

NUTRITION FOR HEALTH

Chapter 10

Lesson 1 – The Importance of Nutrition

Why Nutrition Matters

- Food you eat plays a major role in total health.
- To function properly, your body needs nutrients.
- Energy your body gets from food, measured in calories.
- Healthful foods provide fuel for mind/body.
- Healthful foods help you avoid unhealthy weight gain.
- Lower your risk for several major illnesses.

What Influences Your Food Choices?

- Several factors influence your food choices.

What is the difference between hunger and appetite?

- Hunger is the natural physical drive to eat.
- Appetite is the psychological desire for food.

Food and Emotions

- Some people eat as a response to an emotional need.
- Some people eat to relieve tension or boredom.
- You need to recognize how emotions affect your eating, to break the pattern.

How does your environment affect your food choices?

- Family and culture.
- Friends.
- Time and money.
- Advertising.

Lesson 2 – Nutrients

Giving Your Body What It Needs

- Everything you eat contains nutrients.
- Six types of nutrients.
- Carbohydrates, proteins, and fats are a source of energy.
- Vitamins, minerals, and water perform other functions in the body.

What are carbohydrates?

- Starches and sugars found in food.
- Body's main source of energy.
- Each carb provides four calories of energy.
- 45 to 64 percent of daily calories should come from carbs.

Type of Carbohydrates

- Simple – fructose (found in fruits), lactose (found in milk), also added to processed foods.

- Complex – starches made up of long chains of sugars linked together.
- Common sources – grains, bread, pasta, beans, and potatoes.
- Fiber – body cannot digest, moves waste through your digestive system.
- Teen females (26 grams daily), teen males (38 grams daily).
- Sources of fiber – fruits, vegetables, whole grains, nuts, seeds, and legumes.

The Role of Carbohydrates

- Body uses carbs by breaking them down into their simplest form.
- Most are turned into a simple sugar called glucose.
- Glucose is main source of fuel for the body's tissues.
- Can be stored for later use.

What are proteins?

- Made up of chemicals called amino acids.

- Each gram of protein contains four calories of energy.

Types of Proteins

- Body uses 20 amino acids
- Body produces 11. (nonessential)
- The nine essential amino acids will come from food.
- Proteins from animal sources and soy contain all 9 amino acids.
- Known as “complete” proteins.

- Proteins from plant sources are missing 1 or more essential amino acid.

The Role of Proteins

- Muscles, bones, skin, and internal organs are constructed of protein.
- Teen males (52 grams daily), teen females (46 grams daily).
- Between 10 and 15 percent of daily calories should come from protein.

What are fats?

- Body needs a certain amount of fat.
- Too much can lead to weight gain.
- Each gram provides 9 calories of energy.

Types of Fats

- Dietary fats are made up of fatty acids.
- Essential fatty acids are needed but the body cannot produce.
- Fat in all foods is a combination of fats.

- Unsaturated fats – vegetables oils, seeds, and nuts. May lower risk of heart disease.
- Saturated fats – found mostly in animal based foods. May increase risk of heart disease.
- Trans fats – formed by a process called hydrogenation. May harm health by raising total cholesterol level.

The Role of Fats

- Essential fatty acids are needed for brain development and blood clotting.

- Maintain healthy skin and hair.
- To absorb and transport fat-soluble vitamins.
- Calories from fats that your body does not use is stored as body fat.
- Too much body fat increases risk of health problems.
- Saturated fats can increase cholesterol levels.
- Excess can build up in your arteries.
- Teens - 25 to 35 percent of calories from fat.

What are vitamins?

- Water soluble – dissolve in water, pass easily into the blood stream.
- Fat soluble – stored in body fat for later use.
- If consumed in large amounts can become harmful.

What are minerals?

- Body cannot produce minerals, must come from food.
- Calcium is important for bone health.

Is water a nutrient?

Water's functions include:

- Moving food through the digestive system.
- Aiding chemical reactions in the body.
- Transporting nutrients/removing wastes.
- Storing and releasing heat.
- Cooling the body through perspiration.
- Cushioning the eyes, brain, and spinal cord.
- Lubricating the joints.

Lesson 2 – Assessment Questions

1. Which nutrients can your body use as sources of energy?
2. What are essential amino acids? From what source do you obtain essential amino acids?
3. How does eating calcium rich foods as a teen protect lifelong health?

Lesson 3 – Health Food Guidelines

Guidelines for Healthy Eating and Active Living

- The DG for A are a set of recommendations about smart eating and physical activity.

Remember these three guidelines:

- Make smart choices from every food group.
- Find your balance between food and activity.
- Get the most nutrition out of your calories.

How can you make smart food choices?

- Fruits, vegetables, grains, proteins, and dairy.

MyPyramid/MyPlate

- Illustrates how a healthy plate should look.



Your Best Choices

- Focus on fruits.
- Vary your veggies.
- Get your calcium-rich food.
- Make half your grains whole grains.
- Go lean with protein.
- Limit certain food.

Why is physical activity important?

- Must balance food/activity to avoid weight gain.

How can you get the most nutrition out of your calories?

- Number of daily calories depends on your age, gender, and activity level.
- Make sure you get enough nutrients by choosing nutrient-dense foods.
- These foods have a high ratio of nutrients to calories.

Healthful Eating Patterns – Read paragraph.

How can you start the day off right?

- Breakfast has many benefits for children and teens.
- If you eat breakfast you typically do better in school.
- Less likely to be overweight.

What are some sensible snacks?

- Fresh fruit or vegetables.
- String cheese.

- Unsalted nuts.
- Air-popped popcorn.
- Fat-free yogurt.

How can you eat right while eating out?

- Watch portion size.
- Pay attention to how the food is prepared.
- Add fresh vegetables and fruit.
- Go easy on toppings.
- Don't drink your calories.

Lesson 3 – Assessment Questions

1. What are the five basic food groups?
2. What kinds of foods are best to avoid or limit?
3. Provide two examples of nutrient dense foods.

Lesson 4 - Nutrition Labels and Food Safety

Nutrition Label Basics

The food label lists:

- Name of the food.
- Amount of food in package.
- Name and address of the company that makes, packages, and distributes the product.
- Ingredients.
- Nutrition facts panel.

What information is in the ingredient list?

- Ingredients appear on label in descending order by weight. (largest amount comes first)

Food Additives

- Used to keep food safe for a longer period of time.

EXPERTS ARE CONCERNED with two food additives.

- Aspartame.
- Olestra.

LESSON 4

Nutrition Labels and Food Safety

Nutrition Facts

Nutrition Facts		
Serving Size 30g (about 12 pretzels)		
Servings Per Container 30		
Amount Per Serving		
Calories 110	Calories from Fat 10	

% Daily Value*		
Total Fat 1g	2%	
Saturated Fat 0g	0%	
Trans Fat 0g	0%	
Cholesterol 0mg	0%	
Sodium 300mg	13%	
Total Carbohydrate 23g	8%	
Dietary Fiber 1g	4%	
Sugars Less than 1g		
Protein 3g		

Vitamin A 0%	Vitamin C 0%	
Calcium 0%	Iron 4%	
* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:		
Total Fat	Less Than 65g	80g
Sat Fat	Less Than 20g	25g
Cholesterol	Less Than 300mg	300mg
Sodium	Less Than 2,400mg	2,400mg
Total Carbohydrate	300g	375g
Dietary Fiber	25g	30g
Calories per gram:		
Fat 9	Carbohydrate 4	Protein 4

Serving Size

Calories

Nutrients

Vitamins and Minerals

Footnote

Percent Daily Value

Nutritional Claims

Federal law gives uniform definitions for the following terms:

- Free – foods labeled as “calorie free” must have fewer than 5 calories per serving.
- Low – low-fat foods must have three grams or less of fat per serving.
- Light – must contain one-third fewer calories, one-half the fat, or one-half the sodium of the original version.

- Reduced – contains 25 percent fewer calories, or 25 percent less of a given nutrient, than the original version.
- High – food provides at least 20 percent of the daily value for a vitamin, mineral, protein, or fiber.
- Good source of - food provide 10-19 percent of the daily value for a vitamin, mineral, protein, or fiber.
- Healthy.

What are organic foods?

- Produced without the use of synthetic fertilizers or pesticides.
- Cannot contain genetically modified ingredients.
- Cannot be subjected to certain types of radiation.

What is open dating?

- Sell by dates.
- Use by or expiration dates.
- Freshness dates.
- Pack dates.

Food Safety – Read Paragraph

How does foodborne illness occur?

- Caused by bacteria and viruses.
- Some are naturally present in the bodies of healthy animals.
- Fresh fruits and vegetables may be contaminated.
- Infected humans who handle food.

Consult doctor if:

- High fever, prolonged vomiting/diarrhea, blood in stool, and showing signs of dehydration.

How can you keep food safe to eat?

- Pasteurization of milk and juices.

Four basic steps for keeping food safe:

- Clean – wash and dry hands often, clean utensils and surfaces to prevent cross-contamination, and wash the food itself.
- Separate – keep raw foods separate from other foods and use different cutting boards for raw food and all other food.

- Cook – cook food at a temperature that will kill pathogens, heat all leftover to 165 degrees F, and stir food when heating in a microwave.
- Chill – keep foods cold to slow the growth of bacteria, refrigerate perishable foods as soon as you get home, and avoid over packing the refrigerator.

What are food sensitivities?

- Food allergy – body's immune system reacts to substances in some foods.

- Most common allergens include: milk, eggs, peanuts, and shellfish.
- Symptoms vary from person to person.
- Food intolerance – negative reaction to food that doesn't involve the immune system.
- People must avoid or limit certain foods.

Lesson 4 – Assessment Question

1. What does the term light mean when used on a food label?
2. What is the difference between a sell by date and a use by date?
3. What is another term that refers to foodborne illness?