

Lesson 1: Nutrition Basics

Instructions

To complete this lesson:

Step 1: Read the purpose of the lesson and consider the learning outcomes for the lesson. The learning outcomes specify what you should know and be able to do when you have completed the lesson.

Step 2: Read the rest of the information on this page and in the handouts. Watch the included video.

Step 3: Complete the review at the end of the lesson. Answering these questions will assist you in preparing for your assignments and exams.

Step 4: If you need clarification of any lesson material, contact your instructor for assistance.

Purpose of Lesson

An introduction to some of the key concepts discussed throughout the course.

Learning Outcomes:

1. Define the term nutrition.
2. Differentiate between the six categories of essential nutrients found in food and in the body.
3. Discuss the factors that influence your food choices.
4. Explain the concepts of balance, variety, and moderation as they pertain to food intake.
5. Explain the concepts of nutrient density and calorie density and how you could use these concepts to improve your diet.
6. Identify individuals who provide reliable nutrition information.

Introduction

Nourishment for the body is essential for survival. In this lesson, you will explore some basic concepts related to nutrition. Different factors affect our daily food choices. Understanding why we decide to choose certain foods can help in planning a healthful diet.

Read the following glossary of nutrition terms. Consider saving it for future reference also:

[Nutrition Term Glossary \(https://miamioh.instructure.com/courses/91622/files/11807600/download?wrap=1\)](https://miamioh.instructure.com/courses/91622/files/11807600/download?wrap=1)
 [\(https://miamioh.instructure.com/courses/91622/files/11807600/download?wrap=1\)](https://miamioh.instructure.com/courses/91622/files/11807600/download?wrap=1)

What is Nutrition?

Nutrition is the food that we consume to meet our nutrient needs. Also known as nourishment.

The food we consume is necessary not only to provide fuel for our daily activities, but to build and maintain healthy cells in the body.

What are Nutrients?

Nutrients are substances that are essential for healthy growth and functions in the body. They must be consumed from foods because they are either not made in the body or made in amounts that are too small.

There are 6 categories of essential nutrients found in food and in the body: carbohydrates, fats/lipids, protein, vitamins, minerals, and water.

Carbohydrates, fats/lipids, and protein are macronutrients. They provide energy in the form of kilocalories.

One kilocalorie is the amount of energy needed to raise the temperature of 1 kilogram of water by 1 degree Celsius. Carbohydrates provide 4 kilocalories per 1 gram. Protein also provides 4 kilocalories per 1 gram. Fats provide 9 kilocalories per 1 gram.

Vitamins and minerals are micronutrients. They do not provide energy but they do have important functions in the body. Many are used in the metabolism of carbohydrates, fats, and proteins in the body. In other words, they help release the energy from the macronutrients.

One way in which some vitamins and minerals assist metabolism is by helping enzymes in the body. We call these coenzymes. Vitamins and minerals also have important roles related to hormones or antioxidant properties.

Water is an essential nutrient. It does not provide energy but has many important functions in the body. Water helps in several chemical reactions, helps transport different substances like vitamins and minerals, and helps remove waste from cells.

Factors That Affect Food Choices

What we choose to eat or not eat, depends on both internal and external factors.

Hunger is our physical need for food. Appetite is the psychological desire to eat certain foods and refuse others.

Appetite and the foods we choose are affected by many factors including:

- Taste – the enjoyment of the flavor or taste of food can affect what we eat. What are some of your favorite foods?
- Social network (Family and friends) – Other individuals can influence our intake. Where we spend our social time can also affect food choices. You may notice that there are many social functions that include food whether it is a tray of cookies or a birthday party at a restaurant. When was the last time you got together with friends or family? Was food involved in any way?
- Psychological needs/Emotional needs – How we feel can also affect food choices. Can you think of a time when your mood affected your food choices?
- Food availability – For some individuals, food may not be available due to living situation or inability to pay for certain foods.

- Food marketing – Advertisements on billboards, television, radio, the Internet, or magazines can also influence food choices. Have you seen any food advertisements recently?
- Health and nutrition knowledge and concerns – What we know about nutrition and health can influence our choices. For example, knowing that fruits and vegetables provide certain vitamins and minerals might lead to an increase in consuming those foods.
- Food customs and culture – The way we are raised or groups we identify with can affect what foods we consume. Consider holidays. Think about a holiday that you celebrate with your friends or family. Are foods involved? Are the foods the same every year?
- Food cost – The cost of food can influence what foods are purchased. For individuals on a budget, foods may be limited to those that are less expensive.
- Education, occupation, and income – This goes along with some of the other points. Consider occupation, this can affect the amount of time a person has and can also be related to income.
- Routines and habits – Our daily activities can affect the foods we consume.
- Convenience – Where foods are located can also affect consumption. Food that is nearby will be easier to obtain.
- Trends – This may also be related somewhat to media and advertisements. Foods that are readily available or popular topics may be consumed more frequently. Some trends can also become permanent food recommendations.

Watch this short video (2 minutes, 12 seconds) on Food Choices:

[Do We Control Our Food Choices?](https://www.youtube.com/watch?v=GnVUI8SSM4g) [_\(https://www.youtube.com/watch?v=GnVUI8SSM4g\)](https://www.youtube.com/watch?v=GnVUI8SSM4g)



[_\(https://www.youtube.com/watch?v=GnVUI8SSM4g\)](https://www.youtube.com/watch?v=GnVUI8SSM4g)

How Do We Get the Nutrients We Need?

A healthy diet includes the concepts of balance, variety, and moderation.

Balance means a healthy proportion of all nutrients. Foods from each food group should be included daily.

Variety means to include many foods. Not only should foods from every food group be included, but various foods should be consumed in each food group. For example, vegetables that are red, green, yellow, orange, and purple should all be included.

Moderation means an adequate amount of food and energy. Enough food needs to be consumed and excess food should not be consumed.

Choosing Nutrient-Dense Foods

Nutrient density is the amount of nutrients a food contains in relation to the calories it contains. Foods that are nutrient dense provide more nutrients per calorie than less nutrient-dense foods. Nutrient dense

foods are more likely to meet your nutrient needs.

Calorie density, or energy density, refers to foods that are low in weight or volume but high in kilocalories or energy. For example, potato chips or cookies provide more calories in a small volume than a salad low in calories and high in nutrients.

Nutrition Professionals

Registered Dietitians are individuals who have completed an education program in dietetics and an internship or coordinated program to gain professional experience. They have also passed a national exam given by the Academy of Nutrition and Dietetics which certifies them as completing the required training. Most States also require that a registered dietitian has a license in that state to practice.

Read the following handout to learn more about reliable nutrition resources: [Food Confusion](#)

(<https://miamioh.instructure.com/courses/91622/files/11807597/download?wrap=1>) 

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Summary

The information covered in this lesson may seem basic, but it forms the foundation for learning more about how the foods we consume are chosen and are part of a healthful lifestyle. The six categories of essential nutrients will be discussed in greater detail in future lessons. The concepts of balance, moderation, variety, nutrient density, and calorie density will appear throughout the course.

[_\(<http://www.foodinsight.org/sites/default/files/2017-ExSum-FoodConfusion.pdf>\)](http://www.foodinsight.org/sites/default/files/2017-ExSum-FoodConfusion.pdf)

Review

1. What is "nutrition?"
2. What are the six categories of essential nutrients?
3. What factors influence your food choices from the list above?
4. What is balance?
5. What is variety?
6. What is moderation?
7. What are some examples of foods that are nutrient dense?
8. What are some examples of foods that are calorie dense?
9. Explain the concepts of nutrient density and calorie density and how you could use these concepts to improve your diet.
10. Who can you rely on for reliable nutrition information?