

CNA067-T: Food and Nutrition (CNA In-Service Training)

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A CNA In-Service Course / Non-CE

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Course Introduction

In this module... you will learn about:

- Nutrients in food.
- Special diets.
- Preparing balanced menus.
- Safe food preparation and storage.

Terminology

Dehydration

Gluten

Halal

Hydration

Kosher

Lactose

Nutrient

Dehydration

Losing too much water from the body.

Gluten

A protein found mainly in wheat, barley, rye, triticale that some people are allergic to.

Halal

Food that is approved/lawful for Muslim people.

Hydration

Replacing water in the body.

Kosher

Food that is approved/conforms to Jewish dietary law.

Lactose

A sugar in milk that some people are unable to digest.

Nutrient

A substance in foods that the body uses to make energy or stay healthy.

Introduction

Food and liquids like water are important for everyone. Our bodies need the substances called nutrients that are in many different foods. Nutrients are used for energy to keep us moving, and to keep the body healthy. The body also needs to balance the amount of liquid going in with the amount of liquid going out.

Nutrition is the study of eating the right foods to stay healthy. Nutrition can be very important for older people. As people get older, they often develop diseases that require less or more of some nutrients. So they must avoid certain foods or eat more of others. Older people may also lose some of their appetite and need help eating the right amounts of food.

To plan a meal, it is also important to think about the person's culture and religion. People whose families come from different countries eat different kinds of foods and foods cooked in different ways. Some religions don't allow certain foods at all.

To help older people stay as healthy as possible, all of these things must be considered. In addition, food must be stored and prepared properly so it does not contain germs and/or bacteria, and the food offered needs to be tasty and properly cooked. No one wants to eat food that tastes bad, even if it's healthy.

In this program we will look at many issues about nutrition and preparing food for clients.



Basic Nutrition

Both foods and liquids play a role in keeping a body healthy. First we will look at the main nutrients in foods.

Nutrients

- *Proteins*: These are found in meats of all kinds, eggs, milk and cheese, plus beans and nuts. The body uses proteins to grow, to help repair injured tissue, and to keep bones strong.
- *Carbohydrates*: One kind of carbohydrate, called *complex carbohydrate*, is found in bread, rice, pasta, grains and potatoes. These mainly supply energy. They are the main fuel of the body.



Another kind called *simple carbohydrate*, is found in fruits and sugar. These supply energy much faster than complex carbohydrates.

- *Fats*: These are found in butter and oil, most milk and cheese, and most meats. Fats also provide energy for the body, and they help the body store energy for later. They also help repair nerves and other tissue.
- *Vitamins*: There are many different kinds of vitamins, and they are most common in vegetables and fruits. Some are found in milk and liver. Each kind of vitamin has a special purpose in the body. They do things like help growth, help healing, and keep different body organs healthy.
- *Minerals*: Like vitamins, there are many different kinds of minerals that the body needs. They are found in milk, yogurt and cheese, leafy vegetables like spinach, meat, and eggs. Each mineral has a special purpose in the body, like keeping bones and teeth strong, and keeping nerves and muscles healthy.
- *Fiber*: Fiber, or roughage, is the part of many foods that the body can't digest. There is a lot of fiber in fruits and vegetables, especially when they are uncooked, and in whole grains. Fiber is necessary to keep food moving through our intestines and to help eliminate waste.

These are the main groups of nutrients in food. Equally important to keeping a person healthy are the liquids the person takes in.

Liquids

As much as three-quarters of the weight of every person is water in the body's tissues and blood. The body loses water through sweating, urinating and even the water in the exhaled breath. We lose about 10 cups of water every day. If this water is not replaced, we say the body is *dehydrated*. Some signs of dehydration are dry skin and lips, and dark urine.

Hydration is the opposite. It means supplying enough water to keep the body healthy. Some medications and some diseases require taking extra water. Liquid can be supplied in plain water, juices, fruit drinks, soup, and gelatin.

Diets for Specific Diseases

Clients with certain diseases or medical conditions need to have special diets, usually to avoid a particular nutrient.

- *Diabetes*: These clients need to reduce carbohydrates. They need to be careful to eat less of the simple carbohydrates, like sweets. Usually there will be specific food guidelines from a physician or registered dietitian.
- *High blood pressure*: Often these clients will need to reduce eating salt and fats.
- *High cholesterol*: If the client has high cholesterol in the blood--a condition that may lead to heart trouble--he or she will need to eat less fats and animal protein, especially red meat like beef.
- *Gluten intolerance*: In this condition, the person cannot digest wheat, and sometimes other grains. They should have gluten-free foods and avoid wheat, barley, rye, triticale.
- *Lactose intolerance*: Lactose is a sugar in most milk products. Some people have a condition that keeps them from digesting lactose. This causes stomach pain, gas and nausea. Most milk products should be avoided. In addition, since calcium is important, other foods containing calcium should be increased, like fish and leafy vegetables.
- *Other food allergies*: Some people have allergies to specific foods that don't bother other people. Some common foods that can cause allergies are berries, eggs, tree nuts, peanuts, soy, and shellfish. Sometimes these allergies can be very serious, and may even cause death. You should find out if your client has any food allergies and make certain not to include those foods in the diet.
- *GERD (Gastro-esophageal reflux disease)*: In this condition, stomach contents, including stomach acid, regularly leak back up into the throat, causing a burning feeling. This constant heartburn irritates and damages the lining of the throat. It is often treated with medications, but some foods can hurt or help. The client should eat less fats and acidic foods and more fiber.
- *IBS (Irritable bowel syndrome)*: In this condition, there is pain, gas, and either diarrhea or constipation. It is best to avoid coffee and tea, soft drinks with caffeine, and large meals. Increase the fiber in the diet.
- *Constipation*: When a client has trouble passing bowel movements, the diet should include more fiber, like whole grain bread, fruits such as prunes, and beans.

Other Modified Diets

Some other diets are prepared in special ways.

- *Pureed*: Clients who can't chew or have difficulty swallowing, are in danger of choking need very soft food. If the food is not soft to begin with, like soup or eggs, it is put in a blender and chopped until it is almost liquid.
- *Bite size*: This may also be called a mechanical soft diet. The food is cut into small bites for clients who cannot chew very well or have bad teeth.

- *Thickened liquid:* A person who has difficulty swallowing liquids may need to have liquids thickened to prevent aspiration. A wide range of ingredients and commercial thickeners are available to thicken liquids.

Religious and Cultural Diets

These diets are based on religious beliefs, or the desires of people whose families come from other countries.

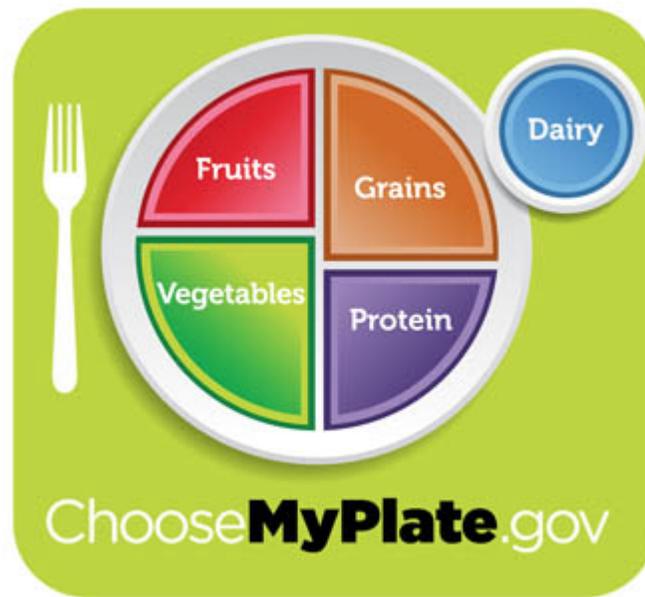
- *Jewish:* Most Jewish people avoid pork and shellfish. Some Jewish people follow a stricter diet and can only eat food that is marked "kosher." It must also be prepared by someone who understands the Jewish food rules. There are other dietary restrictions that must be followed to keep a kosher diet, such as not serving meat and dairy products together.
- *Muslim:* Most Muslims avoid pork and alcohol. Food prepared especially for Muslims is marked "halal."
- *Asian:* The foods most common in the Asian diet are usually not a matter of religion, but culture. They generally eat rice and vegetables in large amounts, and smaller amounts of fat and meat. They rarely eat milk or cheese.
- *Vegetarian:* People who are vegetarian generally don't eat meat of any kind. They often will eat milk, cheese and eggs. Some partial vegetarians will eat fish.
- *Vegan diet:* This is a vegetarian diet that totally avoids all animal products. Vegans do not eat milk, cheese, eggs, or honey.

Meal Planning



To plan menus, you should work with the client. Talk about any medical conditions, food allergies, and religious or cultural needs. Find out what foods the person likes and doesn't like. Be sure to discuss a number of foods of the same type, so you can plan to have variety. Talk about the client being physically active in some way every day. It will improve the appetite and the health.

To help plan a balanced diet for good nutrition, food scientists have developed the MyPlate dietary guidelines.



From the picture you can see the five main groups of foods:

- Vegetables
- Fruits
- Grains (bread, pasta, rice)
- Protein (meat), and
- Dairy (milk and cheese)

The size of each slice shows you how to balance the amounts to make a healthy meal. You should include more vegetables than the other groups. Second is grains, then protein and fruits. The smallest amount should be dairy.

Single Serving Size

Other food scientists developed a way to show the approximate size of a single serving. They use common objects to help you remember. These objects should give you a general feeling for the size of one serving of each food.



NHLBI Serving Size Card

Reading Food Labels

All food in a package or can has a food label on it. This will tell you the number of calories in one serving. Calories tell you how much energy is in the food. The average older man who is not running or working hard needs about 2,000 calories total every day. An older woman usually needs about 1,600. On the label below you can see that one serving contains 250 calories.

The label also tells you about many nutrients in the food. It tells you the percent of a full day's recommended supply that is in one portion of this food. For example, on the label below, the sodium (salt) is about 20% of a day's supply. When you are planning special diets, it can be important to look at the amount of nutrients in foods. For example, a low salt diet needs to avoid foods that contain too much sodium.

Nutrition Facts	
Serving Size 1 cup (228g)	
Servings Per Container about 2	
Amount Per Serving	
Calories 250	Calories from Fat 110
% Daily Value*	
Total Fat 12g	18%
Saturated Fat 3g	15%
Trans Fat 3g	
Cholesterol 30mg	10%
Sodium 470mg	20%
Total Carbohydrate 31g	10%
Dietary Fiber 0g	0%
Sugars 5g	
Proteins 5g	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
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:	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Saturated 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

Below the label there is a list of ingredients in the food. The first ingredient is always the largest quantity in the food, and the last ingredient listed is the smallest. All the ingredients are listed. This can be very important for avoiding foods that the client is allergic to.

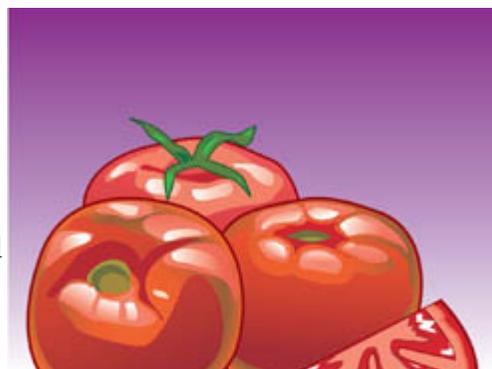
Meal Preparation

General practices for safe meal preparation are described below. However, food preparation and handling standards and regulations vary from state to state and county to county. Know and follow the regulations for your area and your facility's policy.

Hand Washing

Always wash your hands carefully before preparing food. Clean your fingernails. Tie your hair back or use a hairnet. After you have washed your hands, put on disposable gloves.

Remember that many older people can become sick more easily from bacteria in foods. Many vegetables and almost all uncooked meats and fish contain bacteria and must be prepared properly.



Washing and Preparing Food

Make sure all surfaces, cutting boards, knives and other tools have been sanitized before you begin. If you're not sure, sanitize them first (see later.)



- *Vegetables:* Wash all greens and vegetables, before serving or cooking. Boiling destroys many vitamins. It is better to steam or stir-fry vegetables in a small amount of oil. Eat fresh vegetables as soon after buying them as possible.
- *Meats:* There are four safe ways to thaw frozen meat.
 1. Leave it in the refrigerator overnight, making sure to keep temperature at 41°F (5°C) or lower.
 2. Place food under running water at 70°F (21°C) or lower. Never let the temperature of the food go above 41°F (5°C) for longer than 4 hours.
 3. Use a defrost setting on a microwave if food is to be cooked immediately.
 4. You can thaw food as part of the cooking process.

Remember, uncooked meats contain bacteria. Never put other foods on a cutting board where you have set uncooked meat. If possible have two separate cutting boards. If not, sanitize the cutting board after meat touches it.

Sanitize Dishes and Tools

After use, dishes and cooking tools should be sanitized. There are two main ways to do this:

1. Rinse them in running water first and put them in a dishwashing machine using either hot water or a chemical sanitizing solution.
2. Manually wash dishes in a 3 compartment sink found in the dietary department.

Do not use the same cloth towel to clean food surfaces and floors or bathrooms. If a cloth towel appears dirty, discard it and get a fresh one. Prepare a cleaning solution with an approved cleaner. Once finished sanitizing food surfaces, place used cloth towel in approved designated area to assure cloth towel will not be reused until washed.

Food Storage

- *Meats:* Any meat that is fresh or thawed should be wrapped or sealed in a container and put in the refrigerator immediately. To keep it longer than 2 days, put it in the freezer.
- *Leftovers:* Leftovers from a meal should be sealed in a container and refrigerated or frozen within 2 hours. If it is a hot day, within 1 hour. Use the leftovers within 3 days or throw them away.
- *Cans and Packages:* Most regulations call for food to be stored at least 6 inches above the floor. It is not a good idea to store food packages under a sink where they can get wet. Wash the tops of cans before opening them.

Conclusion

By understanding the nutrients in foods, the need for specific diets, and guidelines for food preparation and storage, you will be helping keep your clients as healthy as possible.

Suggested Reading

National Heart, Lung, and Blood Institute. *Serving Sizes and Portion Distortion*. National Institutes of Health (NIH) website. <http://www.nhlbi.nih.gov/health/public/heart/obesity/wecan/eat-right/distortion.htm>. Last updated September 30, 2013. Accessed November 16, 2015.

USDA. *Choose My Plate*. USDA website. <http://www.choosemyplate.gov/>. Accessed November 16, 2015.