

# EMPLOYEE FOOD SAFETY HANDBOOK



**Public Health**  
Prevent. Promote. Protect.

Knox County Health Department

## KNOX COUNTY HEALTH DEPARTMENT

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## **TABLE OF CONTENTS**

1. FOOD SAFETY.....	3
2. PERSONAL HYGEINE.....	4
3. HACCP.....	8
4. SANITATION.....	10
5. TIME AND TEMPERATURE CONTROL.	12
6. CONTAMINATION.....	15
7. QUIZES.....	17
8. ANSWER KEY.....	20

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## FOOD SAFETY



Each year, approximately 76 million people become sick from eating improperly prepared food. Customers dining at your establishment are placing their trust in you to prepare and serve safe food. It is extremely important that each foodservice employee knows the basics of food safety.



### What causes Food Borne Illness?

- ◆ Failure to properly cool food.
- ◆ Poor personal hygiene habits.
- ◆ Raw, contaminated ingredients added to foods receiving no further cooking.
- ◆ Foods remaining at improper temperatures.
- ◆ Failure to reheat food properly.
- ◆ Cross Contamination.

### What are Bacteria?

Bacteria are living organisms too small to be seen with our eyes. They can cause foodborne illness when people eat foods high in bacteria.



### What are Viruses?

Viruses also cause illness. They are usually smaller than bacteria and are much more stable in the environment.

### What are Molds?

Molds usually grow on leftover food. If mold is present, the food should be thrown out. Simply cutting away the mold will not make the food safe to eat.



## Personal Hygiene



### Rules you must follow to ensure personal cleanliness:

- ✓ Bath regularly.
- ✓ Examining body for cuts where harmful bacteria can thrive.
- ✓ Putting on clean laundered clothes before going to work.
- ✓ Keeping your hair neatly groomed and shaving or trimming your beard. Long hair should be in a braid, ponytail or hat to prevent hair from falling into food.
- ✓ Cleaning and trimming your fingernails frequently.
- ✓ Removing nail polish, artificial nails and jewelry before starting work. Jewelry can harbor debris, hair or harmful bacteria.

### CLOTHING:

- Change uniforms and aprons when they become dirty.
- Wear hairnets, caps and other hair restraints to cover all visible hair. Loose hair can fall on food.
- Remove smocks, aprons, etc outside of the restroom before you enter.
- Uniforms must be washed frequently.



## HANDWASHING

Proper hand washing requires more than simply soaping your hands under running water. You should follow these simple hand washing steps:



- 1) Turn the water on to the warmest temperature you can tolerate and wet your hands under running water.
- 2) Take an adequate amount of soap and place it on your hands.
- 3) Scrub your hands against each other for at least 20 seconds making sure you clean every part of your hands. Pay attention to the area between your fingers and around fingernails.
- 4) Rinse your hands thoroughly under running water until all traces of soap is rinsed from your hands.
- 5) Dry your hands under the hand dryer or with paper towels.

Make sure you wash your hands in the designated sinks. Never wash them in sinks used to prepare food.



**Some examples of when to wash your hands are:**

- \* After coughing or sneezing into your hands.
- \* Before putting on gloves.
- \* After touching any part of your skin, hair, eyes, or mouth.
- \* After using a tissue to wipe or blow your nose.
- \* After eating, drinking, or smoking.
- \* After using the restroom.
- \* After picking an item up off of the floor.
- \* Before and after handling raw meats, poultry or other raw foods.
- \* After handling items such as boxes, labels, garbage, brooms etc.
- \* Before touching clean dishware, tableware, and flatware.
- \* After handling or serving any type of allergenic food.
- \* After touching soiled dishes, glasses, flatware, equipment, and utensils.



### **GLOVES:**

- Wash your hands before wearing gloves.
- Change your gloves whenever you would wash hands.
- Gloves must be kept in clean, and sanitary condition.
- Throw away dirty or torn gloves.
- Never put gloves in your pockets or take them into rest rooms, lunchrooms, offices etc.

**Gloves are not a substitute for proper hand washing.**

### **PERSONAL BELONGINGS:**

Your personal belongings such as purses, jackets, cigarettes, jewelry, books and cell phone should also be kept in a designated storage area to avoid pests and contamination of food and work areas.

### **Illness:**

If you are sick DO NOT come to work. Coming to work can expose customers, co-workers and food to harmful infections. **Remember to follow your employer's procedure for reporting your illness.**



# HACCP



## HAZARD ANALYSIS & CRITICAL CONTROL POINTS (HACCP)

**HACCP** is a food safety system that has been adapted by the food industry all over the world. **HACCP** has been established to ensure safe preparation of food. The seven principles of **HACCP** are as follows:

**1) Conduct a hazard analysis:** The first step is to identify and evaluate the potential biological (e.g., bacteria), chemical (e.g.; sanitizer), and physical (e.g.; glass) food safety hazards.

**2) Identify critical control points (CCPs):** A **CCP** is a point, step, or procedure in the food preparation process at which control can be applied to prevent, eliminate, or reduce a food safety hazard to an acceptable level of safety. The following are examples of



**CCPs:**

- ✓ Cooling food within a specific timeframe
- ✓ Cooking food to a specific temperature to destroy harmful bacteria
- ✓ Holding food at specific temperatures throughout the day.

**3) Determine critical limits for each CCP:**

- **Critical limits** are boundaries of safety for each **CCP** to control the identified food safety hazard to ensure that food is safe to eat.
- If food is outside the critical limit, it is considered potentially unsafe to eat.

Example of a critical limit is “cooking product to an internal temperature of 165 degrees Fahrenheit or above.”

**4) Develop monitoring procedures:** Monitoring is simply making observations or measurements to make sure a **CCP** is under control.

**5) Establish corrective actions:** A corrective action must:

- Bring the process back in control, and
- Must tell a person what to do with a food.

Example, if the temperature of a pot of soup was taken and found to be too cold, turning up the stove to get the soup hotter would correct the temperature deviation.

**6) Develop an effective record keeping system:** It is important to record and document all monitoring activities to prove that food is safe to eat.

**7) Perform verification procedures:** After the HACCP system has been implemented, it must be tested to make sure it is working the way that it should.

Verification may include:

- Observing monitoring procedures;
- Calibrating monitoring equipment, like thermometers, and
- Reviewing HACCP records.



## SANITATION

### Dish Washing:

Three Step process:

- 1) **Wash**, removing visible food residue from equipment, tableware, utensils, and work surfaces. Then clean with a detergent
- 2) The second step is to **rinse** with clean clear water.
- 3) **Sanitize** with the chemical used to kill bacteria. Equipment should be left to air dry, covered or inverted when stored, and not to be reassembled until it is needed for use.



### CHEMICALS:

Food service establishments use chemicals to keep their equipment clean. While working around chemicals you should keep the following things in mind:

- ✓ Put away or cover food and ingredients before you begin.
- ✓ Use only approved chemicals and those specified for each task.
- ✓ Use only chemicals for which you've been properly trained on their specific usage requirements.
- ✓ Always make sure proper labels are affixed to containers to prevent mix-ups and accidental contamination of food.
- ✓ Wear gloves and eye protection if necessary while using each chemical.
- ✓ Chemicals must be stored safely away from food and work areas to prevent contamination.

- EQUIPMENT:



- Clean equipment like mops, buckets and brushes before putting them away.
- Hang to dry equipment after each use to eliminate the damp and wet conditions which promotes bacteria growth.

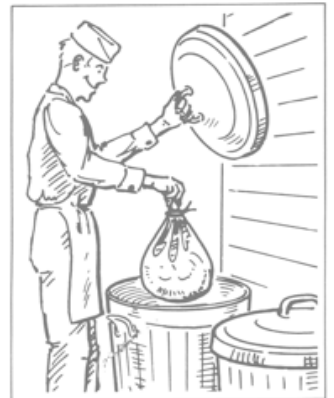


**HOUSEKEEPING:** Simple ways to keep your establishment clean at all times:

- Keep floors clean by removing garbage and waste promptly.
- Clean up food spills immediately.
- Keep work areas as dry as possible.
- Keep personal belongings in designated areas.
- Put items such as brooms, mops, trays, and carts away after each use.
- Keep work areas clean at all times.

**GARBAGE:**

- Remove garbage from the building as soon as possible.
- Make sure garbage containers do not have cracks or holes in them.
- Line containers with plastic to prevent leakage.
- Keep lids closed on trash receptacles and garbage barrels.
- Clean and sanitize garbage containers as often as necessary to prevent insects or rodents.
- Keep garbage areas clean both inside and outside the building.
- Always wash your hands after handling or removing garbage.

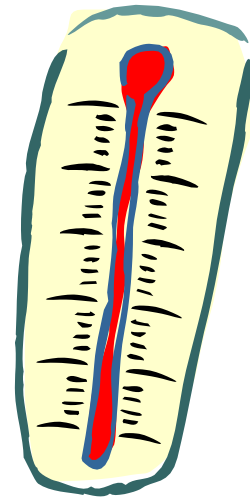


**PEST CONTROL:**



- ✓ Always maintain good housekeeping in all areas of the establishment.
- ✓ Never prop doors open for ventilation and always keep unscreened windows closed.
- ✓ .Keep lids closed on trash receptacles and garbage barrels.
- ✓ Clean up food and ingredient spills immediately.
- ✓ Inspect incoming materials for signs of pest infestation.





## TIME AND TEMPERATURE CONTROL

### THE "DANGER ZONE":

Bacteria grow rapidly from **41 to 140 degrees Fahrenheit**. Food left too long in this temperature zone can cause a foodborne illness.

### RECEIVING:

- ✓ Time and temperature control begins when food is received.
- ✓ Check the internal temperature of food that has been unloaded to make sure it has been refrigerated or frozen during shipment.
- ✓ Signs of temperature abuse are:
  - o Unusual odors
  - o Abnormal colors, and
  - o Pools of ice or ice crystals that may suggest thawing or refreezing.

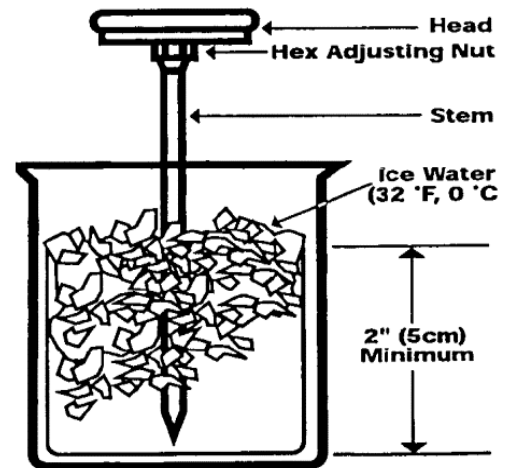
### REFRIGERATION:

- ✓ Keep air circulating around food to keep it cold by not overloading refrigerators and coolers or stacking food too close together.
- ✓ Store the most perishable foods, such as meat, in the coldest part.
- ✓ Place raw meats, seafood, and poultry on bottom shelves to prevent bacterial cross contamination of other food due to dripping or leaking juices.
- ✓ Keep doors to refrigerators and coolers closed to help ensure that the cold temperature is constantly maintained.
- ✓ Label foods with preparation dates and times. Serve food on a "first in, first out (FIFO) basis.
- ✓ Check the temperature of refrigerators and coolers routinely.



**Thermometer Calibration:**

- Fill a container with ice/water
- Place the thermometer into the container.
- Let it stand for 3 minutes
- The thermometer should read 32°.
- If not, use pliers to hold the calibration nut and adjust to 32° by turning the dial.

**COOLING:**

To avoid food from reaching the “Danger Zone,” use the following methods to cool food rapidly:

- o Place it in shallow pans.
- o Divide large volumes into smaller or thinner portions.
- o Place it in a refrigerator or freezer.
- o Place containers in ice water bath and stir frequently.
- o Add ice as an ingredient.

**DO NOT cool food at room temperature and DO NOT fully cover food until it has cooled completely.**

**REHEATING:**

- Leftovers must be reheated rapidly to 165° and served immediately.
- Never mix leftover food with fresh food.

**SERVING:**

While serving food, keep these time and temperature controls in mind:

- Prepare only as much food as intended to be served.
- Serve food right away. Do not let it sit for too long.
  - Keep cold foods cold, 41° and below.
  - Keep hot foods in steam tables and double boilers covered to keep them hot, 140° or above. Stir them frequently to distribute the heat.
  - Periodically check the temperature of foods that are held on buffets and self-service areas with a thermometer.



## **CONTAMINATION:**

**There are three types of contamination hazards:**

- 1) Chemicals (Example Pesticides, cleaners and Sanitizers)
- 2) Physical (Example glass from a chipped cup)
- 3) Biological (Bacteria), virus, etc.

**To prevent cross contamination around chemicals:**

- Don't use chemicals if you have not been trained.
- Always put food away (or make sure they are properly covered) before cleaning or applying chemicals.
- Use each chemical according to the instructions printed on the label.
- Store chemicals in their designated spot when not in use to avoid spills or leaks.
- Chemicals such as pesticides are already on some food (fruits and vegetables). Be sure to wash them to remove surface residue.

**Ways to prevent bacterial cross contamination when food is stored and prepared is to:**

- Store food minimum of 6 inches above the floor.
- Keep raw meat, poultry, and seafood on a bottom shelf to prevent leaking juices from contaminating other food.
- Keep raw and cooked food separate.
- Wash your hands after handling raw food.
- Clean and sanitize work surfaces as often as necessary to keep them clean especially after preparing raw food.
- Clean visibly soiled cans and containers of food before opening.



**When food is served and displayed:**

- ✓ Wrap, cover, or invert preset tableware, and remove it when it's unused or exposed to contamination.
- ✓ Replace linens and napkins used to line containers each time the container is refilled for a new customer.



- ✓ Discard soiled single-service items such as paper placemats, straws, toothpicks etc.
  - ✓ Use a clean cloth for wiping counters and tables. Store cloth in sanitizer and use only for that purpose. Replace cloth when soiled.
  - ✓ Never touch ready to eat foods with your bare hands. Use gloves, tongs, scoop

etc to pick up food.

- ✓ Discard unused portions of food, such as salad dressing, butter, and relish trays.
- ✓ Wash your hands before and after handling food.

**Physical contaminations can come from the following sources:**

- Equipments and utensils.
- Containers and packages.
- Jewelry and other personal belongings.
- Pens and pencils.
- Dishes and glasses.

As an example, using a worn can opener could cause metal shavings to fall into the canned food while it's being opened.

## **FOOD SAFETY AND PERSONAL HYGIENE QUIZ**

- 1) Bacteria can grow due to:
  - a) Unclean hands.
  - b) Slow cooling and heating of food.
  - c) Both a) and b)
  
- 2) Before going to work one must remember to:
  - a) Make sure you have a clean uniform and apron.
  - b) Put on make up.
  - c) Eat food.
  
- 3) Food that is molded should be:
  - a) Thrown away immediately.
  - b) Reheated and served.
  - c) Washed and served.
  
- 4) Proper hand washing includes:
  - a) Drying your hands on your uniform.
  - b) Using the coldest water possible
  - c) Using soap and scrubbing for 20 seconds.
  
- 5) You should wash your hands at any of the following times:
  - a) After coughing and sneezing into your hands.
  - b) Before and after handling raw meats, poultry or other raw foods.
  - c) Both a and b.
  
- 6) Your personal belongings should be kept:
  - a) In areas where food is prepared for customers.
  - b) Designated storage areas.
  - c) In bathrooms.

## **HACCP AND SANITATION QUIZ**

- 1) Critical control point is:
  - a) Ingredients used to prepare a certain dish.
  - b) Steps that tell us how to clean a kitchen.
  - c) A point, step, or procedure in the process at which control can be applied to prevent, eliminate, or reduce a food safety hazard to an acceptable level of safety.
  
- 2) Examples of Critical control points are:
  - a) Cooking food to a specific temperature to destroy harmful bacteria.
  - b) Holding food at specific temperatures throughout the day.
  - c) Both a and b.
  
- 3) Chemicals must be stored:
  - a) Safely away from food and work areas to prevent contamination.
  - b) In the kitchen to prevent contamination.
  - c) With other foods to prevent contamination.
  
- 4) Garbage must be removed:
  - a) Once a month.
  - b) As soon as possible.
  - c) Once in 2 weeks.
  
- 5) Simple ways to keep your establishment clean at all times:
  - a) Clean up food spills immediately.
  - b) Keep personal belongings in designated areas.
  - c) Both a and b.
  
- 6) In order to control pests:
  - a) Always keep food warm.
  - b) Never prop doors open for ventilation and always keep unscreened windows closed.
  - c) Measure the temperature of raw meat.
  
- 7) HACCP is:
  - a) An organization that trains cooks.
  - b) A food safety system that focuses on identifying and addressing hazard before they contaminate food.
  - c) An organization that teaches employees to clean equipments properly.
  
- 8) HACCP stands for:
  - a) Having any affects causes Control Policies
  - b) Hazard Analysis and Critical Control Points.
  - c) Hazard And Control Condition Points.

## TIME AND TEMPERATURE CONTROLS AND CONTAMINATION QUIZ

- 1) Bacteria can grow rapidly from
  - a) 41° to 140°
  - b) 10° to 180°
  - c) 20° to 160°
  
- 2) Freezing involves cooling food to a temperature below:
  - a) 28°
  - b) 45°
  - c) 41°
  
- 3) Food can be thawed:
  - a) Under running hot water.
  - b) Under running cold water.
  - c) At room temperature.
  
- 4) The purpose of time and temperature control is to:
  - a) Produce food faster.
  - b) Make food taste good.
  - c) Control the growth of bacteria.
  
- 5) To prevent bacterial cross contamination when food is stored and prepared:
  - a) Separate raw and cooked products.
  - b) Wash your hands before after handling raw food.
  - c) All of the above.
  
- 6) To prevent cross contamination around chemicals:
  - a) Always put food away before cleaning and applying chemicals.
  - b) Put on clean clothes.
  - c) Dry your hands on your uniform.
  
- 7) Physical hazards can come from:
  - a) Equipments and utensils.
  - b) Dishes and glasses
  - c) Both a and b

## **ANSWER KEY**

### **Food Safety and personal Hygiene**

- 1) c
- 2) a
- 3) a
- 4) c
- 5) c
- 6) b

### **HACCP and Sanitation**

- 1) c
- 2) c
- 3) a
- 4) b
- 5) c
- 6) b
- 7) b
- 8) b

### **Time and Temperature Control and Contamination**

- 1) a
- 2) a
- 3) b
- 4) c
- 5) c
- 6) a
- 7) c