



# 6

## Nutrition

---

### LEARNING OBJECTIVES

*After studying Chapter 6 in the textbook and completing this section of the workbook, students should be able to:*

1. Describe interview techniques used to obtain a nutritional history.
2. Identify components of a nutritional examination.
3. Analyze data gained from a nutritional examination.
4. Identify common nutritional conditions.
5. List micronutrients and micronutrients required by the body.

---

### TEXTBOOK REVIEW

#### Chapter 6 Nutrition (pages 133–162)

---

### CONTENT REVIEW QUESTIONS

#### Multiple Choice

*Circle the correct answer for each of the following questions.*

1. During an interview, the patient reports that she frequently has sores at the corners of her mouth. What type of nutritional deficiency should be considered?
  - a. vitamin E
  - b. protein
  - c. B vitamins
  - d. fatty acid

18. In order to assess an elderly patient's ability to consume foods, the examiner should:
  - a. examine the back, arms, and shoulders for evidence of muscle wasting.
  - b. examine the skin for dryness or elasticity.
  - c. assess the abdomen for fullness, distension, and bowel sounds.
  - d. assess the oral cavity for the condition of the teeth and presence of lesions.

### Terminology Review

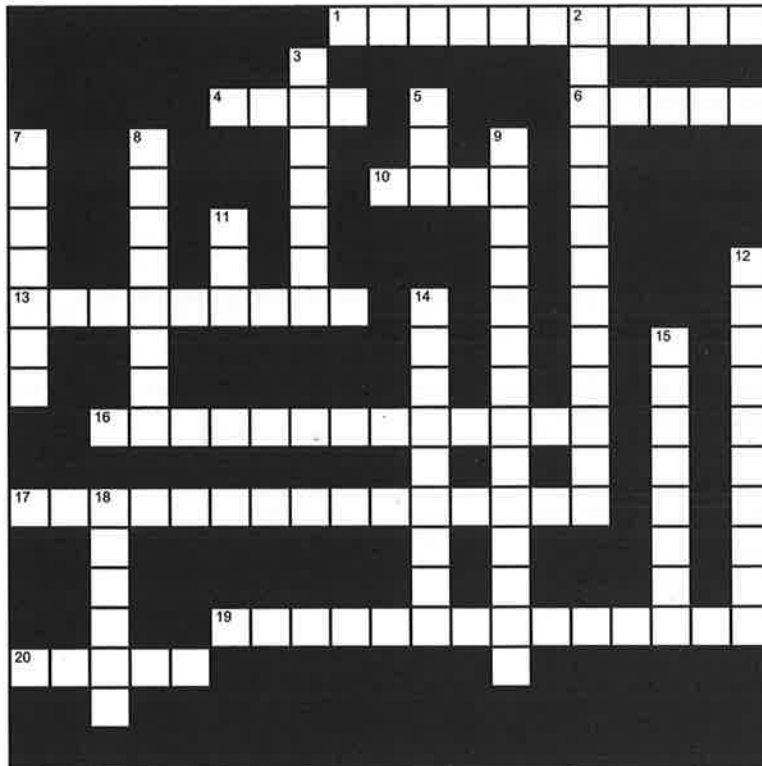
Fill in the blanks in the following statements, selecting the appropriate terms from the word choice box. Use each term once.

**Word Choice Box**

exogenous obesity   anthropometrics   bulexaremia   body mass index   cheilosis   Bitot's spots  
resting energy expenditure   endogenous obesity   anorexia   midarm muscle circumference

19. \_\_\_\_\_ is a method used to evaluate weight-to-height ratio by dividing the patient's weight by the height in meters squared.
20. The largest proportion of total energy expenditure by the body occurs as a result of \_\_\_\_\_.
21. The \_\_\_\_\_ is a sensitive index of protein reserves.
22. A person who has a loss of appetite suffers from \_\_\_\_\_.
23. \_\_\_\_\_ is a term that means binge eating followed by self-induced vomiting, usually to control weight.
24. \_\_\_\_\_ is characterized by an increase in the number of fat cells.
25. \_\_\_\_\_ are grayish-yellow or white foamy areas seen on the sclera of the eye as a result of vitamin A deficiency.
26. A clinical finding caused by vitamin B<sub>6</sub> deficiency and manifested by reddened lips and fissures at the angles of the mouth is known as \_\_\_\_\_.
27. \_\_\_\_\_ is a group of nutritional assessment methods that includes weight for height measurement, body mass index (BMI), skin fold measurement, and midarm circumference.
28. \_\_\_\_\_ is a condition in which an enlargement of fat cells occurs.

## Crossword Puzzle

**Across**

1. Substance associated with coronary heart disease
4. Number of calories in one gram of carbohydrates
6. Number of essential amino acids
10. Nonnutritive eating
13. Type of amino acids that cannot be synthesized in the body
16. Body's main source of energy
17. Procedures for measuring height, weight, skinfold
19. Required and stored by the body in small amounts
20. The most vital nutrient

**Down**

2. Metabolic response to food intake
3. Disorder characterized by binge eating
5. Formula used to assess nutritional status and total body fat
7. Nutrient made up of amino acids
8. Disorder characterized by perceptual distortion of body shape
9. Term applied to carbohydrates, fats, and proteins because they are required in large amounts by the body
11. Main source of linoleic acid
12. Type of obesity characterized by hypertrophied fat cells
14. Science of food as it relates to health and performance
15. Stored form of carbohydrates
18. Percentage of adult calories that should come from fat

**CONCEPTS APPLICATION**

**Activity 1**

*Consider the following four patients:*

- 15-year-old male weighing 110 pounds
- 25-year-old female weighing 142 pounds
- 32-year-old female weighing 200 pounds
- 62-year-old male weighing 168 pounds

1. Which of these patients would you guess has the highest resting energy expenditure?
  
2. Calculate the resting energy expenditure based on age and body weight for the four patients. Refer to Table 6-9, page 144 in the textbook for assistance.

- 15-year-old male weighing 110 pounds: \_\_\_\_\_ kcal/day
- 25-year-old female weighing 142 pounds: \_\_\_\_\_ kcal/day
- 32-year-old female weighing 200 pounds: \_\_\_\_\_ kcal/day
- 62-year-old male weighing 168 pounds: \_\_\_\_\_ kcal/day

**Activity 2**

*Jack is a 43-year-old male who complains of a loss of energy, loss of appetite, and weight loss. He states that he used to have a steady weight of 172 pounds but that over the last 9 months he has steadily lost weight. Jack is 5 feet 9 inches and currently weighs 142 pounds. He has a midarm muscle circumference of 255 mm.*

1. Calculate Jack's desirable weight based on height and weight.  
Desirable body weight \_\_\_\_\_
2. Calculate Jack's percent of desirable body weight.  
Percent of desirable body weight \_\_\_\_\_
3. Calculate Jack's percent of his usual weight.  
Percent of usual body weight \_\_\_\_\_
4. What percent of weight change has Jack experienced with this illness?  
Percent of weight change \_\_\_\_\_
5. Calculate Jack's current BMI. (Refer to Box 6-4, page 156 in the textbook.) Compare this with his BMI prior to his weight loss.  
Current BMI \_\_\_\_\_ Previous BMI \_\_\_\_\_
6. In what percentile does Jack fall in terms of midarm muscle circumference? \_\_\_\_\_
7. What conclusions can be made regarding the calculations done on Jack?

### Activity 3

Using the 24-Hour Record of Food Intake form provided on pages 44-46, compile a list of foods you have eaten in the last 24 hours.

### Activity 4

Using the Food-Frequency Assessment form on page 47, complete a “typical day” food-frequency assessment for yourself.

### Activity 5

Analyze the data you have gathered and compare the results with the suggested daily servings on the Food Guide Pyramid (page 147 in the textbook). Using the nutrition data analysis form below, does your diet meet your nutritional needs?

#### *Nutrition Data Analysis*

*For each of the food groups, indicate the estimated number of servings eaten each day. Compare this with the recommended number of servings per day. In the last column, indicate whether the intake is below, above, or meets recommended servings.*

<i>Food Group</i>	<i>Estimated # Servings/Day</i>	<i>Recommended # Servings/Day</i>	<i>Below (B) Above (A) Meets (M)</i>
Breads, cereals, grains		6–11 servings	
Fruits		2–4 servings	
Vegetables		3–5 servings	
Meat, poultry, fish		2–3 servings	
Milk, cheese, yogurt		2 servings	
Fats, sweets, oils		sparingly	

## A One-Day (24-Hour) Record of Food Intake

NAME \_\_\_\_\_ DATE OF RECORD \_\_\_\_\_

BREAKFAST Time Eaten \_\_\_\_\_

Food/Beverage	Type and/or Method of Preparation (List Ingredients.)	Amount
MILK		
FRUIT fresh, canned, sweetened, etc.		
CEREAL ____ with milk ____ with sugar ____ other	Brand _____	
BREAD ____ margarine/butter ____ mayonnaise ____ other	White _____ Brown _____	
EGGS		
MEAT or OTHER PROTEIN		
BEVERAGE ____ with milk ____ with sugar ____ other		
OTHER FOODS		

Did you eat a mid-morning snack? Yes \_\_\_\_\_ No \_\_\_\_\_ If yes, time? \_\_\_\_\_  
(List foods and beverages eaten.)

---



---

NOON MEAL Time Eaten \_\_\_\_\_

Food/Beverage	Type and/or Method of Preparation (List Ingredients.)	Amount
SOUP		
BREAD _____ margarine/butter _____ mayonnaise _____ other	White _____ Brown _____	
_____ MEAT _____ EGG _____ FISH _____ CHEESE		
VEGETABLES _____ cooked _____ raw _____ topping/seasoning (butter, white sauce, cheese sauce, etc.)		
SALAD _____ dressing (brand, etc.)		
FRUIT fresh, canned, sweetened, etc.		
MILK		
BEVERAGE _____ with milk _____ with sugar _____ other		
DESSERT		
OTHER FOODS		

Did you eat an afternoon snack? Yes \_\_\_\_\_ No \_\_\_\_\_ If yes, time? \_\_\_\_\_  
 (List foods and beverages eaten.)

---



---

EVENING MEAL Time Eaten \_\_\_\_\_

Food/Beverage	Type and/or Method of Preparation (List Ingredients.)	Amount
<b>MAIN DISH</b> <input type="checkbox"/> meat <input type="checkbox"/> cheese <input type="checkbox"/> poultry <input type="checkbox"/> other protein <input type="checkbox"/> pasta <input type="checkbox"/> rice		
<b>VEGETABLES</b> <input type="checkbox"/> cooked <input type="checkbox"/> raw <input type="checkbox"/> topping/seasoning (butter, white sauce, cheese sauce, etc.)		
<b>SALAD</b> <input type="checkbox"/> dressing (brand, etc.)		
<b>BREAD</b> <input type="checkbox"/> margarine/butter <input type="checkbox"/> mayonnaise <input type="checkbox"/> other	White _____ Brown _____	
<b>FRUIT</b> fresh, canned, sweetened, etc.		
<b>MILK</b>		
<b>BEVERAGE</b> <input type="checkbox"/> with milk <input type="checkbox"/> with sugar <input type="checkbox"/> other		
<b>DESSERT</b>		
<b>OTHER FOODS</b>		

Did you eat an evening snack? Yes \_\_\_\_\_ No \_\_\_\_\_ If yes, time? \_\_\_\_\_  
 (List foods and beverages eaten.)

\_\_\_\_\_

Adapted from Burke B: The dietary history as a tool in research, *J Am Dietic Assoc* 23:1044-1046, 1947.



## Food-Frequency Assessment

Circle the types of foods and indicate the number of servings you eat of each on a typical day.	
Food Group	Amount or Number of Servings
Breads	
Cereal	
Rice/Pasta	
Fruits (type)	
Vegetables (type)	
Milk	
Yogurt	
Cheese	
Meat	
Poultry	
Fish	
Beans	
Eggs	
Nuts	
Fats	
Sweets	
Alcohol	

