

# Food Handler

## Clay County, Missouri



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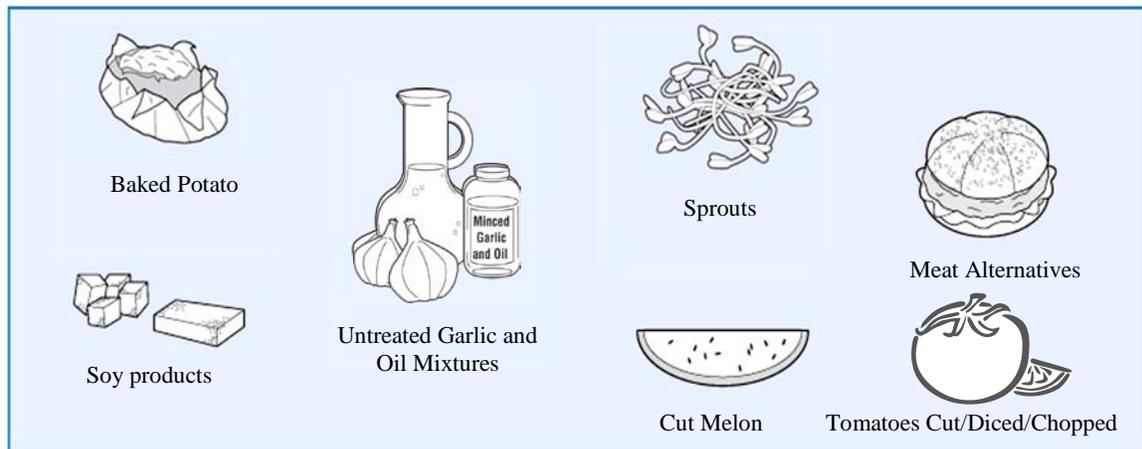
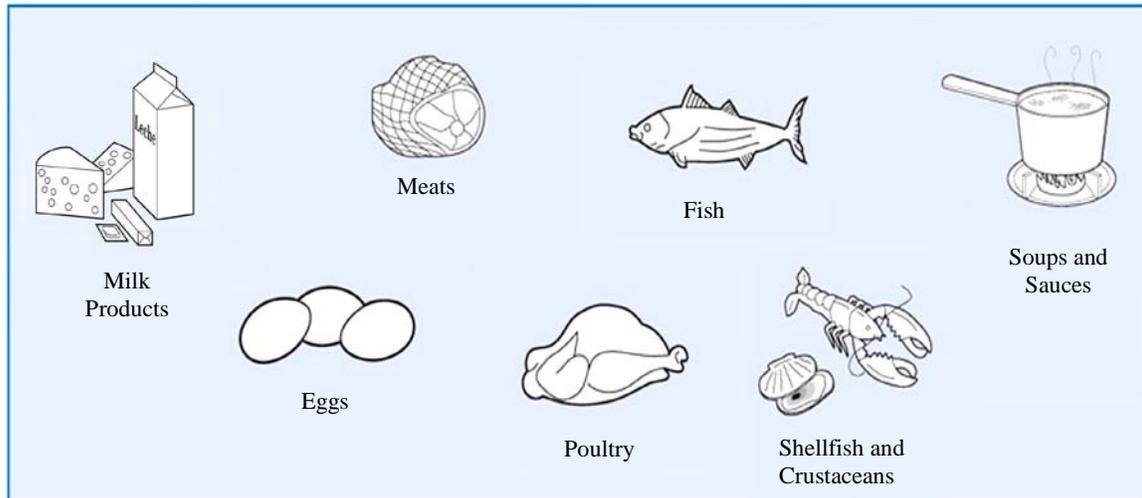
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# What are Potentially Hazardous Foods?



All of these foods could make you sick if you leave them in the **“Temperature Danger Zone”** for more than 4 hours.

The **“Temperature Danger Zone”**

=

A temperature between **41°F (5°C)** and **135°F (57°C)**

To determine if a food is more likely to make you sick, remember the acronym:

## FAT TOM

### Food

- Foodborne microorganisms require nutrients to grow. Specifically carbohydrates and proteins
- These are found in potentially hazardous food including:
  - Meat
  - Poultry
  - Dairy products
  - Eggs



### Acidity

- Foodborne microorganisms grow best in food that has a neutral or slightly acidic pH (7.5 to 4.6)
- Most food falls into this range

### Temperature

- Foodborne microorganisms grow well at temperatures between 41°F and 135°F (5°C and 57°C) = “Temperature Danger Zone”

### Time

- Foodborne microorganisms need sufficient time to grow
- 4 hours or more in Temperature Danger Zone = growth high enough to cause illness



### Oxygen

- Some foodborne microorganisms require oxygen to grow, while others grow when oxygen is absent

### Moisture

- Most foodborne microorganisms require moisture to grow
- The amount of moisture available in food for this growth is called water activity (aw)
- Potentially hazardous food typically has an aw of .85 or higher



## Compliance with Food Law

- Food must be obtained from an approved source
- Food prepared in a private home can not be used or offered for human consumption in a food establishment
- Packaged food must be labeled according to FDA requirements and include ingredients, allergens, and directions for preparation

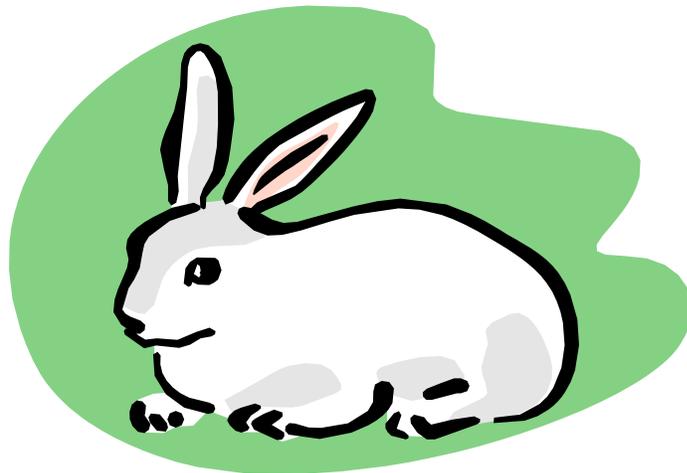
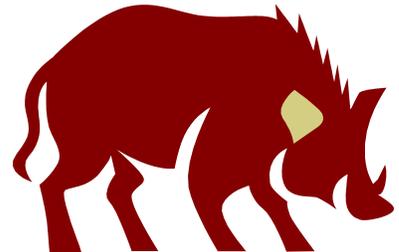
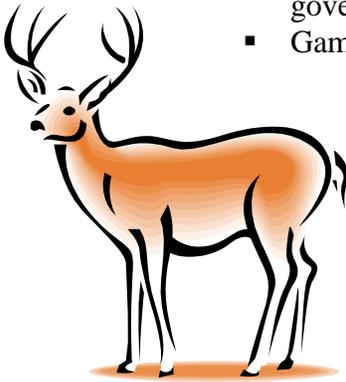
## Wild Mushrooms

- Mushroom species picked in the wild must be obtained from sources where each mushroom is individually inspected and found to be safe by an approved mushroom identification expert



## Game Animals

- If game animals are received for sale or service they must be:
  - Commercially raised for food; and
  - Raised, slaughtered, and processed according to the laws governing meat and poultry
  - Game animals include:
    - Deer
    - Wild boar
    - Bear
    - Turkey
    - Rabbit



## Requirements When Receiving Food

### Temperature

- Refrigerated, potentially hazardous food must be received at a temperature of 5°C (41°F) or below
- Milk must be received at 5°C (41°F)
- Shell eggs may be received at 7°C (45°F)
- Molluscan shellfish may be received alive and at 7°C (45°F)
- Potentially hazardous food that is cooked or reheated to the proper temperature and received hot must be at a temperature of 57°C (135°F) or above
- A food that is labeled frozen and shipped frozen by a food processing plant must be received frozen
- Potentially hazardous food must be free of evidence of previous temperature abuse



### Package Integrity

- Food packages must be in good condition and protect the integrity of the contents so that the food is not exposed to adulteration or potential contaminants

### Ice

- Ice for use as a food or a cooling medium must be made from drinking water
- Ice used as a cooling medium may not be used as food



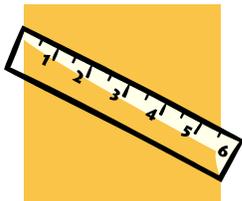
## Shellstock Identification and Condition

- Shellstock must be obtained in containers with readable source identification tags or labels that are attached by the harvester and each dealer that depurates, ships, or reships the shellstock, as specified in the National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish
- The information must include:
  - The harvester's identification number that is assigned by the Shellfish Control Authority
  - The date of harvesting,
  - The most precise identification of the harvest location
  - The type and quantity of shellfish
  - The following statement in bold, capitalized type: "This tag is required to be attached until container is empty or retagged and thereafter kept on file for 90 days;"
  - The dealer's name and address, and the certification number
  - The original shipper's certification number including the abbreviation of the name of the state or country in which the shellfish are harvested
  - If the container does not contain all of the required information, it is subject to a hold order, or seizure and destruction of the product
- When the food establishment receives the shellstock, it must be reasonably free of mud, dead shellfish, and shellfish with broken shells, dead shellfish, or shellstock with badly broken shells must be discarded

## Contamination from the Premises

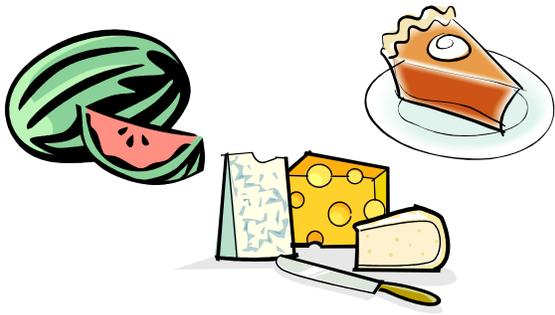
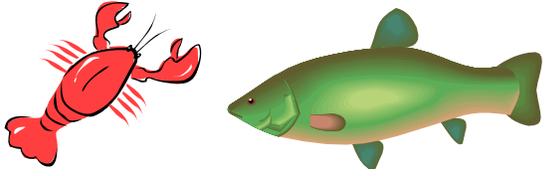
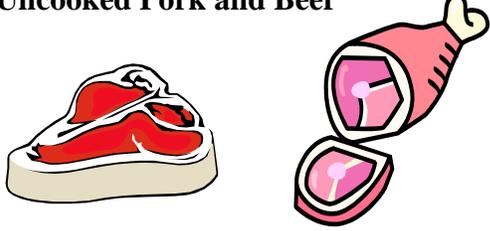
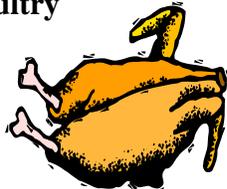
### Food Storage

- Food must be protected from contamination by storing the food:



- In a clean, dry location
- Where it is not exposed to splash, dust, or other contamination
- At least 15 cm (6 inches) above the floor
- In walk-in coolers store raw meat, poultry, and seafood below cooked and ready to eat food
- Store raw meat, poultry, and seafood in reverse order of cooking temperature

## Storage Chart for Refrigerated Foods

<h3>Top Shelf</h3>	<h4>Cooked and Ready-to-Eat Foods</h4> 
<h3>Second Shelf</h3>	<h4>Uncooked Fish and Seafood</h4> 
<h3>Third Shelf</h3>	<h4>Uncooked Pork and Beef</h4> 
<h3>Bottom Shelf</h3>	<h4>Uncooked Poultry</h4> 

### Food may not be stored:

- Under chemicals
- In locker rooms
- In restrooms
- In dressing rooms
- In garbage rooms
- In mechanical rooms
- Under sewer lines that are not shielded to intercept potential drips
- Under leaking water lines, including leaking automatic fire sprinkler heads, or under lines on which water has condensed
- Under open stairwells
- Under other sources of contamination

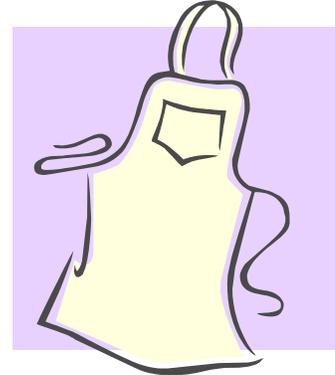
## Protection from Contamination after Receiving

### Contamination from Employee Hands

- Food employees must wash their hands properly
- Food employees can not contact exposed, ready-to-eat food, with their bare hands and must use proper utensils such as deli tissue, spatulas, tongs, single-use gloves, or dispensing equipment
- Food employees must minimize bare hand and arm contact with exposed food that is not in a ready-to-eat form

### Foodhandlers should:

- Wear a clean hat or other hair restraint
- Wear clean clothing daily
- Remove aprons when leaving food-preparation areas
- Remove jewelry from hands and arms
- Wear appropriate, clean, and closed-toe shoes
- Prevent Cross Contamination
  - Create physical barriers between food products:
    - Assign specific equipment to each type of food
    - Clean and sanitize work surfaces, equipment, and utensils after each task
  - Create procedural barriers between food products:
    - Prepare raw meat, fish, and poultry and ready-to-eat food at different times (when using the same prep table)
    - Purchase ingredients that require minimal preparation

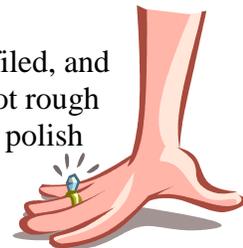


### Personal Cleanliness

- Food employees must wear clean clothing and keep their hands and exposed portions of their arms clean

### Fingernail Maintenance

- Food employees need to keep their fingernails trimmed, filed, and maintained so the edges and surfaces are cleanable and not rough
- Food employees can not wear artificial nails or fingernail polish



### Jewelry Restrictions

- While preparing food, food employees can not wear jewelry on their arms and hands; the only exception is a plain ring such as a wedding band

## Hygienic Practices

### Eating, Drinking, or Using Tobacco

- No eating, drinking, or smoking is allowed in areas where food is prepared or stored or where single service items, utensils, and equipment are cleaned and stored
- A food prep employee may drink from a closed beverage container *if* :
  - The beverage is handled and stored to prevent contamination of the employees hands, **and**
  - The beverage is stored in a location that does not contaminate clean equipment and utensils



### Discharge - Eye, Nose, Mouth

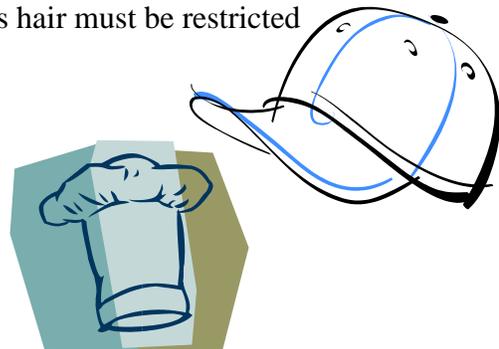
- Food employees that have a persistent cough, sneezing, or a runny nose that causes discharge from the eyes, nose, or mouth can not work with exposed food; clean equipment, utensils, and linens; or unwrapped single-service or single-use items



### Hair Restraints

- Food prep employees must wear hair restraints to keep their hair from contacting exposed food; clean equipment, utensils, and linens; and unwrapped single-service and single-use articles
- Movement of the food prep employees hair must be restricted
- Possible hair restraints include:

- Hats
- Hair coverings or hair nets
- Beard restraints
- Clothing that covers body hair



## When to Wash Your Hands

Food employees must wash their hands and exposed portions of their arms immediately:

### ■ Before

- Preparing food
- Putting on gloves
- Using clean equipment and utensils
- Using unwrapped single use items

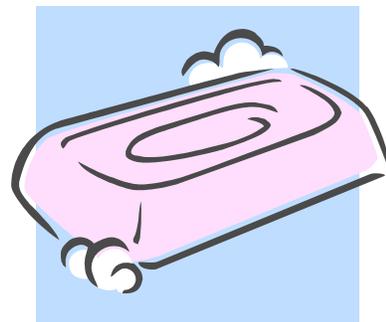
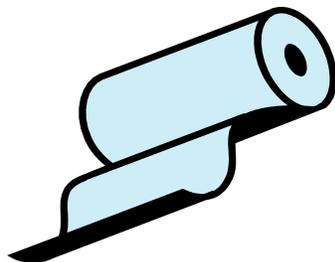


### ■ After

- Touching parts of their body other than clean hands and clean, exposed portions of arms
- Using the restroom
- Caring for or handling service animals or aquatic animals
- Coughing, sneezing, using a handkerchief or disposable tissue, using tobacco, eating, or drinking
- Handling soiled equipment and utensils
- Engaging in any other activities that contaminate the hands
- During food preparation, as often as necessary to remove soil and contamination and to prevent cross contamination when changing tasks
- When switching between working with raw food and working with ready-to-eat food

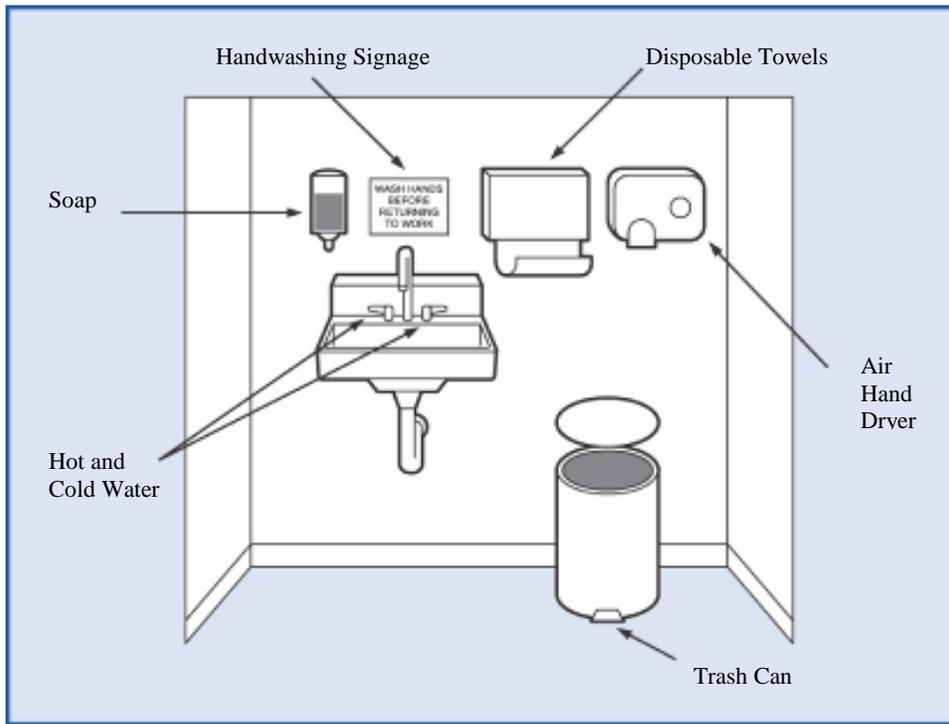
## Where to Wash/How to Wash

- Food employees must wash their hands in a designated hand sink
- Wet hands in water that is at least 100°F (38°C)
- Use soap
- Scrub hands, exposed portions of arms, and finger nails for at least 20 seconds
- Rinse hands thoroughly
- Dry hands with disposable towels or a hand dryer



## Handwashing stations must be equipped with:

- Hot and cold running water
- Liquid, bar, or powdered soap
- A way to dry your hands
  - Individual disposable towels
  - Heated hand drying device
- A waste container
- A sign indicating employees must wash their hands



## Glove Usage

- Gloves must be:
  - Single use
  - Used for performing only one task
  - Used when handling ready-to-eat food
- When to Change Gloves
  - As soon as they become soiled or torn, or when interruptions occur in preparation
  - Before beginning a different task
  - At least every four hours during continual use and more often when necessary
  - After handling raw meat and before handling cooked or ready-to-eat food



## Hand Sanitizers

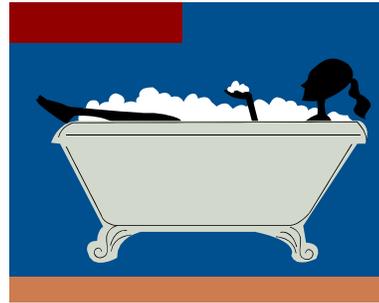
- Hand sanitizers are only allowed after the employees hands are washed properly
- Hand sanitizers are never a replacement for hand washing

## Behaviors That Can Contaminate Food

- Scratching the scalp
- Running fingers through hair
- Wiping or touching the nose
- Rubbing an ear
- Touching a pimple or open sore
- Wearing a dirty uniform
- Coughing or sneezing into the hand
- Spitting in the establishment

## Good personal hygiene includes:

- Maintaining personal cleanliness
- Taking a bath or shower every day
- Wearing proper work attire
- Following hygienic hand practices
- Avoiding unsanitary habits and actions
- Maintaining good health
- Reporting illnesses



## Contamination from Other Foods or Ingredients

- Food must be protected from cross contamination by:
  - Separating raw animal foods during storage, preparation, holding, and display from raw and cooked ready-to-eat food
  - Using separate equipment for each type of raw animal food
  - Arranging each type of food in equipment so that cross contamination is prevented
  - Preparing each type of food at different times or in separate areas
  - Cleaning equipment and utensils properly
  - Storing the food in packages, covered containers, or wrappings
  - Cleaning sealed containers before opening
  - Storing damaged, spoiled, or recalled food so that it does not contaminate food that will be sold or served to the public
  - Properly washing fruits and vegetables before use

## Labeling Food Containers

- Working containers holding food or ingredients that are removed from their original packages must be identified with the common name of the food except containers holding food that can be readily and unmistakably recognized such as dry pasta do not need to be labeled
- Examples of products that need labeled include:
  - cooking oils
  - flour
  - herbs
  - potato flakes
  - salt
  - spices
  - sugar



## Contamination from Ice Used as a Coolant

- After being used for cooling the exterior surfaces of food, ice cannot be used as an ingredient

## Food in Contact with Water or Ice

- Packaged food may not be stored in direct contact with ice or water if the packaging is subject to leakage
- Unpackaged food may not be stored in direct contact with un-drained ice
- Raw chicken and raw fish that are received immersed in ice in shipping containers may remain in that condition while in storage awaiting preparation, display, service, or sale

## Contamination from Equipment/Utensils/Linens

### Food contact with soiled items

- Food can only contact surfaces of equipment and utensils that are properly cleaned and sanitized

## To prevent contamination when serving food:

- Use clean and sanitized utensils for serving
  - Use separate utensils with long handles for each food
  - Clean and sanitize utensils after each task
- Practice good personal hygiene
- Store serving utensils properly
  - Store them in the food, with the handle extended above the rim of the container or on a clean, sanitized food-contact surface
- Minimize bare-hand contact with cooked or ready-to-eat food
  - Handle food with tongs, deli sheets, or gloves

## In use utensils / Utensil storage between uses

- During pauses in food preparation or dispensing, food preparation and dispensing utensils must be stored:
  - In the food with their handles above the top of the food and the container
  - On a clean portion of the food preparation table that is properly cleaned and sanitized at least every four hours
  - In running water of sufficient velocity to flush particulates to the drain
  - In a container of water if the water is maintained at a temperature of at least 57°C (135°F)



### Wiping cloths

- Cloths that are in use for wiping food spills cannot be used for anything else
- Cloths used for wiping food spills must be:
  - Dry and stored in a location to prevent contamination
  - Wet and stored in a chemical sanitizer at the proper concentration required by the food code



## Types of Food Hazards

### Biological Hazards

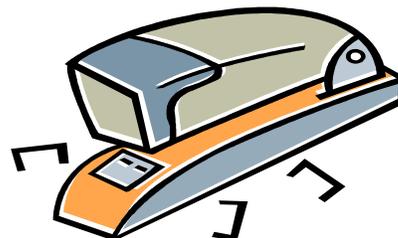
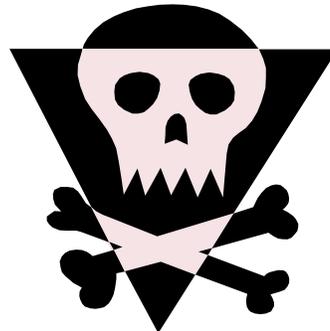
- Bacteria, viruses, parasites, fungi
- Toxins

### Chemical Hazards

- Pesticides, food additives, cleaning supplies, toxic metals

### Physical Hazards

- Hair, dirt, metal staples, etc.



## **Contamination from Consumers**

### **Food Display**

- Food on display must be protected from contamination by the use of packaging, counter, service line, or salad bar food guards, display cases, or other effective means
- This does not apply to items such as nuts in the shell and whole, raw fruits and vegetables that are intended for hulling, peeling, or washing by the consumer before consumption

### **Condiments, Protection**

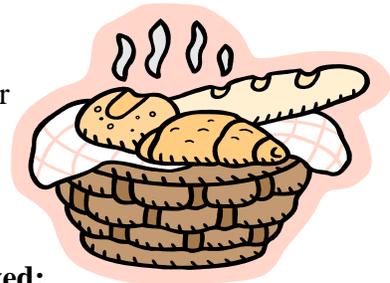
- Condiments must be protected from contamination by being kept in dispensers that are designed to provide protection, protected food displays provided with the proper utensils, original containers designed for dispensing, or individual packages or portions

### **Consumer Self-Service Operations**

- Buffets, salad bars, and other self-service operations must be provided with suitable utensils or effective dispensing methods that protect the food from contamination
- Buffets, salad bars, and other self-service operations must be monitored by food employees trained in safe operating procedures

### **Never re-serve:**

- Menu items returned by one customer to another
- Plate garnishes
- Uncovered condiments
- Uneaten bread or rolls



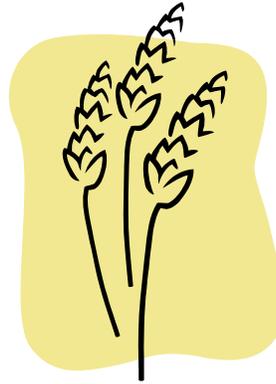
### **In general only unopened, prepackaged food can be re-served:**

- Condiment packets
- Wrapped crackers or similar items

## Food Allergens

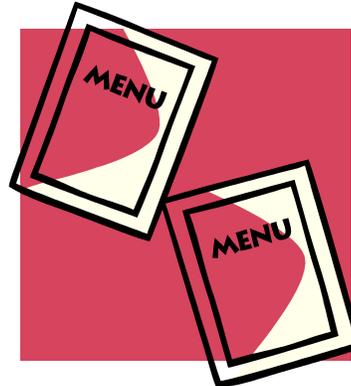
### Common Food Allergens

- Milk and dairy products
- Eggs and egg products
- Fish
- Shellfish
- Wheat
- Soy and soy products
- Peanuts
- Tree nuts



### Symptoms of an allergic reaction include:

- Itching in and around the mouth, face, or scalp
- Tightening in the throat
- Wheezing or shortness of breath
- Hives
- Swelling of the face, eyes, hands, or feet
- Gastrointestinal symptoms
- Loss of consciousness and death



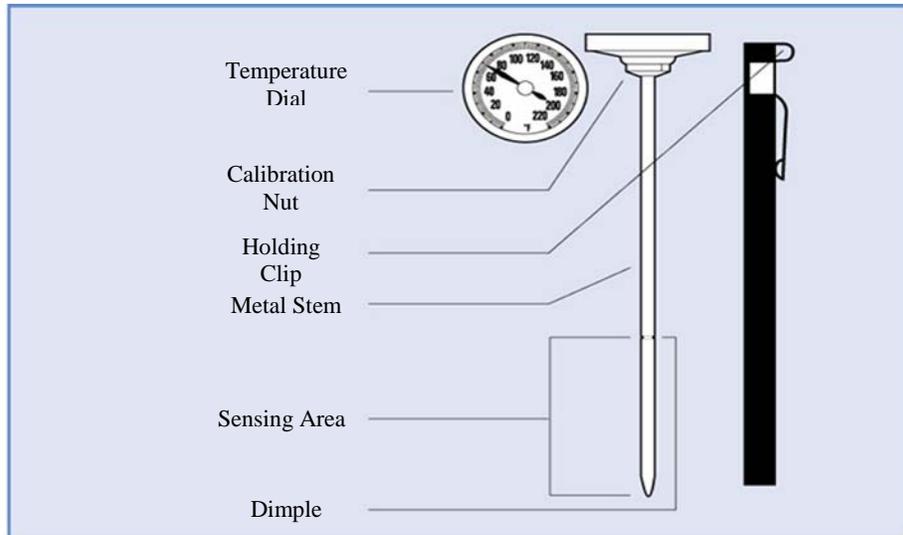
### To protect guests with food allergies:

- Be able to fully describe menu items
- If you are unsure if an item is allergen free, urge the guest to order something else
- Ensure that cookware and utensils used to prepare the guests' food are allergen free

## Thermometers

### When using thermometers:

- Use a metal stem thermometer that reads from 0°F-220°F in two degree increments
- Keep thermometers and their storage cases clean
- Calibrate them regularly to ensure accuracy
- Never use glass thermometers to monitor food temperature
- Insert the thermometer stem or probe into thickest part of product
- Wait for the thermometer reading to steady before recording the temperature of a food item
- Store a thermometer in each cooling unit to monitor its ambient temperature



## Calibrating Thermometers

### Ice-Point Method

- Fill a large container with crushed ice and water
- Submerge the thermometer stem or probe in the water for thirty seconds
- Hold the calibration nut and rotate the thermometer head until it reads 32°F (0°C)



## Destroying Organisms of Public Health Concern Cooking Temperatures

### ■ Minimum Internal Cooking Temperature:

- 135°F (57°C) for 15 seconds
  - Commercially processed, ready-to-eat food that will be hot-held for service (cheese sticks, chicken wings, etc.)
  - Fruits and vegetables that are cooked for hot holding



- 145°F (63°C) or above for 15 seconds for:
  - Raw shell eggs that are prepared for immediate service
  - Steaks, chops, fillets of fish, meat, and pork

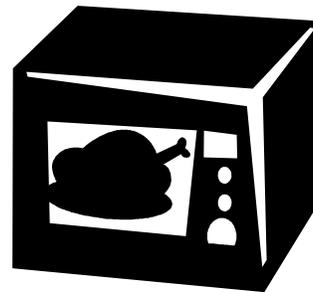
- 145°F (63°C) for 4 minutes
  - Roasts



- 155°F (68°C) for 15 seconds for
  - Injected meats
  - Comminuted fish, meat, or pork (such as hamburgers or crab cakes)
  - Raw eggs that are prepared and then hot held



- 165°F (74°C) or above for 15 seconds for
  - Poultry
  - Stuffed fish, meat, pasta, poultry, vegetables, etc.
  - Anything cooked in the microwave
  - Anything that includes leftovers that were previously cooked



### **Microwave Cooking**

Foods cooked in a microwave oven must be:

- Rotated and stirred halfway during cooking to compensate for uneven distribution of heat
- Covered to retain surface moisture
- Allowed to stand covered for 2 minutes after cooking to let the temperature even out

## Reheating for Hot Holding

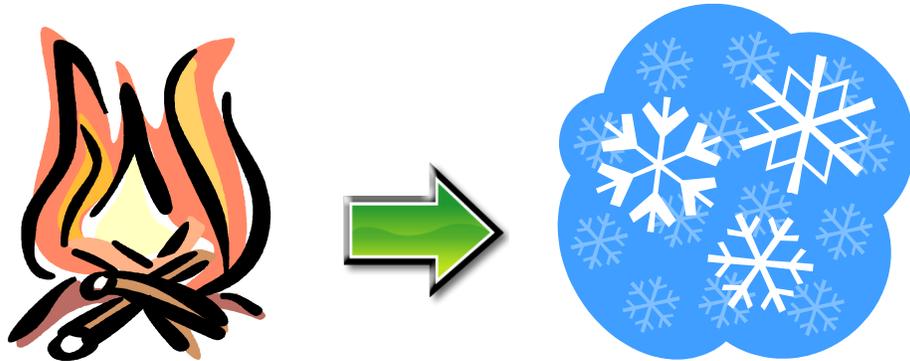
- Ready-to-eat food previously cooked and cooled must be reheated so that it reaches a minimal internal temperature of at least 74°C (165°F) for 15 seconds
- Ready-to-eat food taken from a commercially processed, hermetically sealed container must be reheated to a temperature of at least 57°C (135°F) for hot holding
- The reheating process must take no longer than two hours
- Never use hot-holding equipment to reheat the food

## Limiting Organisms of Public Health Concern

### Thawing

Potentially hazardous food must be thawed:

- Under refrigeration that maintains the food temperature at 41°F (5°C) or less
- Completely submerged under cold running water that is at 70°F (21°C) or below
- As part of a cooking process
- Thawed in a microwave oven and immediately cooked to the proper temperature

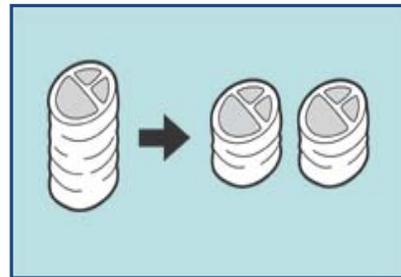
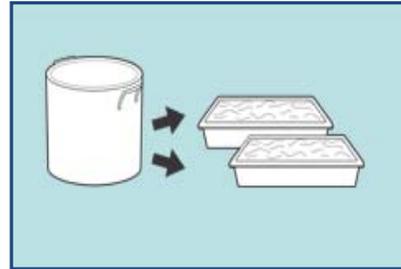
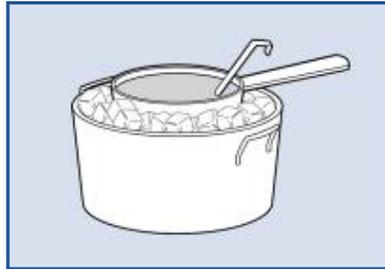


### Cooling

- Cooked potentially hazardous food must be cooled:
  - Within 2 hours from 135°F (57°C) to 70°F (21°C); **and**
  - Within 4 hours, from 70°F (21°C) to 41°F (5°C) or less

## Cooling Methods

- Cooling foods properly must be accomplished by
  - Placing the food in shallow pans
  - Separating the food into smaller or thinner portions
  - Stirring the food in a container placed in an ice water bath
  - Using containers that facilitate heat transfer
  - Stir the food with an ice paddle
  - Adding ice as an ingredient
  - Using rapid cooling equipment like a blast or tumble chiller
  
- When placed in cooling or cold holding equipment, food containers in which food is being cooled must be:
  - Loosely covered, or uncovered if protected from overhead contamination
  - Covered after they have completely cooled to 41°F (5°C)
  - Placed so they are not stacked on top of each other



## Hot and Cold Holding

### Potentially Hazardous Food (PHF) must be maintained:

- At 135°F (57°C) or above
- At 41°F (5°C) or less



Any potentially hazardous food item that is at a temperature between 41°F (5°C) and 135°F (57°C) is in the ***“Temperature Danger Zone”***

- When preparing foods, prepare them in small batches to minimize the time that potentially hazardous food spends in the temperature danger zone

### Datemarking Ready-to-Eat Food

- Refrigerated, ready-to-eat, potentially hazardous food prepared and held refrigerated for more than 24 hours must be clearly marked at the time it is prepared to indicate the date that the food must be consumed by, which is:
  - 7 calendar days or less from the day that the food is prepared, if the food is maintained at 41°F (5°C) or less
- Potentially hazardous food prepared in a food establishment and frozen immediately afterward must be clearly marked:
  - When the food is placed into the freezer, and include the length of time before freezing that the food was held refrigerated, including day of preparation:
    - 7 calendar days or less from the day of preparation, if the food is maintained at 41°F (5°C) or less
  - When the food is removed from the freezer, to show the date that the food shall be consumed by, which is:
    - 7 calendar days or less after the food is removed from the freezer, minus the time before freezing, that the food was held refrigerated at 5°C (41°F) or less

### Disposing of Outdated Ready-to-Eat Food

- Potentially hazardous foods that are not consumed within 7 calendar days after the date of preparation must be thrown away



Use **FIFO** and rotate products to ensure the oldest inventory is used first:

- **F**irst **I**n **F**irst **O**ut
- Identify the use-by or expiration date of products
- Shelve products with the earliest dates in front of those with later dates
- Use products stored in front first

### **Time as a Public Health Control**

- If time is the only factor used as the public health control for cooked ready-to-eat potentially hazardous food that is displayed or held for service and immediate consumption:



- The food must be marked with a time that it must be thrown away (This time cannot exceed 4 hours)
- Written procedures must be maintained at the food establishment outlining the establishment's "Time as a Control" procedures

### **Food Labels**

- Food packaged in a food establishment, must be labeled as specified by law
- Label information must include:
  - The common name of the food
  - If made from two or more ingredients, a list of ingredients in descending order of predominance by weight, including a declaration of artificial color or flavor and chemical preservatives, if contained in the food
  - An accurate declaration of the quantity of contents
  - The name and place of business of the manufacturer, packer, or distributor
  - Nutritional labeling when required
- Bulk food that is available for consumer self-dispensing must be prominently labeled with the following information in plain view of the consumer:
  - The manufacturer's or processor's label that was provided with the food
  - A card, sign, or other method of notification that includes the information specified in the required labeling section

## Discarding Contaminated Food

- A food that is unsafe, adulterated, or not honestly presented must be reconditioned according to an approved procedure or discarded
- Food that is not from an approved source must be discarded
- Ready-to-eat food that may have been contaminated by an employee who has been restricted or excluded must be discarded
- Food that is contaminated by food employees, consumers, or other persons through contact with their hands, bodily discharges, such as nasal or oral discharges, or other means must be discarded

## Equipment, Utensils, and Linens

### Materials for Construction and Repair

Materials that are used in the construction of utensils and food-contact surfaces of equipment must be:

- Safe
- Durable, corrosion-resistant, and nonabsorbent
- Sufficient in weight and thickness to withstand repeated warewashing
- Finished to have a smooth, easily cleanable surface
- Resistant to pitting, chipping, crazing, scratching, scoring, distortion, and decomposition



### Nonfood-contact Surfaces

- Nonfood-contact surfaces of equipment that are exposed to splash, spillage, or other food soiling or that require frequent cleaning must be:
  - Corrosion resistant, nonabsorbent, and smooth material

### Single-Service and Single Use Characteristics

Materials that are used to make single-service and single-use articles:

- Can not:
  - Impart colors, odors, or tastes to food
  - Must be safe and clean



## Design and Construction

### Equipment and Utensils

- Equipment and utensils must be designed and constructed to be durable and to retain their original qualities under normal use conditions

## Food Temperature Measuring Devices

- Food temperature measuring devices can not have sensors or stems constructed of glass

## Cleanability of Food Contact Surfaces

- Multiuse food-contact surfaces must be:
  - Smooth
  - Free of breaks, open seams, cracks, chips, inclusions, pits, and imperfections
  - Free of sharp internal angles, corners, and crevices
  - Finished to have smooth welds and joints
  - Accessible for cleaning and inspection by one of the following methods:
    - Without being disassembled
    - By disassembling without the use of tools

## Clean in Place Equipment (CIP)

- CIP equipment must be designed and constructed so that:
  - Cleaning and sanitizing solutions circulate throughout a fixed system and contact all interior food-contact surfaces
  - The system is self-draining or capable of being completely drained of cleaning and sanitizing solutions
- CIP equipment that is not designed to be disassembled for cleaning must be designed with inspection access points to make sure that all interior food-contact surfaces throughout the system are being effectively cleaned

## Numbers and Capacities

### Cooling/Heating/Holding Capacities

- There must be enough equipment for cooling, heating, cold holding, and hot holding FOOD and it must maintain the food temperatures at or below 41°F (5°C) or at or above 135°F (57°C)

## Cleaning of Equipment, Utensils, and Tableware

- Equipment food-contact surfaces and utensils must be clean to sight and touch
- The food-contact surfaces of cooking equipment and pans must be kept free of debris and soil accumulations
- Nonfood-contact surfaces of equipment must be kept free of an accumulation of dust, dirt, food residue, and other debris
- Equipment food-contact surfaces and utensils must be cleaned:



- Before each use with a different type of raw animal food such as beef, fish, lamb, pork, or poultry
  - Each time there is a change from working with raw foods to working with ready-to-eat-foods
  - Between uses with raw fruits and vegetables and with potentially hazardous food
  - At any time during the operation when contamination may have occurred
  - **If the equipment or utensil is under the same constant use, it must be cleaned and sanitized at least once every 4 hours**
- Surfaces of utensils and equipment contacting food that is not potentially hazardous must be cleaned:
    - At any time when contamination may have occurred
    - At least every 24 hours
    - Before restocking consumer self-service equipment

## Cooking and Baking Equipment

- The food-contact surfaces of cooking and baking equipment; and cavities and door seals of microwave ovens must be cleaned at least every 24 hours

## Nonfood-Contact Surfaces

- Nonfood-contact surfaces of equipment must be cleaned frequently to prevent the accumulation of soil residues

## Sanitization of Equipment and Utensils

Frequency – Before Use, After Cleaning

- Utensils and food-contact surfaces of equipment must be properly washed and then sanitized before they are used

Methods – Hot Water, Chemical

### Sanitizing

After being cleaned, equipment food-contact surfaces and utensils must be sanitized by:

- Submerging the equipment in hot water at a temp of 171°F (77°C) for at least 30 seconds
- Running the equipment through a mechanical dish machine that allows the surface temperature of the equipment to reach 160°F (71°C). (The water temperature generally has to be at 180°F (82°C) or greater to achieve this)
- Submerging the equipment in a quaternary sanitizing solution at the proper concentration and duration of time as specified by the manufacturer
- Submerging the equipment in a chlorine sanitizing solution mixed at a ratio of 50-100ppm for an exposure time of at least 10 seconds

Concentration

- Chlorine

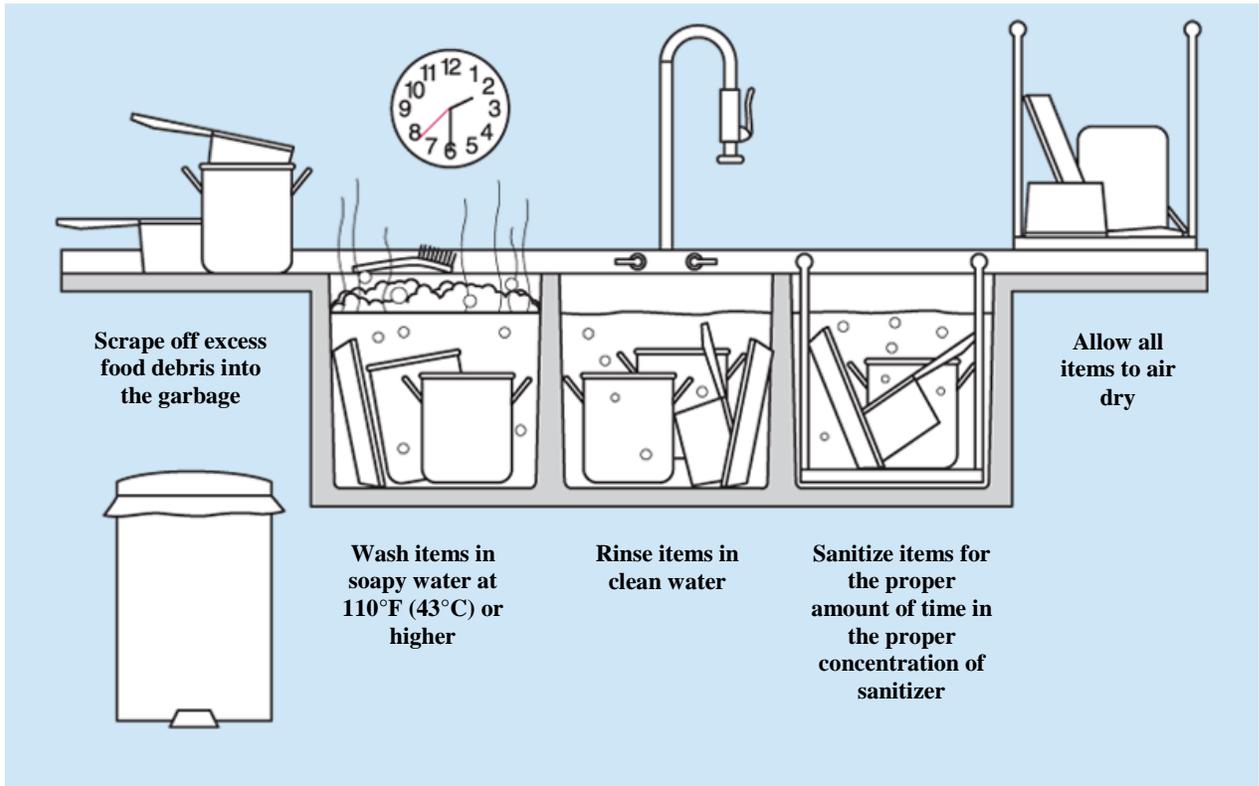
Minimum Concentration	Minimum Temperature	
	pH 10 or less °F	pH 8 or less °F
25	120	120
50	100	75
100	55	55

- Quats – **200 ppm** – (You must read the manufacturers recommendations, because for some quaternary sanitizers the concentration varies from 150-400ppm)
- Iodine - **12.5 ppm**
- Concentration must be checked frequently with a test kit
  - **Low Concentrations:**  
May fail to sanitize objects
  - **High Concentrations:**  
May be unsafe, leave an odor or bad taste, corrode metals
- Change the solution when it is dirty or when the concentration has dropped below the required level

Sanitizing Solution Testing Devices

- A test kit or other device that accurately measures the concentration of sanitizer in mg/L or parts per million (ppm)

## Washing Soiled Dishes in a Three Compartment Sink



### Warewashing, Sink Requirements

- A sink with at least 3 compartments must be provided for manually washing, rinsing, and sanitizing equipment and utensils
- Sink compartments must be large enough to accommodate the largest equipment and utensils
- Drainboards, utensil racks, or tables large enough to accommodate all soiled and cleaned items that may accumulate during hours of operation must be provided
- When washing dishes in a three compartment sink, use the five step process: **1. Scrape 2. Wash 3. Rinse 4. Sanitize 5. Air dry**

### Equipment

#### Good Repair and Proper Adjustment

- Equipment must be maintained in good condition and be adjusted properly to meet its requirement

#### Cutting Surfaces

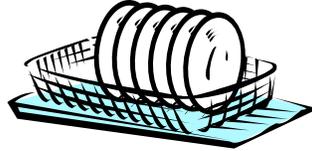
- Surfaces like cutting blocks and boards must be resurfaced if they can no longer be effectively cleaned and sanitized, or thrown away if they are not capable of being resurfaced

## Protection of Clean Items

### Wet Stacking

After equipment and utensils are cleaned and sanitized, they:

- Must be air-dried before they come in contact with food or are stored for later use
- Cannot be dried with a cloth



### Storing Single Service Items – Prohibitions



- Cleaned equipment and utensils, laundered linens, and single-service and single-use articles must be stored:
  - In a clean, dry location
  - Where they are not exposed to splash, dust, or other contamination
  - At least 15 cm (6 inches) above the floor
- When storing clean and sanitized tableware and equipment:
  - Store them at least 15 cm (6 inches) above the floor
  - Clean and sanitize drawers and shelves before the items are stored
  - Clean and sanitize the trays and carts used to carry them
  - Store glasses and cups upside down
  - Store flatware and utensils with the handles up
  - Cover equipment food contact surfaces until they are ready for use
- Single-service and single-use articles must be kept in the original protective package or stored so they cannot become contaminated
- Cleaned and sanitized equipment, utensils, laundered linens, and single-service and single-use articles cannot be stored:
  - In locker rooms
  - In toilet rooms
  - In garbage room
  - In mechanical rooms
  - Under sewer lines that are not shielded to intercept potential drips
  - Under leaking water lines including leaking automatic fire sprinkler heads or under lines on which water has condensed
  - Under open stairwells
  - On the floor
  - Under other sources of contamination

### Handling and Storing Dishes and Silverware



- Single-service and single-use items and cleaned and sanitized utensils must be handled, displayed, and dispensed so that contamination of food and lip-contact surfaces is prevented
- Knives, forks, and spoons that are not pre-wrapped must be stored so that only the handles are touched when they are removed from storage

## **Water, Plumbing, and Waste**

### Handwashing Facilities

- A handwashing sink must provide water at a temperature of at least 100°F (38°C) through a mixing valve or combination faucet
- A metering faucet must provide a flow of water for at least 20 seconds without the need to reactivate the faucet
- A handwashing sink must be present and in proper working order in any food prep area, dishwashing area, restroom, or wait station where food preparation occurs
- A handwashing facility may not be used for any purpose other than handwashing

### Toilets and Urinals

- At least 1 toilet and not fewer than the toilets required by law must be provided



### Service Sink

- At least 1 mop sink with a floor drain must be provided and conveniently located for the cleaning of mops and for the disposal of mop water and other liquid waste

### Plumbing Systems in good repair

- A plumbing system must be:
  - Repaired according to the law
  - Maintained in good repair



### Retention, Drainage, and Delivery

#### Backflow Prevention

- A direct connection cannot exist between the sewage system and a drain originating from equipment in which food, portable equipment, or utensils are placed
- A direct connection cannot exist between, a warewashing or culinary sink and the floor drain (An air gap must be present)

## Grease Trap

- If used, a grease trap must be located where it is easily accessible for cleaning

## Refuse

### Outside receptacles

- Trash cans and other receptacles for refuse and recyclables must be designed and constructed to have tight-fitting lids, doors, or covers
- Trash cans and other receptacles for refuse and recyclables such as an on-site compactor must be installed so that accumulation of debris and insect and rodent attraction and harborage are minimized
- Dumpster areas must be kept free of debris on the ground
- Dumpster areas must be maintained to be in good repair

### Receptacles

- An inside and outside storage areas for receptacles must be large enough to hold all of the garbage and/or recyclables that accumulate
- Trash cans must be placed in all locations where garbage is commonly discarded including:
  - Prep tables
  - Dishwashing area
  - Hand sinks
  - Restrooms
- A restroom used by females must be provided with a covered trash can for feminine hygiene products



## Physical Facilities

### Materials for Construction and Repair

#### Indoor Surfaces

- Materials for indoor flooring, walls, and ceiling surfaces must be:
  - Smooth, durable, easily cleanable, and nonabsorbent for areas that include:
    - Food preparation
    - Warewashing
    - Walk-in coolers/freezers
    - Restrooms
    - Bars
    - Inside mobile units

- In a temporary food establishment:
  - If graded to drain, a floor may be concrete, machine-laid asphalt, or dirt or gravel if it is covered with mats, removable platforms, duckboards, or other suitable approved materials that are effectively treated to control dust and mud; and
  - Walls and ceilings may be constructed of a material that protects the interior from the weather and windblown dust and debris

### Outdoor Surfaces

- The outdoor walking and driving areas must be surfaced with concrete, asphalt, or gravel or other materials that have been effectively treated to minimize dust, facilitate maintenance, and prevent muddy conditions
- Exterior surfaces of buildings and mobile food establishments must be of weather-resistant materials and shall comply with law

### Light Bulbs - Protective Shielding

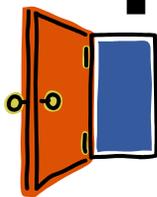
- Light bulbs must be shielded, coated, or otherwise shatter-resistant in areas where there is exposed food, clean equipment, utensils, and linens, or unwrapped single-service and single-use articles



### Restrooms Enclosed

- A restroom located in the food establishment must be completely enclosed and provided with a tight-fitting and self-closing door

### Outer Openings



- Outer openings of a food establishment must be protected against the entry of insects and rodents by:
  - Gaps along floors, walls, and ceilings must be filled
  - Windows must be closed and tight fitting
  - Doors must be solid, self-closing, and tight-fitting

### Pest Control and Removal



- The presence of insects, rodents, and other pests must be controlled to minimize their presence on the premises by:
  - Routinely inspecting incoming shipments of food and supplies
  - Routinely inspecting the premises for evidence of pests
  - Using methods, if pests are found, such as trapping devices or other approved means
  - Keep the establishment clean and sanitary



## Removing Dead or Trapped Pests

- Dead or trapped birds, insects, rodents, and other pests must be removed from control devices and the premises at a frequency that prevents their accumulation, decomposition, or the attraction of pests

## Storing Maintenance Tools

- Maintenance tools such as brooms, mops, vacuum cleaners, and similar items must be:



- Stored so they do not contaminate food, equipment, utensils, linens, and single-service and single-use articles
- Stored in an orderly manner so that the area can be effectively cleaned

## Unnecessary Items and Litter

- The premises must be free of:
  - Items that are unnecessary to the operation or maintenance of the establishment such as:
    - Equipment that is nonfunctional or no longer used
    - Litter

## Prohibiting Animals

- Live animals may be allowed in the following situations if the contamination of food; clean equipment, utensils, and linens; and unwrapped single-service and single-use articles can not result:



- Edible fish, shellfish, or crustaceans
- Patrol dogs accompanying police or security officers
- Service animals that are controlled by a disabled employee or person, if a health or safety hazard will not result from the presence or activities of the service animal

## Poisonous or Toxic Materials

### Chemicals in an Establishment

- Store chemicals so they can not contaminate food, equipment, utensils, linens, single-service, and single-use articles
- When transferring them to a new container label it with:
  - The chemical's name
  - The manufacturer's name and address
  - A description of potential hazards
- Keep MSDS for each chemical
- Only purchase those approved for use in a restaurant or foodservice establishment
- Rodent bait must be contained in a covered, tamper-resistant bait station
- Tracking powders are not approved for use in a food establishment



### Medicine Restriction and Storage

- Only those medicines that are necessary for the health of employees can be allowed in a food establishment
- Medicines that are in a food establishment for the employees' use must be properly labeled and located to prevent the contamination of food, equipment, utensils, linens, single service, and single-use articles
- Medicines belonging to employees or to children in a day care center that require refrigeration and are stored in a food refrigerator must be:
  - Stored in a package or container and kept inside a covered, leakproof container that is identified as a container for the storage of medicines
  - Located so they are not accessible to children



### First Aid Supplies Storage

- First aid supplies that are in a food establishment for the employees' use must be:



- Properly labeled
- Stored in a kit or a container that is located to prevent the contamination of food, equipment, utensils, linens, single-service, and single-use articles

## **Supervision – Person in Charge**

### **Assigning a Person in Charge**

- The owner or manager is the person in charge
- If they have to leave the establishment for any reason, they need to designate someone as the person in charge to handle any emergencies or situations that may arise in their absence
- There must be a person in charge during all hours of operation

### **Duties of a Person in Charge**

The person in charge must make sure that:

- No food is prepared in a private home or in a room used as living or sleeping quarters
- People that are not necessary to the operation of the establishment are not allowed in the food preparation, food storage, or warewashing areas
- Employees, delivery drivers, maintenance technicians, and pest control applicators entering the food preparation, food storage, and warewashing areas comply with the Food Code
- Employees properly wash hands
- Foods received are from approved sources, delivered at the required temperatures, protected from contamination, unadulterated, and accurately presented
- Employees are cooking potentially hazardous foods properly and to the required minimal internal temperature
- Employees are rapidly cooling potentially hazardous foods before they are stored
- A consumer advisory is present for consumers who order raw or partially cooked ready-to-eat foods of animal origin
- Employees are properly cleaning and sanitizing multiuse equipment and utensils before they are reused
- Consumers are notified that clean tableware is to be used when they return to self-service areas such as salad bars and buffets
- Employees are preventing cross-contamination of ready-to-eat food with bare hands by properly using the proper utensils such as deli tissue, spatulas, tongs, single-use gloves, or dispensing equipment
- Employees are properly trained in food safety

# **SICK EMPLOYEES - Exclusions and Restrictions**

## **Restrictions - Restrict the employee from working with or around food**

- **If the foodhandler has a sore throat with fever and works with a normal population, restrict the employee from working with or around food**

## **Exclusions - Exclude the employee from working in the food establishment**

- **If the foodhandler has a sore throat with fever and works with a high risk population, exclude the employee from working in the food establishment**

- **If the foodhandler has one or more of the following symptoms:**

- Vomiting
- Diarrhea
- Jaundice

- **Exclude the employee from the establishment**

- Do not allow employees with vomiting or diarrhea to return to work unless they:
  - Have been symptom-free for 24 hours
  - Have a written release from a medical practitioner
- Do not allow employees with jaundice to return to work unless they have been released by a medical practitioner

- **If the foodhandler has been diagnosed with a foodborne illness caused by:**

- *Salmonella* Typhi
- *Shigella* spp.
- Shiga toxin-producing *E. coli*
- Hepatitis A virus
- Norovirus

- **Exclude the employee from the establishment**

- **Notify the Clay County Public Health Center**
- Work with the employee's medical practitioner and/or the local regulatory agency to determine when he or she can safely return to work

## **Removal of Restrictions**

If the restricted person:

- Is free of the symptoms and no, foodborne illness occurs that may have been caused by the restricted person; and
- The restricted person provides written medical documentation from a physician licensed to practice medicine stating that the symptoms experienced result from a chronic noninfectious condition such as Crohn's disease, irritable bowel syndrome, or ulcerative colitis

## Removal of Exclusions

If the person excluded:

- Supplies written medical documentation from a physician licensed to practice medicine that specifies that the excluded person may work in an unrestricted capacity in a food establishment
- Excluded person provides written medical documentation from a physician licensed to practice medicine:
  - That specifies that the person is free of:
    - The infectious agent of concern
    - Jaundice if hepatitis A virus is the infectious agent of concern; or
    - If the person is excluded stating that the symptoms experienced result from a chronic noninfectious condition such as Crohn's disease, irritable bowel syndrome, or ulcerative colitis

### Reporting by and Employee

- Tell your manager if you have a fever, diarrhea, vomiting, or a cut or wound on any exposed portion of your body

### Reporting by the Person in Charge

- The person in charge must notify the Clay County Public Health Center if a food employee is diagnosed with an illness due to
  - ***Salmonella Typhi***
  - ***Shigella*** spp.
  - Shiga toxin-producing ***ESCHERICHIA COLI O157:H7***
  - Hepatitis A virus
  - Norovirus

### High Risk Population

Individuals with weakened or suppressed immune systems include:

- Infants and preschool-age children
- Pregnant women
- Elderly people
- People taking certain medications
- People who are seriously ill



## Access to the Establishment

- An Environmental Health Inspector from the Clay County Public Health Center will present official credentials, ask to speak with the person in charge, and will inform the person in charge of the purpose of the visit
- The person in charge must allow the inspector access to the establishment to determine if the food establishment is in compliance with the Clay County Food Code

## Violations During an Inspection

- Time Frame of Correction
  - **Critical Violation** – Correct the violation at the time of the inspection. If it is not able to be corrected at the time of the inspection, a re-inspection will be conducted in 10 days or less and a re-inspection fee will be assessed
  - **Non-Critical Violation** – May be corrected on site. If it is not able to be corrected on site, it must be corrected within 90 days

## Food Establishment Inspections

- Food establishments must be inspected at the following frequency as determined from the Priority Risk Assessment Worksheet
  - **High Priority Assessment** - at least four (4) routine inspections per year
  - **Moderate Priority Assessment** - at least three (3) routine inspections per year
  - **Low Priority Assessment** - at least two (2) routine inspections per year

## Closing an Establishment

The permit holder must immediately close the establishment and notify the Clay County Public Health Center if an imminent health hazard exists including:

- A significant lack of refrigeration
- A backup of sewage into the establishment
- An emergency, such as a fire or flood
- A significant pest infestation
- A long interruption of electrical or water service
- Misuse of poisonous or toxic materials
- Clear evidence of a foodborne illness outbreak related to the establishment
- A gross unsanitary occurrence or condition
- Any other circumstances that may endanger public health



## Reopening after a closure

- The permit holder must obtain approval from the Clay County Public Health Center before resuming operations

## Waiter/Waitress Section

- Plate/cup/utensil handling
  - Plates, cups, and utensils should never be handled by placing your fingers onto the eating or drinking surfaces

- Barehand contact



- When preparing salads, drinks, and baskets of rolls or chips, or packaging leftovers into to go containers; there should never be any barehand contact with any of the food
- When preparing a customers drink you should:
  - Never touch the drinking surface of the cup
  - Use an ice scoop with a handle
  - Return the ice scoop to a clean sanitized surface or place it in the ice where the handle does not touch the ice
  - Never touch the drinking surface of the straw

- Reserving foods



- Items that are served to a customer and not consumed may not be returned to the kitchen and reserved to another guest
  - Examples include:
    - ✓ Baskets of rolls
    - ✓ Baskets of chips
    - ✓ Loaves of bread

- The only exceptions are unopened prepackaged items such as crackers, croutons, condiments, and similar items

- Storage of money book and bar towel

- A money book or bar towel can never be stored in the waist band of a servers pants

## Dishwashing Employee Section

- Handsink and handwashing requirements



- A handsink must be present in the dishwashing area and supplied with:
  - Hot and cold running water
  - Soap
  - Paper towels or a warm air hand dryer
- Dishwashing employees must wash their hands after they handle dirty dishes and before they handle clean dishes

- Dishwashing employees must properly wash dishes by using a:
  - Dish machine
    - Dishes and utensils must be scraped or sprayed off to remove excess food debris
    - Dishes must be washed in a dish machine that sanitizes by:
      - ✓ Heat
        - The surface of the items being washed must reach at least 165°F
      - ✓ Chemical
        - The surface of the items being washed must be sanitized by a chlorine solution at a concentration of 50-100ppm
  - Three compartment sink
    - The items being washed must be cleaned and sanitized by following a five step process
      - ✓ Scrape
        - Scrape any excess food debris into the garbage
      - ✓ Wash
        - Wash the items in soapy water at a temperature of at least 110°F (43°C)
      - ✓ Rinse
        - Rinse items with clean water
      - ✓ Sanitize
        - Sanitize the items in a sanitizing solution for the proper amount of time
          - ❖ Chlorine sanitizer should be at 50-100ppm and items should be submerged for at least 10 seconds
          - ❖ Quaternary sanitizer should be at the concentration determined by the manufacture and at a concentration determined by the manufacturer
      - ✓ Air Dry
        - Allow all items to air dry before storing them properly



- Storage of clean items
  - Store cups and pans upside down on a clean and sanitized surface
  - Store utensils with their eating surfaces downward in a clean and sanitized container or otherwise protected from contamination

**Definitions:**

**Biological agents** – Bacteria, parasites, viruses, and fungi (mold) that can grow and survive in certain types of food and on surfaces of equipment and dishes.

**Clean** – To be free of visible soil, dirt, food, etc.

**Contaminate** (contamination) – To introduce bacteria, chemicals, or other harmful substances into food or onto food contact surfaces.

**Cross Contamination** – To transfer or re-introduce bacteria, chemicals, or other harmful substances into food or onto food contact surfaces.

**Dishwashing** – The process of cleaning, rinsing and sanitizing dishes and the food contact surfaces of equipment by hand or by machine, using heat or chemicals.

**Equipment** – Items used in the operation of a food service establishment such as slicers, mixers, stoves, can openers, tables, refrigerators, etc.

**FIFO (First In First Out)** – Method of rotating food items to ensure that the oldest stock items are the first items used.

**Food contact surfaces** – Surfaces of equipment and dishes that come into contact with food or the customers' mouth; these surfaces include those in which foods may drip, drain, or splash onto them.

**Foodborne illness** (food poisoning) – An illness which results when people eat food contaminated with bacteria, viruses, chemicals, physical agents, or other harmful substances.

**Non-potentially hazardous foods** – Foods in which bacteria does not easily grow.

**Potentially Hazardous Foods** – Foods that support the rapid and progressive growth of bacteria; requires time and temperature control to be safe for consumption.

**Ready to eat food** – Food that is in a form that is ready to be served to customers due to washing, cooking, or other preparation.

**Sanitize** – To reduce the amount of bacteria and viruses on an item to safe levels; to kill or prevent the growth of bacteria and viruses by using heat or chemicals.

**Temperature Danger Zone** – Temperature range in which biological agents can survive, reproduce, and grow. Temperature range is between 41°F - 135°F.



