d
TOP: ESTABLISHING NUTRIENT RECOMMENDATIONS DIF: Knowledge Level

80. Which set of values is used to recommend the average kilojoule intake that maintains an energy balance in different population groups?
a. Estimated Energy Requirement (EER)

b. adequate average requirement
c. Recommended Dietary Intake (RDI)
d. acceptable energy distribution range
ANS: a
TOP: ESTABLISHING NUTRIENT RECOMMENDATIONS
DIF: Knowledge Level

81. The percentage of kilojoule intakes for protein, fat, and carbohydrate that are thought to reduce the risk of chronic diseases are termed the:
a. Estimated Energy Requirements (EER).
b. tolerable range of kilojoule intakes.
c. estimated energy nutrient recommendations.
d. Acceptable Macronutrient Distribution Ranges (AMDR).
ANS: d
TOP: ESTABLISHING ENERGY RECOMMENDATIONS DIF: Knowledge Level

82. What is the Acceptable Macronutrient Distribution Range (AMDR) for carbohydrates?
a. Five to 10 per cent
b. 15–25 per cent
c. 30–40 per cent
d. 45–65 per cent
ANS: d
TOP: ESTABLISHING ENERGY RECOMMENDATIONS
DIF: Knowledge Level

83. Which of the following figures falls within the Acceptable Macronutrient Distribution Range (AMDR) for carbohydrates?
a. 35 per cent
b. 50 per cent
c. 70 per cent
d. 90 per cent
ANS: b
TOP: ESTABLISHING ENERGY RECOMMENDATIONS
DIF: Application Level

84. What is the Acceptable Macronutrient Distribution Range (AMDR) for protein?
a. 15–25 per cent
b. 30–45 per cent
c. 50–65 per cent
d. 70–85 per cent
ANS: a
TOP: ESTABLISHING ENERGY RECOMMENDATIONS
DIF: Knowledge Level

85. What is the upper range of fat intake in the Acceptable Macronutrient Distribution Range (AMDR)?
a. 20 per cent
b. 25 per cent
c. 35 per cent
d. 50 per cent
ANS: c

TOP: ESTABLISHING ENERGY RECOMMENDATIONS
DIF: Application Level

86. What is the Acceptable Macronutrient Distribution Range (AMDR) for fat?
a. 10–30 per cent
b. 20–35 per cent
c. 40–55 per cent
d. 60–75 per cent
ANS: b
TOP: ESTABLISHING ENERGY RECOMMENDATIONS
DIF: Knowledge Level

87. If a person consumed the upper Acceptable Macronutrient Distribution Range (AMDR) limit for protein as part of a diet containing 10&&500 kilojoules, approximately how many *grams* of protein would be ingested?
a. 41
b. 63
c. 154
d. 219
ANS: d
TOP: ESTABLISHING ENERGY RECOMMENDATIONS
DIF: Application Level

88. Which of the following statements does *not* describe features of the application of the recommended nutrient intakes?
a. The recommendations also apply to sick people.
b. The recommendations are designed to be met through the intake of foods, not supplements.
c. It is difficult and unnecessary to meet the recommended intakes for all nutrients every day.
d. The recommendations are neither minimum requirements nor, necessarily, optimal intakes for everybody.
ANS: a
TOP: ESTABLISHING NUTRIENT RECOMMENDATIONS
DIF: Knowledge Level

89. The Nutrient Reference Values (NRV) may be used to:
a. treat people with diet-related disorders.
b. assess the adequacy or inadequacy of all required nutrients.
c. plan and evaluate diets for healthy people.
d. assess the adequacy of vitamins and minerals only.
ANS: c
TOP: USING NUTRIENT RECOMMENDATIONS
DIF: Knowledge Level

90. Which of the following is used to detect nutrient deficiencies?
a. Assessment techniques
b. Nutrient stages identification
c. Overt symptoms identification
d. Outward manifestations assessment
ANS: a
TOP: NUTRITIONAL ASSESSMENT
DIF: Knowledge Level

91. As a registered dietician at Jones Hospital, you have been instructed to write a policy statement on nutrition assessment procedures for all new patients. Which of the following would you highlight as the most useful parameters for the nutrition assessment of individuals?
a. Diet recall; food likes and dislikes; allergies; favourite family recipes
b. Anthropometric data; physical examinations; food likes and dislikes; family tree
c. A diet record of what the patient usually eats will provide sufficient information
d. Historical information; anthropometric data; physical examinations; laboratory tests
ANS: d
TOP: NUTRITION ASSESSMENT
DIF: Application Level

92. The inspection of hair, eyes, skin and posture is part of the nutrition assessment component known as:
a. diet history.
b. anthropometrics.
c. biochemical testing.
d. physical examination.
ANS: d
TOP: NUTRITION ASSESSMENT
DIF: Knowledge Level

93. Which of the following is an anthropometric measure?
a. Body weight
b. Blood pressure
c. Blood iron level
d. Food intake information
ANS: a
TOP: NUTRITION ASSESSMENT
DIF: Knowledge Level

94. Which of the following methods is used to determine the presence of abnormal functions inside the body due to a nutrient deficiency?
a. Diet history
b. Laboratory tests
c. Body weight loss
d. Physical examination
ANS: b
TOP: NUTRITION ASSESSMENT
DIF: Knowledge Level

95. Which of the following represents the usual chronological sequence of stages in the development of a nutrient deficiency resulting from an inadequate intake?
a. Declining nutrient stores, abnormal functions within the body and overt signs
b. Abnormal functions within the body, declining nutrient stores and overt signs
c. Abnormal functions within the body, overt signs and declining nutrient stores
d. Declining nutrient stores, overt signs and abnormal functions within the body
ANS: a
TOP: NUTRITION ASSESSMENT
DIF: Knowledge Level

96. Which of the following would most likely lead to a primary nutrient deficiency?

a. Inadequate nutrient intake
b. Reduced nutrient absorption
c. Increased nutrient excretion
d. Increased nutrient destruction
ANS: a
TOP: NUTRITION ASSESSMENT
DIF: Application Level

97. Which type of deficiency is caused by inadequate absorption of a nutrient?
a. Primary
b. Clinical
c. Secondary
d. Subclinical
ANS: c
TOP: NUTRITION ASSESSMENT
DIF: Knowledge Level

98. A subclinical nutrient deficiency is defined as one that:
a. shows overt signs.
b. is in the early stages.
c. shows resistance to treatment.
d. is similar to a secondary deficiency.
ANS: b
TOP: NUTRITION ASSESSMENT
DIF: Application Level

99. Which of the following is an *overt* symptom of iron deficiency?
a. Anaemia
b. Headaches
c. Skin dryness
d. Decreased red blood cell count
ANS: b
TOP: NUTRITION ASSESSMENT
DIF: Knowledge Level

100. Which of the following measures would a health professional use to identify early-stage malnutrition?
a. Laboratory tests
b. Anthropometric data
c. Physical exam results
d. Review of dietary intake data
ANS: a
TOP: NUTRITION ASSESSMENT
DIF: Knowledge Level

101. Factors known to be related to a disease but not proven to be causal are called:
a. risk factors.
b. genetic factors.
c. degenerative factors.
d. environmental factors.
ANS: a

TOP: RISK FACTORS FOR CHRONIC DISEASE
DIF: Knowledge Level

102. The most common causes of death today in Australia include all of the following, *except*:
a. cancer.
b. diabetes.
c. tuberculosis.
d. diseases of the heart and blood vessels.
ANS: c
TOP: CHRONIC DISEASES
DIF: Knowledge Level

103. Of the 10 leading causes of illness and death in Australia, how many are directly associated with nutrition?
a. One
b. Four
c. Seven
d. 10
ANS: b
TOP: CHRONIC DISEASES
DIF: Knowledge Level

104. Which of the following leading causes of death in Australia does *not* bear a relationship to diet?
a. Cancer
b. Heart disease
c. Diabetes mellitus
d. Pneumonia and influenza
ANS: d
TOP: CHRONIC DISEASES
DIF: Knowledge Level

105. Which of the following statements defines the association between a risk factor and the development of a disease?
a. All people with the risk factor will develop the disease.
b. The absence of a risk factor guarantees freedom from the disease.
c. The more risk factors for a disease, the greater the chance of developing that disease.
d. A factor (such as heredity) can be modified to lower the risk of degenerative diseases.
ANS: c
TOP: CHRONIC DISEASES
DIF: Knowledge Level

106. Which behaviour is linked to the major cause of death in Australia?
a. Poor diet
b. Cigarette smoking
c. Alcohol intake
d. Sexual activity
ANS: b
TOP: CHRONIC DISEASES
DIF: Knowledge Level

107. Which of the following factors makes the greatest contribution to deaths in Australia?

a. Guns
b. Alcohol
c. Cigarette smoking
d. Automobiles
ANS: c
TOP: CHRONIC DISEASES
DIF: Knowledge Level

108. Which of the following best describes a university-educated nutrition and food specialist who is qualified to make evaluations of people's nutritional health?
a. Accredited practising dietitian (APD)
b. Licensed nutritionist
c. Master of Nutrient Utilisation
d. Doctor of Food and Nutritional Sciences
ANS: a
TOP: IDENTIFYING NUTRITION EXPERTS
DIF: Knowledge Level

Matching

Match the statements with the words that best fit them from the lists below.

A. 29 kJ/g
B. Historical information
C. 15–25 per cent
D. 40
E. 4.2
F. Fat
G. Water
H. Energy
I. Protein
J. Organic
K. Placebo
L. Inorganic
M. Vitamin A
N. Vitamin C
O. Undernutrition
P. Overnutrition
Q. Anthropometrics
R. Overt deficiency
S. Physical examination
T. Subclinical deficiency

1. Substance containing no carbon or not pertaining to living things
2. Number of indispensable nutrients for human beings
3. Most substances containing carbon–hydrogen bonds
4. Substance containing nitrogen
5. Energy (kJ) required to increase the temperature of 1 kilogram (litre) of water from 0° C to 100° C
6. Nutrient with the highest body concentration
7. Nutrient with the highest energy density

8. Recommended percentage of energy from protein
9. Energy (kJ) yield of one gram of alcohol
10. A water-soluble vitamin
11. A nutrition assessment method
12. An inert medication
13. A fat-soluble nutrient
14. The recommended intake of this is set at the population mean
15. Excess nutrient intake leads to this
16. Deficient nutrient intake leads to this
17. Measurement of physical characteristics
18. Inspection of skin, tongue, eyes, hair and fingernails
19. A nutrient deficiency showing outward signs
20. A nutrient deficiency in the early stages

1. ANS: L TOP: The nutrients
2. ANS: D TOP: The nutrients
3. ANS: J TOP: The nutrients
4. ANS: I TOP: The nutrients
5. ANS: E TOP: The nutrients
6. ANS: G TOP: The nutrients
7. ANS: F TOP: The nutrients
8. ANS: C TOP: The energy yielding nutrients
9. ANS: A TOP: The energy yielding nutrients
10. ANS: N TOP: The nutrients
11. ANS: B TOP: Nutritional assessment
12. ANS: K TOP: Conducting research
13. ANS: M TOP: Nutrient Reference Values
14. ANS: H TOP: Nutrient Reference Values
15. ANS: P TOP: Nutrition assessment
16. ANS: O TOP: Nutrition assessment
17. ANS: Q TOP: Nutrition assessment
18. ANS: S TOP: Nutrition assessment
19. ANS: R TOP: Nutrition assessment
20. ANS: T TOP: Nutrition assessment

Essay

1. Describe six behavioural or social motives that govern people's food choices.
ANS: Answers will vary.
TOP: Food choices

2. Explain how food choices are influenced by habits, emotions, physical appearance and ethnic background.
ANS: Answers will vary.
TOP: Food choices

3. Discuss some of the consequences of eating in response to emotions.
ANS: Answers will vary.
TOP: Food choices

4. Define the term *organic*. How do the properties of vitamins relate to their organic nature? Contrast these

features with the properties of inorganic compounds such as minerals.
ANS: Answers will vary.
TOP: The nutrients

5. Explain the importance of the placebo and double-blind techniques in carrying out research studies.
ANS: Answers will vary.
TOP: Conducting research

6. List the three types of research approaches and discuss the strengths and weaknesses of each.
ANS: Epidemiological, laboratory-based and clinical/human intervention studies and their strengths and weaknesses.
TOP: Research methods

7. What approach is taken in setting recommendations for energy intakes? Why is this approach taken, and how does it differ from that taken for other nutrients?
ANS: Answers will vary.
TOP: The nutrients

8. Describe the steps involved in establishing the nutrient values that make up the NUTRIENT REFERENCE VALUES (NRV).
ANS: Answers will vary.
TOP: Nutrient Reference Values

9. Compare and contrast the meaning of Adequate Intakes (AI), Recommended Dietary Intakes (RDI), Estimated Average Requirements (EAR) and Upper Level of Intakes (UL) for nutrients.
ANS: Answers will vary.
TOP: Nutrient Reference Values

10. Define the Estimated Energy Requirement (EER).
ANS: The EER is needed in order to maintain an energy balance in individuals. Excess energy intake leads to weight gain.
TOP: Establishing energy recommendations

11. List and discuss four methods that are commonly used to assess the nutritional status of individuals.
ANS: Answers will vary.
TOP: Nutritional assessment

12. Discuss how the results from national nutrition surveys are used by private and government agencies and groups.
ANS: Answers will vary.
TOP: Nutrition assessment for populations

13. Suppose that your study results show a correlation between a nutrient intake and a specific disease. Discuss how this finding can be interpreted.
ANS: Correlation indicates an association, but not a cause. You would need to conduct additional research to identify and explain this relationship.
TOP: Research methods

14. What is nutritional genomics?
ANS: Nutritional genomics is the study of nutrient effect on genes, and how genes affect interactions between diet

and disease.
TOP: Science of nutrition

15. Discuss the meaning and significance of the relationships between risk factors and chronic diseases.
ANS: Answers will vary.
TOP: Risk factors for chronic disease

16. List the ways to identify a reliable nutrition information website.
ANS: Answers will vary.
TOP: Highlight 1

17. A. Explain the education and training requirements associated with obtaining registration as a dietitian.
B. List several areas in which registered dietitians are often employed.
ANS: Answers will vary.
TOP: Highlight 1

18. A. List the techniques that make it possible to identify nutrition quackery.
B. Where can you find reliable sources of nutrition information?
ANS: Answers will vary.
TOP: Highlight 1