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Back to the Basics of Nutrition

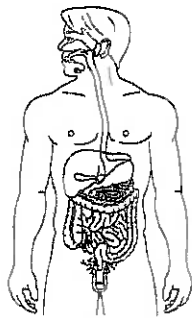
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After completing this section, you should be able to:

1. List essential nutrients and explain the *Dietary Guidelines for Americans*
 2. Explain the USDA's MyPyramid and identify important factors affecting proper nutrition
 3. Describe the four "Ps" of nutrition
 4. List seven easy steps to proper nutrition
 5. Demonstrate an understanding of the food label
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1. List essential nutrients and explain the *Dietary Guidelines for Americans*

Nutrition includes the processes of eating, digesting, absorbing, using, and storing food and fluids for body growth, healing, and body functions.



Eating occurs in the digestive system. It begins in the mouth, which chews and cuts food into portions to swallow. Food passes from there through the esophagus to the stomach.

Digestion occurs in the stomach and small intestines with help from the liver, the pancreas, and the gall bladder.

Absorption of food occurs in the small intestine. Absorption of fluid occurs in the large intestine.

Usage occurs as nutrients are consumed by cells of the body.

Storage occurs in muscle and fat tissue.

The six essential nutrients for life are: water, protein, carbohydrates, fats, vitamins and minerals.

Water makes up about two-thirds of the body's weight. Water is the most essential nutrient for life. Without it, a person can only live a few days. Water helps in the digestion and absorption of food. It helps with waste elimination. Through perspiration, water also helps maintain normal body temperature. Water is lost through vomitus, urine, feces, perspiration, and respiration. A human body should have at least 64 ounces of water or fluids every day.

Protein is necessary for growth, the healing and repair of body tissue, and combating diseases. Proteins also supply energy for the body. Every body cell is made up of protein. Excess proteins are excreted by the kidneys or stored as body fat. One gram of protein gives the body four calories of energy.

Carbohydrates are necessary for body energy, and most offer fiber for bowel elimination. Carbohydrates are broken down into sugars during digestion and absorbed into the blood. Excess is stored in the liver and body fat. One gram of carbohydrates gives the body four calories of energy.

Fats are also sources of body energy, and they assist in the body's use of vitamins and in conserving body heat. Fats also protect organs from injury. In addition, fats add flavor to food. Excess fat in the diet is stored as fat in the body. One gram of fat gives the body nine calories of energy.

Vitamins each have a specific role in the body's ability to function:

Vitamin A: Growth, vision, skin, and hair

Vitamins B: Muscle tone, nerve function, digestion, growth, metabolism, vision, and formation of red blood cells

Vitamin C: Healing, resistance to infection, and healthy blood vessels

Vitamin D: Healthy bones and teeth

Vitamin E: Muscle function, formation of red blood cells

Vitamin K: Blood clotting

Minerals each have a specific role in normal body function:

Calcium: Teeth and bones, blood clotting, nerves, heart and muscle

Phosphorus: Teeth and bones, use of proteins, fats and carbohydrate use, and nerve and muscle function

Iron: Red blood cells to carry oxygen

Iodine: Thyroid function

Sodium: Fluid balance, nerve and muscle function

Potassium: Nerve and heart function and muscle contraction

Directions. From the key words in the hand-out above fill in the missing words below:

The five body functions involved in the process of nutrition are:

1. E _____
2. D _____

Name: _____

3. A _____

4. U _____

5. S _____

The six essential nutrients for life are:

6. W _____

7. P _____

8. C _____

9. F _____

10. V _____

11. M _____

Name the vitamin that matches the role in the body's ability to function:

12. Growth = Vitamin _____

13. Nerve Function = Vitamin _____

14. Healing = Vitamin _____

15. Healthy Bones = Vitamin _____

16. Muscle Function = Vitamin _____

17. Blood Clotting = Vitamin _____

Directions. Answer each of the questions below with one of the nutrients from the following list. Some of the words on the list may be used more than once.

Water	Fats
Protein	Vitamins
Carbohydrates	Minerals

18. What is the most essential nutrient for life? _____

19. What protects organs from injury? _____

20. What is necessary for repair of body tissues? _____

21. What plays a role in blood clotting? _____

Name: _____

22. One gram of what equals nine calories of energy?

23. What is broken down into sugars during digestion? _____
24. What is calcium? _____
25. What maintains thyroid function?

26. What is stored in the liver and in body fat? _____
27. Which nutrient aids in bowel elimination? _____

Dietary Guidelines for Americans

The *Dietary Guidelines for Americans* is published every five years by the Department of Health and Human Services (HHS) and the Department of Agriculture (USDA). The purpose of the Guidelines is to educate people about proper dietary choices and how these choices can promote health and reduce risk for major diseases.

1. Adequate Nutrients Within Calorie Needs

Many Americans consume more calories than they need yet still do not meet recommended intakes for a number of nutrients. This is because many people tend to choose foods that contain too much fat, cholesterol, added sugars and salt. A healthy diet should be made up of a variety of nutrient-dense foods from the various food groups.

Nutrient-dense foods are those that provide substantial amounts of vitamins and minerals without excessive calories.

Choosing low-fat foods that are free of added sugars from each group is the best

way to meet nutritional needs.

Each food group contributes substantial amounts of needed nutrients, so it is important to include a variety of foods in your daily diet.

Americans typically do not choose to eat nutrient-dense forms of foods. The typical American diet needs more dark green and orange vegetables, legumes, fruits, whole grains and low-fat milk and milk products, with less refined grains, fats, added sugars and calories. If nutrient-dense foods are chosen from each food group, a small amount of calories can be consumed as added fats or sugars, alcohol or other foods. This is called discretionary calorie allowance.

2. Weight Management

Obesity in the US has doubled in the past two decades. Nearly one-third of adults are obese. Excess body fat leads to a higher risk of premature death, Type 2 diabetes, hypertension, some kinds of cancers and many other diseases. For people who are obese, even a small amount of weight loss has great health benefits. Prevention of further weight gain is also very important.

Many Americans consume more calories than they need for their activity level. Eating fewer calories while increasing physical activity are the keys to controlling body weight. Calories from foods and beverages consumed must be balanced with calories expended by activity. Small decreases in calorie consumption and increased physical activity will prevent gradual weight gain over time. To reverse the trend toward obesity, most Americans need to eat fewer calories, be more active, and make wiser food choices.

Over the past two decades, portion sizes have increased significantly. While mak-

ing food choices, it is important to pay attention to serving sizes when reading food labels.

3. Physical Activity

Americans tend to be relatively inactive. In a survey taken in 2002, 25% of adult Americans had not participated in any leisure time activities in the past month.

Regular physical activity and physical fitness are important contributions to physical and mental health and maintenance of a healthy weight. Good physical fitness helps you meet the physical demands of work and leisure comfortably. A sedentary lifestyle increases risk for obesity and many chronic diseases. Mortality rates from all causes of death are lower in physically active people than in sedentary people. Physical activity can also help manage mild to moderate depression and anxiety.

To maintain health, adults should engage in physical activity at a moderate level for at least 30 minutes a day on most days of the week. This should be in addition to usual daily activity at home or at work. For most people, greater benefits can be obtained with more vigorous activity for longer periods of time. To lose weight, adults should engage in 60 minutes of moderate physical activity on most days of the week while decreasing the intake of calories. It is a good idea to consult with your doctor to help you decide on a diet and exercise regimen.

For older adults, regular physical activity can help reduce loss of function due to aging as well as maintaining body weight and overall good health.

4. Food Groups to Encourage

Most Americans would benefit by increasing their intake of fruits, vegetables, whole grains, and fat-free or low-fat milk

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and milk products. While protein is also important, most Americans get enough protein in their daily diet. Although some specific foods and food groups have been associated with reduced risk for chronic diseases, a variety of foods from all food groups should make up a healthy diet.

Many people eat only small amounts of fruits and vegetables. Those who eat more may have reduced risk of chronic diseases, including stroke and other cardiovascular diseases, diabetes, and certain cancers. A healthy diet should include a sufficient amount of fruits and vegetables without too many calories. For a 2,000 calorie diet, 2 cups of fruit and 2-1/2 cups of vegetables per day are recommended.

A variety of fruits and vegetables should be chosen every day. As different vegetables are rich in different nutrients, choose foods from each of the five vegetable subgroups several times each week. The subgroups are: dark green vegetables, orange vegetables, legumes, starchy vegetables, and other vegetables. Whole or cut up fruits, instead of fruit juices, should be chosen for most of the daily fruit intake to increase dietary fiber, which may reduce the risk of heart disease.

Whole grains are another good source of fiber. At least half of the grains eaten daily should be whole grains. Whole grains and foods made from whole grains contain the entire grain kernel. Refined grains have been milled in such a way that the bran and the germ are removed. This gives grain a finer texture and improves its shelf life but also removes dietary fiber, iron, and many B vitamins. At least three ounce-equivalents of whole grains should be consumed per day. Words on food labels that ensure that grains are whole grains include: brown rice, wild rice, bul-

Name: _____

gur, oatmeal, whole grain corn, whole oats, whole wheat, and whole rye.

Consumption of milk and milk products can improve bone health and provide many important nutrients. Fat-free and low-fat choices without added sugars are best to prevent weight gain. For those who must or choose to avoid all milk products, good sources of calcium include fortified cereals, tofu, white beans and spinach. Remember that a healthy diet consists of selections from all food groups.

5. Fats

Fats supply energy and essential fatty acids and serve as a carrier for the absorption of fat-soluble vitamins A, D, E, and K. Fats and oils are part of a healthy diet, but the type and amount of fats consumed are important. High intake of saturated fats, trans fats and cholesterol may increase the risk of coronary heart disease and makes it difficult to avoid consuming excess calories.

The recommended total fat intake is between 20% and 35% of calories for adults. Few Americans consume less than 20% of calories from fat. Less than 10% of calories should come from saturated fats. Most of the fats you eat should be polyunsaturated (PUFA) or monounsaturated (MUFA) fats. These are found in fish, nuts, and vegetable oils. When selecting and preparing meat, poultry, dry beans and milk or milk products, make choices that are lean, low-fat, or fat-free.

6. Carbohydrates

Carbohydrates supply fuel for the body's needs and help the body use fat efficiently. They also provide fiber. Carbohydrates can be divided into two basic types: complex and simple. Complex carbohydrates are found in breads, cereal, potatoes, rice, pasta, vegetables and fruits. Simple carbo-

hydrates are found in foods such as sugars, sweets, syrups and jellies.

Simple carbohydrates do not have the same nutritional value as complex carbohydrates do. The only value of simple carbohydrates is as energy for people who eat very little or are malnourished. In others, simple carbohydrates are stored as fat. Sugars and starches also contribute to tooth decay.

Foods that are high in fiber, such as fruits, vegetables, whole grains and legumes, should be chosen often. This is especially true for older adults, as constipation affects up to 20% of people over 65 years of age.

7. Sodium and Potassium

Table salt contains sodium and chloride; both are essential in the diet. However, most Americans eat more salt than they need. Food and beverages containing salt provide most of the sodium in our diets. Much of it is added during processing and manufacturing.

In populations with diets low in salt, high blood pressure is less common than in populations with diets high in salt. Other factors that affect blood pressure are heredity, obesity, and excessive drinking of alcoholic beverages.

Reducing salt in the diet can prevent or delay the onset of high blood pressure and can lower elevated blood pressure. Increasing potassium in the diet, losing weight, and increasing physical activity can also help lower blood pressure. Salt content can vary widely in similar foods. Reading and comparing labels is a good strategy for decreasing salt in the diet (food labels list sodium content rather than salt content). Taste for salt tends to decrease after foods with less salt have

been consumed for a period of time; use of other flavorings in food may also help.

Most people should consume less than 2300 mg, or about one teaspoon, of sodium per day. Middle-aged and older adults are more sensitive to salt than others, and should consume no more than 1500 mg of sodium per day. Potassium-rich foods, such as fruits and vegetables, should be consumed to help lower blood pressure. Salt substitutes containing potassium chloride may be useful, but can be harmful for those with certain medical conditions.

8. Alcoholic Beverages

Alcoholic beverages supply calories but few or no nutrients. Drinking them is linked with many health problems, including liver cirrhosis, high blood pressure, and some cancers. It is also the cause of many accidents and can lead to addiction.

There may be some health benefits to drinking alcohol in moderation. Moderate drinking means no more than one drink per day for women and no more than two drinks per day for men. Twelve ounces of regular beer, five ounces of wine, or one and one-half ounces of distilled spirits each count as one drink.

Alcohol use should be avoided altogether by some individuals. These include those who cannot restrict their alcohol intake, women who are pregnant or may become pregnant, and those who are taking medications that may interact with alcohol. Alcohol can be dangerous to persons with some specific health conditions. Alcohol should never be consumed before or during activities that require concentration, skill, or coordination, including driving and operating machinery.

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9. Food Safety

Avoiding contaminated food is very important for health. Every year about 76 million Americans get sick from pathogens in food. Approximately 5,000 of these illnesses are fatal. The biggest food safety issue is microbial foodborne illness. Foodborne illness is an even greater risk for older adults, who may have less sense of taste and smell and may not be able to tell if food has spoiled.

To keep food safe, people who prepare food should always wash their hands and any surfaces that contact foods during preparation before they begin. Fruits and vegetables should be washed, but do not rinse or wash meat and poultry. Raw foods should be separated from cooked food during storage and preparation. Foods should be cooked at a safe temperature to kill microorganisms. Use a food thermometer to tell if meat and poultry are safely cooked. Perishable foods and leftovers should be refrigerated promptly. Refrigerated leftovers may not be safe to eat after three or four days. Remember that you may not always be able to tell if food has been contaminated by bacteria, so "when in doubt, throw it out."

Citation: U.S. Department of Health and Human Services and U.S. Department of Agriculture. *Dietary Guidelines for Americans*, 2005. 6th Edition, Washington, DC

Directions. After reading the Dietary Guidelines information, briefly answer the following questions:

28. Why is it important to eat a variety of foods?

Name: _____

29. Which health problems are associated with maintaining an unhealthy weight?

30. What percentage of adults in the U.S. are obese?

31. How often and for how long should adults engage in physical activity?

32. Describe a one-day menu for yourself, keeping in mind your food likes and dislikes. Include the suggested amount of vegetables, fruits and grain products.

33. In your daily menu, what three foods should be used in moderation?

1. _____

2. _____

3. _____

34. What are some good strategies for reducing salt in your diet?

35. In what cases should alcohol use be avoided altogether?

36. What is one reason older adults have a greater risk of foodborne illness?

Directions. Read each of the questions below and decide which of the Dietary Guidelines for Americans answers the question. Write the letter of the correct guideline in the blank provided. Some of the guidelines may be used more than once.

- (A) Adequate Nutrients Within Calorie Needs
 (B) Weight Management
 (C) Physical Activity
 (D) Food Groups to Encourage
 (E) Fats
 (F) Carbohydrates
 (G) Sodium and Potassium
 (H) Alcoholic Beverages
 (I) Food Safety
37. _____ Which guideline says no single food can supply all nutrients?
38. _____ Which guideline suggests eating fewer calories while increasing physical activity to control body weight?
39. _____ Which guideline tells you how to prepare food safely?
40. _____ Which guideline mentions the dangers of a sedentary lifestyle?
41. _____ Which guideline explains the difference between whole grains and refined grains?
42. _____ Which guideline explains the difference between simple and complex carbohydrates?
43. _____ Which guideline discusses ways to lower blood pressure?
44. _____ Which guideline defines nutrient-dense foods?
45. _____ Which guideline lists the five subgroups of vegetables?

Name: _____

46. _____ Which guideline emphasizes attention to portion sizes?
47. _____ Which guideline explains moderate drinking of alcohol?
48. _____ Which guideline explains where to find PUFAs and MUFAs?

2. Explain the USDA's MyPyramid and identify important factors affecting proper nutrition

In 1980, the U.S. Department of Agriculture (USDA) developed the Food Guide Pyramid to help promote healthy eating practices. In 2005, in response to new scientific information about nutrition and health and new technology for support tools, MyPyramid was developed. MyPyramid replaces the Food Guide Pyramid. MyPyramid is a personalized version of the Food Guide Pyramid that offers individual plans based on age, gender, and activity level.

The Pyramid is made up of six bands of different widths and colors. Each color represents a food group. The different widths indicate that not all groups should make up an equal part of a healthy diet. The orange band, grains, is the widest. This means that grains should make up the highest proportion of the diet. The smaller bands, such as the purple band representing meat and beans, should make up a smaller part of food eaten.

The bands of the Pyramid are wide at the bottom and narrow into a point at the top. This represents the great variety of foods that make up each group. Many choices are available to help meet the daily requirements. Foods that are

Name: _____

nutrient-dense and low in fat and calories should form the “base” of a healthy diet. Foods that are high in fat and sugar and have less nutritional value are at the narrow top. They should be eaten less often.

The new pyramid also emphasizes the importance of physical activity, as represented by the figure climbing the stairs. Physical activity goes hand-in-hand with diet to make up an overall healthy lifestyle. The USDA recommends at least 30 minutes per day of vigorous activity for everyone. Sixty minutes or more is even better.

Grains

This group includes all foods made from wheat, rice, oats, cornmeal, and barley. Examples are bread, pasta, oatmeal, breakfast cereals, tortillas and grits. One slice of bread, one cup of ready-to-eat cereal, or $\frac{1}{2}$ cup of cooked rice, pasta, or cooked cereal can be considered a one-ounce equivalent from the grains group. At least half of all grains consumed should be whole grains.

Vegetables

The vegetable group includes all fresh, frozen, canned and dried vegetables and vegetable juices. One cup of raw or cooked vegetables or vegetable juice or two cups of raw leafy greens can be considered as one cup from the vegetable group.

Vegetables are low in fat and calories and have no cholesterol (although sauces and seasonings may add fat, calories and cholesterol). They are good sources of dietary fiber, potassium, Vitamin A, Vitamin E, and Vitamin C.

Fruits

The fruit group includes all fresh, frozen, canned and dried fruits and fruit juices. One cup of fruit or 100% fruit juice or $\frac{1}{2}$ cup of dried fruit can be considered as one cup from the fruit group.

Fruits, like vegetables, are naturally low in fat, sodium and calories and have no cholesterol. They are important sources of dietary fiber and many nutrients, including folic acid and Vitamin C.

Milk

The milk group includes all fluid milk products and foods made from milk that retain their calcium content, such as yogurt and cheese. Most milk group choices should be fat-free or low-fat. One cup of milk or yogurt, one-and-a-half ounces of natural cheese, or two ounces of processed cheese can be considered as one cup from the milk group.

Foods in the milk group provide nutrients that are vital for the health and maintenance of your body. Milk products are the primary source of calcium in the American diet.

Meat and Beans

One ounce of lean meat, poultry, or fish, one egg, one tablespoon peanut butter, $\frac{1}{4}$ cup cooked dry beans, or $\frac{1}{2}$ ounce of nuts or seeds can be considered as a one-ounce equivalent from the meat and beans group. Most meat and poultry choices should be lean or low-fat.

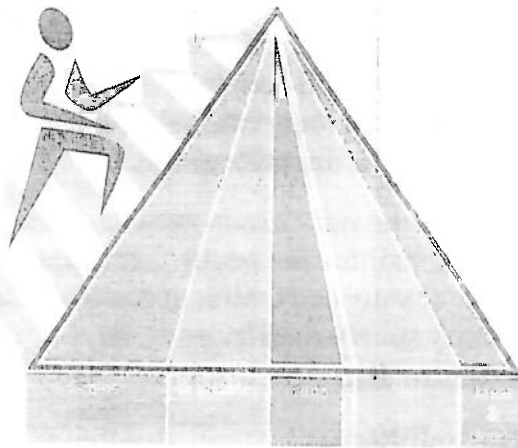
Oils

Oils include fats from many different plants and from fish that are liquid at room temperature, such as canola, corn, olive, soybean and sunflower oil. Some

foods are naturally high in oils, like nuts, olives, some fish, and avocados. Foods that are mainly oil include mayonnaise, certain salad dressings, and soft margarine. Most Americans consume enough oil in the foods they eat.

Activity

Physical activity and nutrition work together for better health. Being active increases the amount of calories burned. As people age, their metabolism slows. Maintaining energy balance requires moving more and eating less. For health benefits, physical activity should be moderate or vigorous and add up to at least 30 minutes a day.



Directions. Plan a day's meals using your personalized guidelines from MyPyramid.

Name: _____

Factors Affecting Adequate Nutrition

1. Physical health is the most important factor affecting adequate and proper nutrition. A person's ability to ingest, digest, and transport food is affected by poor absorption, metabolism, and disease conditions. Medications for diseases may also affect nutrition.
2. Emotional health also affects nutritional status. Trauma and disease cause periods of increased stress during which the body needs extra nutrients. At the same time, appetite decreases. All foods should be high in nutrition and calories. Small amounts of food offered frequently are suggested. Supplements such as protein drinks may help.
3. Age, ethnic background, culture, activity level, social background and family situation play a part in nutrition. Some ethnic backgrounds that may have special food habits include the following:

Chinese: rice, eggs, vegetables, fish, and pork cooked by stir-frying with soy sauce.

Japanese: tofu, rice, fruits, vegetables, and raw or cooked fish.

Breakfast	Lunch	Dinner

Name: _____

Mediterranean: pasta, grains, seafood, garlic, onions, and olives.

Middle Eastern: marinated meats, pita bread, beans, and rice.

Indian: vegetables, curry and spicy foods, rice, and baked breads.

Mexican: spicy foods, corn and flour tortillas, beans, cheese, sauces.

Sometimes elderly people may have poor appetites or may even have denture and gum problems.

Activity level also affects a person's nutrition. Decreased physical activity can reduce energy demands. In home care, a good way to increase appetite and activity level is to involve the client and family in food preparation. A client can peel potatoes and cut vegetables while seated or in a wheelchair.

Social background can affect nutrition, especially if the client frequently dines out. In home care, restaurant delivery, Meals on Wheels, and similar programs are good alternatives for the household without someone to cook. In any setting, social interaction may encourage better eating habits.

In home care, the client's family situation is an important consideration in nutrition and meal planning. All other factors are tied to the family situation. Does the client have an extended family in the area? Can the spouse prepare meals and/or shop for food? Does the out-of-town family know of the needs of the client?

4. Any person's food likes and dislikes are an important part of meal planning. When a diet is decided upon, a

list of likes and dislikes can be made. Tastes may also change during the course of an illness.

5. Clients who are ill at home will not have the ability to buy and cook their own food. This creates a dependency upon others for providing proper nutrition.
6. Cost is always a factor affecting nutrition, with protein the most expensive food to buy. Food that is indicated may not be available and others may have to be substituted.

Directions. Determine what six important factors affect adequate nutrition and list them here.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

3. Describe the four "Ps" of nutrition

The Four "Ps" of Proper Nutrition

Planning

A plan is essential to considering special likes and dislikes of the client as well as special diets ordered by the physician. All the factors discussed must be considered in the planning.

Purchasing

When the plan is created, the next step is to purchase the food. Decisions such as who will shop, when, and what the food budget will be must be made. The availability of a cook and food storage times must also be considered.

Preparing

Who will cook the meal and clean the kitchen after? How should the food be cooked (for example, should it be broiled or steamed?) The "cook" should be taught proper nutrition principles and safe food handling practices.

Presenting

How the food looks is very important to tempting the client with a poor appetite. Remember that small portions don't seem so overwhelming to the ill client.

Directions. List the four "Ps" of proper nutrition.

- P _____
- P _____
- P _____
- P _____

4. List seven easy steps to proper nutrition

Seven Easy Steps to Proper Nutrition

There are seven easy steps to proper nutrition for yourself and those in your care.

1. Rely on the *Dietary Guidelines for Americans*.
2. Use your personalized MyPyramid plan as a guide to healthy eating.
3. Drink plenty of water.
4. Eat enough fiber.
5. Watch intake of cholesterol and saturated fats.
6. Use seasonings to bring out flavor in foods.
7. Eat with a friend.

Name: _____

Directions. List the seven easy steps to proper nutrition below.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Fiber Content of Selected Foods

Dietary Fiber

A collective term for the indigestible content of food. This includes cellulose, hemicellulose, methycellulose, lignin, and pectin. The amount of dietary fiber in foods is estimated from the crude fiber content.

Crude Fiber

Indigestible content of food following vigorous chemical treatment. It is reported to underestimate dietary fiber by 50%. It is described by the terms "roughage" and "bulk."

Residue

Indigestible content of food. This includes any food that increases fecal output, regardless of low fiber content, for

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example, fats (volatile fatty acids), prune juice (diphenisatin), and milk (lactose).

	Serving Size	Weight (g)	Fiber (g)
Bran Products			
All Bran (Kellogg's)	1/2 cup	28	2.0–2.3
Bran Flakes 40%	3/4 cup	28	1.0
Raisin Bran	1/2 cup	21	0.6
Whole wheat flour	3/4 cup		2.3
Oatmeal	1 cup		0.5
Fruit and Fruit Juices			
Apple, raw,	2" diameter	100	1.0
dried or frozen	1/2 cup	100	0.7–0.8
Applesauce, canned	cup	100	0.5
Apricots, raw,	2–3 med	100	0.6
canned, dried, cooked frozen,	3–4 halves	100	0.4–0.9
Avocado	1/2 pitted	100	1.6
Banana	1 small	100	0.5
Berries, blackberries, blueberries, raspberries, strawberries (raw)	1/2 cup	100	1.3–5.9
Cherries, raw	1/2 cup	100	0.2–0.4
canned	1/2 cup	100	0.1
Figs, raw or canned	2–3	100	0.6–1.2
Fruit cocktail	1/2 cup	100	0.4

Directions. List the amount of grams (g) of fiber in the following foods.

Raisin Bran _____ Apple _____
 Banana _____ Figs _____
 Fruit cocktail _____

5. Demonstrate an understanding of the food label

Food packages often make claims about the health benefits of the food they contain. Remember that food labels are advertising designed to convince you to buy a product. Although some regulations exist about what labels can claim, read health claims carefully before making a decision to buy. Key claims in food label advertising include the following:

Low-fat, nonfat, fat-free, reduced fat, or light: If a product is labeled low-fat or nonfat, it usually does not contain much fat. Always read the label anyway to determine the fat content of the food. Products labeled “reduced fat” or “light” contain less fat than other versions of the same product. For example, salad dressing labeled “reduced fat” should contain 25 percent less fat than regular salad dressing. But it may still be high in fat. Salad dressing labeled “light” should contain 50 percent less fat than regular. Read the label to determine fat content.

Low-sodium, sodium-free, or no salt added: For people who must reduce their sodium or salt intake, foods labeled “low-sodium” or “sodium-free” are important. Most foods naturally contain some sodium. Avoid foods that list salt or sodium as added ingredients. In general, canned foods and prepared foods like soups and frozen dinners usually have a lot of added salt and should be avoided.

Cholesterol-free: Cholesterol-free foods may be useful for people who must

restrict their cholesterol intake. However, the best way to limit cholesterol is to avoid foods containing animal fats, such as butter, cheese, whole milk, eggs, red meats, and organ meats.

Sugar-free or no sugar added: People who must restrict their weight or who are diabetic must be very careful about consuming any sugar. Sugar-free products can be helpful, but you must read the labels carefully. Sugar-free products may contain artificial sweeteners, such as saccharin or aspartame. These have no food value and should be used sparingly. Foods sweetened with fruit juice may still contain a lot of calories. Diabetics may need to avoid fruit-juice-sweetened products as well as sugar-sweetened ones.

Organic: Organic food is produced without using most conventional pesticides, fertilizers made with synthetic ingredients or sewage sludge, bioengineering, or ionizing radiation. Organic meat, poultry, eggs, and dairy products come from animals that are given no antibiotics or growth hormones. Before a product can be labeled "organic," a government-approved certifier inspects the farm where the food is grown to make sure the farmer is following all the rules to meet USDA organic standards. Companies that handle or process organic food before it gets to the supermarket or restaurant must be certified, too. Organic food differs from conventionally produced food in the way it is grown, handled, and processed.

Natural, healthy, or good for you: These claims may have little or no meaning. Buy whole, unprocessed grains, fresh fruits and vegetables, and lean meats, poultry, and fish, and you will know you are buying food that is healthful and nutritious.

Name: _____

The Food and Drug Administration (FDA) requires that all packaged foods contain a standardized nutrition label, called "Nutrition Facts." This label contains information about the nutritional content of food. Because the label is in the same format on all foods, it is easy to compare different products.

Regular Frozen Lasagna

Nutrition Facts	
Serving size 1 Package (10.75 oz.)	
Amount Per Serving	
Calories 360	Calories from Fat 120
	% Daily Value
Total Fat 13g	20%
Saturated Fat 7g	35%
Cholesterol 35mg	11%
Sodium 960mg	40%
Total Carbohydrate 40g	14%
Dietary Fiber 6g	23%
Sugars 10g	
Protein 21g	
Calcium	35%
Vitamin A	10%
Vitamin C	10%
Iron	6%

Serving size and number of servings per container: Check the size of the serving. Remember that a serving may be a different amount than what a person actually eats.

Calories per serving and calories from fat per serving: The number of calories per serving tells you how much food energy a serving contains. It does not tell you how much nutritional value the food has. A candy bar is high in calories, providing quick energy, but has very few nutrients and lots of fat and sugar.

The number of calories from fat tells you a lot about the fat content of a food. In general, no more than one-third, or

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roughly 30 percent, of the total calories should come from fat. Thus, potato chips containing 110 calories per ounce and 80 calories from fat per ounce are not a good food choice. With more than two-thirds of their calories from fat, they are a high-fat food.

Amounts and percent daily values: For each of the following items, the label tells you two things. First, how much a serving contains, and second, what percent of the recommended daily total a serving contains. For example, crackers that contain three grams of fat per serving contain 5 percent of the recommended daily total of fat. These recommended daily totals are based on a 2,000-calorie diet. Someone who eats fewer than 2,000 calories per day should have less fat each day. Someone who eats more than 2,000 calories per day can have more fat. The label provides information on total fat and saturated fat, cholesterol, sodium, total carbohydrates, dietary fiber, sugars, and protein. The FDA-required label gives amounts and daily totals for the percentage of the daily recommended amount one serving of the food provides.

Vitamins and minerals: The label lists the percentages of the recommended daily total for certain vitamins and minerals. If the label says one serving contains 50 percent of the vitamin C needed each day, you know this food is a good source of vitamin C.

Directions. Look at the nutrition facts on the food label on the previous page and answer these questions.

1. How many total grams of fat are in the frozen lasagna?

2. What is the daily value percentage of cholesterol of this product?

3. Would you consider this product a good source of vitamin C?

4. If a person were to eat the entire package of lasagna, how many servings of lasagna would that be?

5. One serving of the lasagna contains 40% percent of the recommended daily total of sodium. Would you consider the lasagna a low-sodium food choice?

6. Does this lasagna meet the recommendation that no more than one-third, or roughly 30 percent, of the total calories should come from fat?

