

Food Employee Safety Training Outline

Provided By The Barton County Health Department

What is expected of a Food Employee?

This training outline will provide information on the basics of food safety in a retail or food service establishment. The topics that will be discussed are:

- Good personal hygiene
- Proper glove use
- Proper cleaning procedures
- Warewashing procedures
- Proper cooking, hot holding and cold holding temperatures
- Understanding of the general requirements for a food establishment

Personal Hygiene

Disease and Medical Conditions

A Food Employee that has a contagious disease may easily spread the disease to the public via food during the food preparation. For this reason it is required that you report to the manager if you have an illness due to:

- Salmonella Typhi
- Shigella spp.
- Escherichia coli O157:H7
- Hepatitis A virus
- Diarrhea
- Fever
- Vomiting
- Jaundice (yellowing of the skin due to a liver disorder)
- Sore throat with fever
- A lesion containing pus on an area of the body where it is likely to come into contact with food or a food contact surface

Handwashing

Our hands come into contact with a large variety of objects throughout the day. As a result it is very common for pathogens, or germs that cause illness to be present on our hands. Food Employees shall keep their hands and exposed portions of their arms clean. To protect the health of the public, it is imperative for handlers to wash their hands in a designated hand washing sink prior to handling food, utensils and other food contact surfaces. The handwashing sink is to be used only for handwashing and no other operations.

Food Employee Safety Training Outline

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A Food Employee must also wash their hands after:

- Touching bare human skin (other than clean hands)
- After using the toilet room
- After coughing, sneezing, eating, drinking or using tobacco
- When switching between working tasks that may cause contamination of food
- Prior to use of gloves

Hygienic Practices

Because many diseases can be spread through excretions from the mouth it is important to minimize the opportunity for pathogens to move from our mouths to the food preparation area. For this reason Food Employees shall only eat, drink, or use tobacco in designated areas where contamination of food or food contact surfaces is not possible.

Staphylococcus bacteria live on the outside of the human body on our skin and hair. These bacteria may contaminate food if hair falls into food and the bacteria is allowed to reproduce over time. Food Employees shall use hair restraints to keep hair from contacting exposed food, equipment or food contact surfaces. This rule only applies to individuals that are preparing the food. Food Employees that have minimal exposure to food, such as a hostess or counter staff are not required to wear hair restraints because contamination at this point would not allow the bacteria enough time to reproduce to a dangerous level right before it is delivered to the customer.

Glove Use

Even after thorough hand washing, large amounts of pathogens may be present under and around our fingernails. To prevent these pathogens from contaminating the food preparation area Food Employees should not allow bare hand contact with ready-to-eat food (food that will not be cooked further before it is served). A Food Employee may touch a food product but only if it will later be cooked. Foods that are considered ready-to-eat should only be handled if the person wears gloves, uses a type of food tissue paper or uses some type of serving utensil.

Cleaning a Food Preparation Area

It is not possible to prepare untainted food in an area that has not been kept clean. In a food establishment there are two general types of work areas, food contact surfaces and non-food contact surfaces. Both types of surfaces should be kept clean to sight and touch, however food contact surfaces are required to be sanitized periodically. Adequate sanitizing requires that debris be removed from the surface and then cleaned with an approved sanitizing solution. The sanitizing solution must be maintained at the appropriate concentration that is determined by the manufacturer.

Food Employee Safety Training Outline

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Before you are able to prepare foods you should realize that raw animal foods, by nature, are likely to be covered with pathogens. For this reason special care should be given to these types of raw products.

The frequency of cleaning depends on the types of food that comes into contact with the surface. Some general rules are:

- Sanitize surfaces before and after contact with a raw animal product
- Sanitize surfaces in between different types of raw animal products
- If one type of raw animal product is contacting the same surface for a prolonged period of time the surface should be sanitized every 4 hours at a minimum.
- Special attention should be used when going from a raw animal product to a food that is ready-to-eat. Ready-to-eat food will not be cooked and therefore any pathogens that contact this food will not be destroyed and can lead to food poisoning if ingested.

Cleaning non-food contact surfaces should be done as often as needed to keep the surfaces clean to sight and touch. Your manager will be able to explain to you what areas need to be washed and what methods to use.

Warewashing

Warewashing is a crucial step ensuring food safety. There are two basic types of warewashing, manual warewashing (washing by hand) and automatic warewashing (using a machine). Both types of washing should be done to remove all debris from the surfaces, use some type of sanitizing process and should allow the surfaces to air dry.

Manual Warewashing

Manual warewashing involves the following steps:

1. Pre-scrape solids into the garbage. You do this step to remove the majority of the solids so that they do not buildup in the wash water.
2. Wash the surfaces in warm, soapy water. Remove all particles from the surfaces. When the water is no longer warm or becomes heavily saturated with particles of food it should be drained and filled with new warm soapy water.
3. Rinse the soap off in clear water. This step is necessary to remove the soap before sanitizing. Without this step the sanitizer will be much less effective and will dissipate much faster.
4. Sanitize the surfaces. This is done by submerging the surfaces in a sanitizing solution. The solution should be monitored by using a sanitizer test strip and should be kept at the level described by the manufacturer of the sanitizer. The length of time the surface is submerged in the sanitizer should be between 10 and 30 seconds.

Food Employee Safety Training Outline

Provided By The Barton County Health Department

5. Allow the surfaces to air dry. The surfaces are required to be air dried and not dried with a towel to prevent contamination from a drying cloth.

Automatic Warewashing

Automatic warewashing involves the following steps:

1. Pre-scrape solids into the garbage. You do this step to remove the majority of the solids so that they do not buildup in the automatic washing equipment.
2. Load the utensils and equipment into the automatic washing machine. Be sure that you do not over load the machine. The machine should use some type of sanitizing step. It is common for automatic washing machines to use chemical sanitizer or high temperature sanitizing. Your manager should be able to tell you what type the machine at your facility uses and how to check that it is sanitizing properly.
3. Remove the utensils and equipment from the machine. Allow the surfaces to air dry before you put them away. The surfaces are required to be air dried and not dried with a towel to prevent contamination from a drying cloth.

Food

Handling and cooking the food is the most complex component of your food safety program. There are many variables associated with handling food, some of which people often overlook. Many times people have the idea that it does not matter what happens to the food, as long as it is cooked it will not pose a problem. This idea is NOT correct. A Food Employee should understand two principles about germs before they cook.

1. Many bacteria are able to protect themselves with something called endospores (or spores for short). Spore-forming bacteria can survive most cooking and freezing procedures, and if given enough time at the right temperature they can multiply to dangerous levels. This is often a problem when food is cooked, hot held and then cooled too slowly in storage.
2. There are species of bacteria that create poisons known as heat resistant toxins. If these bacteria are allowed to grow on food they will leave the heat resistant toxins. The food may be cooked adequately to the correct temperatures but the heat resistant toxins will not be destroyed. These toxins can cause foodborne illness if ingested.

These two points in food safety are often overlooked and can easily lead to foodborne illness because people do not understand the risks associated with food pathogens. The most comprehensive method to ensure food safety is to consider the flow of food through the facility. Food will come into the facility during a shipment, it will be held in cold holding or dry storage, it will be prepared, it will be held and then finally it will leave the facility with a customer. Every step along that process poses a risk to any type of food.

Food Employee Safety Training Outline

Provided By The Barton County Health Department

Receiving

When food comes into the facility it needs to be determined whether or not the food is in good condition and is not contaminated. Food coming into the facility needs to be inspected for temperature abuse, exposure to moisture, and damage to the packaging or labels. Also check to see if pests like insects or rodents are in the packaging.

Cold Holding

Before Potentially Hazardous Food is used it is often held in cold storage. In this setting there are several risks to the food. The food needs to be protected from all types of contamination, maintained at the appropriate temperature ($\leq 41^{\circ}\text{F}$), it needs to be protected from moisture and it should be stored at least 6 inches off of the floor.

Special consideration should be given to cross contamination in cold storage. Often raw animal products are stored with foods that have already been cooked. Raw foods should always be stored on the lowest shelf possible to prevent the food from dripping on other food. Also raw animal foods should never be stored over an item that is ready-to-eat.

Once the original packaging of potentially hazardous food is open, the container holding the potentially hazardous food should be date marked to identify the date the package was open. This date should be used so that no item is kept for more than seven (7) days. This rule is used to provide protection from bacteria, such as *Listeria monocytogenes*. This type of bacteria can multiply slowly in temperatures of $\leq 41^{\circ}\text{F}$, so by limiting the time a good can be in storage after it is open you eliminate the risk that *Listeria* can multiply to dangerous levels.

Dry Storage

Dry storage is usually reserved for foods that are not considered to be potentially hazardous. Foods that will not spoil and that will not allow bacterial growth at room temperature are held in dry storage. Considerations for dry storage include protection from contamination by employees, the condition of the packaging, the collection of dust and debris and contamination from insects and rodents.

Preparation

When preparing food you must always wash your hands before you start your work, it does not matter if the food is potentially hazardous or non-potentially hazardous. In addition to hand washing you should prevent bare hand contact with ready-to-eat foods. To do this you may use gloves or some other type of utensil.

Be sure that your work space has been cleaned and sanitized. While preparing food be sure that you do not contaminate any other working surface or any other type of food. Remember that foods from animal sources are typically inhabited by bacteria, so do not allow them to contact foods that will not be cooked.

Food Employee Safety Training Outline

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The cooking step with the proper minimum cooking time and temperature will destroy pathogens on the food to an acceptable level so that they do not cause illness. Cooking temperatures are established on the principle that greater numbers and varieties of pathogens are found on poultry than on other raw animal foods. Therefore higher temperature combined with the appropriate time is needed to cook these products.

The minimum cooking temperatures for some common Potentially Hazardous Foods, according to the Missouri Department of Health and Senior Services, are listed in the table below.

Food Type	Temperature	Time
Poultry (including ground poultry)	165°F	15 seconds
Beef (whole intact, not ground)	145°F	15 seconds
Pork and pork products	145°F	15 seconds
All other ground meats	155°F	15 seconds
Casseroles containing previously cooked potentially hazardous foods	165°F	15 seconds
Foods previously cooked and needing reheating	165°F	15 seconds

Hot Holding

Once the food item has been prepared it is often hot held before it is served. Food items that have been cooked should be held $\geq 135^{\circ}\text{F}$ to prevent microbial growth. Re-contamination should be prevented during hot holding by providing adequate cover over the food at all times to prevent debris from falling onto the food.

Cooling

Food items that are cooked and held at high temperatures are often cooled, held cold and then reheated for service. During this process the food item will pass through the temperature danger zone ($41^{\circ}\text{F} - 135^{\circ}\text{F}$). Every time food moves through this temperature range extra caution should be used because bacteria can grow well in this temperature range.

To properly cool potentially hazardous foods the internal temperature of the food should go from 135°F to $\leq 70^{\circ}\text{F}$ in 2 hours, then from 70°F to $\leq 41^{\circ}\text{F}$ in an additional 4 hours. If this step is not done properly it could lead to the growth of pathogens such as *Clostridium perfringens*.

Clostridium perfringens is a bacterium that is able to produce spores. If this bacteria is present in a food item it will produce spores and withstand the high temperatures of cooking and hot holding. When the food item is cooled and passes through the temperature danger zone the bacterial spores will begin multiplying and if given enough time may multiply to dangerous levels.

This type of hazard is usually associated with large containers of foods such as gravies, stews and meat. A simple solution to this problem is to speed the cooling process by using ice baths or splitting large containers into smaller containers.

Food Employee Safety Training Outline

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For food that has been cooled it is required to reheat all parts to $\geq 165^{\circ}\text{F}$ for 15 seconds before it can be served. The reason for this is because the food has traveled through the temperature danger zone several times, it is likely that there has been some bacterial growth. Cooking all parts of the food to $\geq 165^{\circ}\text{F}$ for 15 seconds will ensure that the threat of this bacterial growth will be minimized.

Conclusion

Remember that it is not possible for this manual to cover every situation that might arise while working in a food establishment. Often situations arise that are not ordinary or typical and require critical thinking. If you are ever unsure of what to do, ask your manager for assistance. Always remember that you can call the Barton County Health Department at 1-417-682-3363 for assistance in a food safety related situation.

Upon completion of this training material, record your name, date you were hired and date this material was completed on the training log in the back of this manual.

Food Employee Safety Training Record Log

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