

Learn at Home: Nutrition Lessons for Healthy Living

Food Safety

By choosing to complete this mail lesson, you have taken the first step in learning more about the importance of nutrition and its relationship to good health. How do you thaw meat? Do you leave it on the counter at lunch so it will be defrosted by the evening meal? If so, you are putting your family at risk for foodborne illnesses. This lesson will take a closer look at food safety.

To complete this lesson:

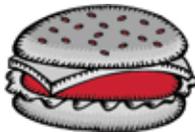
1. Carefully read this lesson. It should take about 15-20 minutes to complete.
2. Answer the questions included with this lesson.
3. When you are finished, place the questions in the prepaid envelope and place the envelope in the mail.

Food Safety

Keeping food safe to eat helps prevent foodborne illness. Foodborne illness is a serious concern, especially for certain groups of people. The good news is that foodborne illness can be prevented by using safe food practices. This lesson should provide an introduction to food safety and steps to prevent foodborne illnesses.

This lesson will discuss:

- Why is food safety important?
- Who is at risk for foodborne illness
- How food becomes dangerous
- How bacteria grows
- Proper way to wash your hands
- How to keep foods safe
- High-risk foods
- Steps to food safety



◆ Why is food safety important?

Good food safety is important for your health. Food safety helps to prevent the spread of foodborne illness. A foodborne illness causes humans to get sick from food. Types of spoiled food that cause foodborne illness have mold or bacteria. These foods may not look, smell, or even taste bad.

◆ Who is at risk?

Infants, young children, pregnant women, the elderly, and people who get sick easily have a greater risk of developing a foodborne illness because their immune systems may not be able to fight off the bacteria and viruses that cause the illness. These individuals should avoid eating foods that are raw or not fully cooked.



Infants and children are more likely to get sick from foodborne illness because their stomachs produce less acid, making it easier for bacteria and viruses to multiply.

Pregnant women are at risk because a fetus does not have a fully developed immune system.

The elderly are more at-risk to foodborne illness because of poor nutrition, lack of protein in their diets, or poor blood movement throughout their body.

People who get sick easily or who take medication that affects their immune system are also at greater risk of becoming sick from a foodborne illness. This could include people with cancer, diabetes, AIDS patients or people who take antibiotics.

◆ How does food become dangerous?

Food becomes dangerous by contamination. Contamination occurs when harmful substances or bacteria is in food. Food can become contaminated from chemical, physical or biological sources.



Chemical sources: Chemical sources include cleaning solutions and sanitizers can contaminate food, making it unsafe to eat.

Physical sources: Physical sources include items such as glass or metal that may end up in food, making it unsafe to eat.

Biological sources: Biological sources include bacteria, viruses, and parasites that make food unsafe to eat.

Handling food is risky when harmful bacteria are allowed to grow in food. As you touch food, you may transfer several thousand bacteria to its surface. Under the right conditions, bacteria can double every 10 to 30 minutes. A single cell can become billions in 10 to 12 hours.

◆ What causes bacteria to grow?

Bacteria live in a warm, moist, protein-rich environment. However, there are exceptions—some bacteria can live in extreme heat or cold. Bacteria grow fastest in the temperature range between 40°F and 140°F, which is known as the Temperature Danger Zone or “TDZ”.

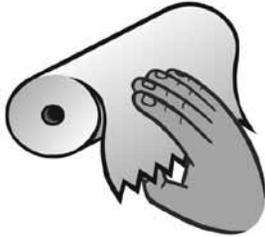
The most important tool you have to prevent foodborne illness is good personal hygiene. Personal

hygiene is the way a person keeps themselves clean. Not only can you become the victim of illness, but you can also be the carrier! A cough or sneeze can transmit thousands of bacteria that could make you or someone else sick. That is why it is so important to wash your hands.

◆ Washing your hands

Your hands can be the most dangerous serving equipment you use. Scratching your scalp, running your fingers through your hair, or touching a blemish can cause bacteria to get into food. Washing your hands is a very important step towards food safety and should be done before, during, and after cooking to prevent the spread of germs.

The proper way to wash your hands:

<p>1. Wet hands with warm water</p> 	<p>2. Use soap</p> 
<p>3. Wash hands while counting to 20</p> 	<p>4. Rinse completely</p> 
<p>5. Dry hands with paper towel</p> 	<p>6. Shut off water with paper towel and put paper towel in trash</p> 

◆ How to keep foods safe:

Storing fresh fruits and vegetables is very important. Safe storage can keep you from getting sick from foodborne illness. Fresh fruits and vegetables should be stored unwashed. However, fruits and vegetables that are very dirty after harvest can be rinsed and dried well before storing. Wash them well with cool running water before eating.



Before preparing fruits and vegetables, wash your hands with warm water and soap and use hot soapy water to clean your cutting board, countertops, and utensils.

Thoroughly rinse fresh fruits and vegetables under running tap water, including those with skins and rinds that are not eaten. Never use detergent or bleach to wash fresh fruits or vegetables. These products are not intended for people to eat.

Rub firm-skinned fruits and vegetables or scrub with a clean vegetable brush under running tap water.

Cut out and throw away damaged or bruised areas on fruits and vegetables. Bacteria can thrive in these places.

◆ Avoid high-risk foods

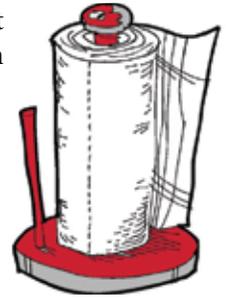
One way to reduce the risk of foodborne illness is to avoid certain foods. Some high-risk foods include:

- Unpasteurized milk and fruit juices
- Raw sprouts
- Raw or undercooked seafood, meat, or poultry
- Raw or undercooked eggs

◆ Four steps to food safety

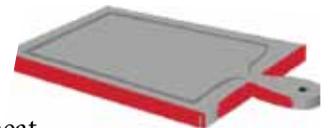
1. **Clean:** Rinse fresh fruits and vegetables with tap water. Clean countertops, cutting boards, utensils, and hands with warm water and soap.
 - Paper towels can be used to clean kitchen surfaces and then be thrown away. Paper towels are easy as safe to use, but they can be expensive.

Cloth towels can be used, but they must be washed often in the hot cycle of the washing machine. Let dishes air-dry instead of using a cloth towel to dry.



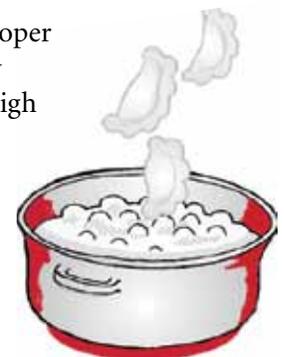
- Do not wash meat and poultry. Washing raw meats and poultry can actually increase the number of bacteria on the meat and poultry and also in the sink and surrounding areas. This can increase the risk of contamination.

2. **Separate:** Do not cross-contaminate. Cross-contamination is how bacteria can be spread. Keep raw meat, poultry, seafood, eggs, and their juices away from ready-to-eat foods. Always start with a clean area and wash hands with warm water and soap.



- Use one cutting board for fresh fruits and vegetables and a separate one for raw meat, poultry, and seafood.
- To prevent juices from raw meat, poultry, or seafood from dripping onto other foods in the refrigerator, place these raw foods in sealed containers or plastic bags on the bottom shelf of the refrigerator.
- Never place cooked food on a plate that previously had raw meat, poultry, seafood, or eggs.
- Sauce that is used to marinate raw meat, poultry, or seafood should not be used on cooked foods. Throw it away.

3. **Cook:** Cook food to the proper temperature. Food is safely cooked when it reaches a high enough internal temperature to kill the harmful bacteria that causes illness. This internal temperature should be measured with a food thermometer.



- When serving hot food, buffet-style, remember hot food should be kept at 135°F or higher.

- When bringing hot soup, chili or hot dips to an outdoor party, keep it hot before and during serving. Transport hot foods in insulated thermal containers. Keep containers closed until serving time.
- When cooking in a microwave, make sure there are no cold spots in food because bacteria can survive there. For best results, cover food, stir and rotate for even cooking. If your microwave does not have a turntable, rotate and stir the dish by hand once or twice during cooking.
- Bring sauces, soups and gravies to a boil when reheating.
- Use a clean food thermometer to measure the internal temperature of food to make sure meat, poultry, egg dishes, casseroles, and other types of food are cooked all the way through

4. **Chill:** Refrigerate foods promptly. Use a refrigerator thermometer to be sure the refrigerator is consistently 41°F or below.



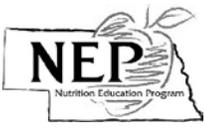
- Refrigerate or freeze perishables, prepared foods and leftovers within two hours of purchase or use. Always marinate foods in the refrigerator.
- Never defrost food at room temperature. Thaw food in the refrigerator. If you plan to cook food immediately, for a quick thaw, defrost in the

microwave. You can also enclose the food in an airtight package and submerge it in cold water and place in refrigerator, replacing water every 30 minutes.

- Separate large amounts of leftovers into shallow containers for quicker cooling in the refrigerator.
- Do not overstuff the refrigerator. Cold air must circulate to keep food safe.
- As you approach 32°F ice crystals can begin to form and lower the quality of foods such as raw fruits, vegetables and eggs. A refrigerator thermometer will help you determine whether you are too close to this temperature.
- In the temperature danger zone (between 40°F and 140°F) harmful bacteria in food grow and multiply quickly. The more bacteria in the food, the greater the chance of getting sick from foodborne illness. However, keeping food at cold temperatures slows most harmful bacteria from growing and multiplying, so it is important to chill foods quickly. Refrigeration does not kill bacteria. Refrigeration only slows the growth of bacteria and helps bacteria from growing.

Foodborne illness can be prevented by using food safety such as washing hands, avoiding high risk foods, and remembering to clean, separate, cook and chill foods properly. The tips in this lesson will help you to keep you and your family safe and healthy.

This material was funded in part by USDA's Supplemental Nutrition Assistance Program and Expanded Food & Nutrition Education Program (EFNEP). The Supplemental Nutrition Assistance Program provides nutrition assistance to people with low income. It can help you buy nutritious foods for a better diet. To find out more, call 1-800-430-3244.



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Food Safety

Food Safety Questions:

1. **True or False.** Keeping food safe to eat helps prevent foodborne illness.
2. A foodborne illness is:
 - a. May cause humans to get sick from food
 - b. Will always make the food taste bad
 - c. Will always make the food smell bad
 - d. Will always make the food look bad
3. **True or False.** Infants, young children, pregnant women, the elderly, and people who get sick easily have a greater risk of developing a foodborne illness.
4. **True or False.** Fresh fruits and vegetables should be stored unwashed.
5. How does food become contaminated?
Chemical sources like cleaning solutions and sanitizers
Physical sources like glass or metal
Biological sources like bacteria
All of the above
6. The proper way to wash your hands includes which of the following steps?
 - a. Washing with warm water and soap
 - b. Washing with ice cold water
 - c. Using hand sanitizer
 - d. Using a dirty towel to dry hands
7. What is the Temperature Danger Zone?
 - a. 20°F and 100°F
 - b. 40°F and 140°F
 - c. 80°F and 190°F
 - d. 60°F and 180°F



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8. **True or False.** The most important tool you have to prevent foodborne illness is good personal hygiene.

9. What is the order of steps of food safety?

- a. Clean, Separate, Cook, Chill
- b. Separate, Clean, Chill, Cook
- c. Separate, Cook, Chill, Clean
- d. Clean, Cook, Chill, Separate

10. **True or False.** Foodborne illness can be prevented by using food safety such as washing hands, avoiding high risk foods, and remembering to clean, separate, cook and chill foods properly.

Mini Goals

Setting goals is important when making food safety choices. Please choose or create at least one mini-goal to complete *before your next* lesson.

Based on what you have learned during this mail lesson, what is one lifestyle change you plan to make?

Do you have an idea for a mini-goal? Go ahead and share your idea with your NEP staff member!

For Office Use Only:

Client's Name: _____ ID: _____

Staff Name: _____ Date: _____

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