

## Food Safety Best Practices

Food safety is critical while providing meals for children. During the summer, risk factors increase because of the warmer conditions at summer sites.

Center for Disease Control and Prevention (CDC) data tell us that children are 4.5 times more susceptible to bacterial infections from food compared to adults aged 20-49 years. On the link below, you will find research based training materials and educational worksheets developed by researchers as part of a U.S. Department of Agriculture grant.

<http://www.fightbac.org/kidsfoodsafety/young-children-child-care-training/>

## Four Core Practices



Bacteria growing on food can be tasteless, odor-less, non-visible but double every two minutes.

As a general rule, at the end of four hours, food stored at room temperature is no longer safe and a foodborne illness can strike anyone.

Highly susceptible populations, including pregnant women, young children, older adults and people with weakened immune systems are at a higher risk for developing foodborne illness,.

### **Following these tips to reduce the risk of a foodborne outbreak:**

#### ***Clean: Wash hands and surfaces often***

Bacteria can be spread throughout the kitchen and get onto hands, cutting boards, utensils, counter tops and food.

#### ***Separate: Don't cross-contaminate***

Cross-contamination is how bacteria can be spread. When handling raw meat, poultry, seafood and eggs, keep these foods and away from ready-to-eat foods. Start preparation by properly cleaning

and sanitizing all surfaces, cutting boards and utensils. Always, wash hands with warm water and soap.

**Cook: Cook to proper temperatures**

Food is safely cooked when it reaches a high enough internal temperature to kill the harmful bacteria that cause illness. Refer to the [chart](#) to learn more about proper cooking temperatures.

**Chill: Refrigerate promptly**

Refrigerate foods quickly because cold temperatures slow the growth of harmful bacteria. By ensuring the refrigerator isn't over full, cold air is able to circulate helping food safe. Keeping a constant refrigerator temperature of 40°F or below is one of the most effective ways to reduce the risk of foodborne illness. Use an appliance thermometer to be sure the temperature is consistently 40°F or below. The freezer temperature should be 0°F or below.

Click [here](#) to learn more about Fighting BAC and keep your program Food Safe during the summer.

## Cleanliness Helps Prevent Foodborne Illness

Cleanliness is a major factor in preventing foodborne illness. Even with food safety inspection and monitoring at Federal, State, and local government facilities, the contracting entities role is to make sure food is handled safely after it is purchased. Everything that touches food should be clean.

The following educational video highlights the importance of keeping your environment clean.

Listed below are steps we can take to help prevent foodborne illness by safely handling food in preparation facilities:

1. Wash hands with warm, soapy water for 20 seconds: anytime clean hands become in contact with an unclean surface.

**Examples; not limited to:**

- o before and after handling food
- o after using the bathroom
- o after changing a diaper
- o after handling pets
- o after tending to a sick person
- o after blowing your nose, coughing, or sneezing
- o after handling uncooked eggs or raw meat, poultry, or fish and their juices.

2. To keep cutting boards clean, wash them in hot, soapy water after each use; then rinse and air or pat dry with clean paper towels.

**TIP:** Cutting boards can be sanitized with a solution of 1 tablespoon of unscented, liquid chlorine bleach per gallon of water. Flood the surface with the bleach solution and allow it to stand for several minutes; then rinse and air or pat dry with clean paper towels.

3. Don't use the same platter and utensils that held the raw product to serve the cooked product. Any bacteria present in the raw meat or juices can contaminate the safely cooked product. Serve cooked products on clean plates, using clean utensils and clean hands.

4. When using a food thermometer, it is important to wash the probe after each use with hot, soapy water before reinserting it into a food.

5. Keep pets, household cleaners, and other chemicals away from food and surfaces used for food.
6. When serving food or cooking outdoors; take plenty of clean utensils. Pack clean, dry, and wet and soapy cloths for cleaning surfaces and hands.

Because bacteria are everywhere, cleanliness is a major factor in preventing foodborne illness. By keeping everything clean that comes in contact with food, consumers can be assured they are helping to do their part to **Be Food Safe**.

Click [here](#) for more information.

## Purchasing and Receiving Food Safely

School is beginning to let out for the summer, which means summer meals are ready to begin! Storing and purchasing food safely is a vital component to the overall safety of the meals served. Preventing a food borne illness begins when items are purchased or received from an approved and reputable supplier.

### Inspect before you purchase or accept:

Food items and supplies purchased from a store or received by a delivery truck should be visually inspected to ensure items are not damaged, temperatures were not abused and items are not expired. Plan for purchasing and delivery, have a plan for items that can be substituted and check items off the list. Ensure items were separated to avoid cross contamination while transported during receiving or stored in the cart while purchasing. The following are points of consideration for purchasing items for your summer program!

### Dry Goods:

- Check for rips and tears on the bag
- Ensure water spots are not present
- Check for signs of mold
- Feel for hard places in bags of sugar, salt, flour, ect; this can be a sign of water damage or exposure to excess humidity

### Canned Items:

- All cans should be properly labeled, attached, and legible
- Check for dents or swells, this can be a sign of bacterial growth
- No leaks or rust visible on the edge or rim of the can

### Cold Items:

- *Shell eggs* at 45oF (7oC) or colder; liquid eggs at 41oF (5oC) or colder.
  - o Shell eggs -- clean and uncracked and pasteurized.
- *Fresh produce* should be clean and in good condition, if produce is cut or processed, it is at 41oF or colder.
- *Dairy products* should be stored and received at 41oF or colder
  - o Obtained from an approved source
  - o Packaging clean and in good condition
  - o All products are pasteurized
- *Meat and poultry products* 41oF or colder
  - o Obtained from an approved source
  - o Stamped with USDA inspection stamp
  - o Good color and no odor with no signs of browning; color change of meat items indicates a potential time/temperature abuse and exposure to oxygen

- o Packaging clean and in good condition with no signs of air pockets; air pockets are a potential sign of bacterial contamination

#### **Frozen Items:**

- Check bag for ice clumps at the bottom or corner of the bag, this is a sign of thawing and re-freezing.
- Packaging is clean and in good condition
- Ensure ice crystals are not present on the food items, this is a sign of thawing and re-freezing

#### **Paper goods/Products:**

- Ensure all cleaning supplies are properly labeled and sealed
- No rips, tears, holes or damages to the box or product, this could air borne bacteria to contaminate the item.

#### **Resources:**

Texas A&M AgriLife Extension, Food Safety Education

<https://agriflifeextension.tamu.edu/>

Iowa State University, Food Safety Resources

<https://www.extension.iastate.edu>

USDA Food Safety and Inspection Service, Food Safety Resources

<https://www.fsis.usda.gov>

## Storing Food Safely



### **Principals of Food Storage**

Storing food safely ensures purchased items remain fresh and safe to eat. The following principals apply to dry, cold and frozen storage.

- Ensure the storage area is clean, sanitized, and free from pest or rodents
- Storage racks should be six (6) inches off the floor and away from the wall
- Ensure items are **not** stored under in/near restroom facilities
- Ensure items are away from leaking pipes or condensation
- Practice the F-I-F-O Rule: First-In-First-Out
- Store all food items and service materials away from chemicals or cleaning supplies
- Items containing allergens need to be stored separately to reduce this risk of contamination
- Only store items in containers designed for specific storage purpose; do **not** use old food containers to store household chemicals or use household chemical containers to store food items.
- Items removed from the original container need to be properly label for storage.
- Always refrigerate perishable food within 1 hour when the temperature is above 90 °F (32.2 °C).
- Check the temperature of your refrigerator and freezer with an appliance thermometer. The refrigerator should be at 40 °F (4.4 °C) or below and the freezer at 0 °F (-17.7 °C) or below.
- Cook or freeze fresh poultry, fish, ground meats, and variety meats within 2 days
- Perishable food such as meat and poultry should be wrapped securely to maintain quality and to prevent meat juices from getting onto other food.
- To maintain quality when freezing meat and poultry in its original package, wrap the package again with foil or plastic wrap that is recommended for the freezer.
- Canned foods are safe as long as they are not exposed to freezing temperatures, or temperatures above 90 °F. Discard cans that are dented, rusted, or swollen.
- Check expiration dates before purchasing or preparing items
- Freeze or use items before the “use-by” date

## Resources

USDA – FNS: [Handling Food Safely](#)

University of Nevada: [Preparing, Cooking, and Storing Food Safely](#)

# Principles of Cleaning and Sanitizing



## Principles of cleaning and sanitizing

The process of cleaning and sanitizing should occur in every food service establishment on a routine basis. Occurrence frequency can be altered based on food preparation and contamination, but should never exceed a four-hour timeframe. Niche points, cracks, and crevasses in dishes, countertops and equipment create the ideal environment for pathogenic growth if not properly cleaned and sanitized.

### Define cleaning and sanitizing:

Cleaning: the initial removal of dirt, food products, grease and surface pathogens

Sanitizing: reduction and elimination of harmful microorganism that can cause a foodborne illness

### Five steps for cleaning and sanitizing in a three compartment sink:

1. Scrape away leftover food on the dishes and utensils into a near-by trash can that is appropriately sized for the amount of food waste.
2. Clean the dishes and utensils in the first sink with soap and warm water.
3. Rinse the dishes and utensils in the second sink with clear, clean water.
4. Sanitize the dishes and utensils in a chemical solution or very hot water (at least 171°F) in the third sink.
5. Allow the dishes and utensils to air-dry.

### Training your employees:

The chart below provides the proper chemical to water ratio for the most popular cleaning solutions. As a best practice, demonstrate how to properly dilute chemical products to a safe level for food safety. Test strips will help ensure the solution is at the appropriate level. When spraying chemicals, ensure all food products have been removed, chemical particles can become airborne and settle on nearby food or preparation surfaces.

*Food safety approved bleach mixture is 2TBSP to one (1) gallon of room temperate water.*

Chemical	Concentration	Contact Time	Advantage	Disadvantage
Chlorine	50 ppm in water between 75 and 100°F	7 seconds	Effective on a wide variety of bacteria; highly effective; not affected by hard water; generally inexpensive	Corrosive, irritating to the skin, effectiveness decreases with increasing pH of solution; deteriorates during storage and when exposed to light; dissipates rapidly; loses activity in the presence of organic matter
Iodine	12.5-25 ppm in water that is at least 75°F	30 seconds	Forms brown color that indicates strength; not affected by hard water; less irritating to the skin than is chlorine; and activity not lost rapidly in the presence of organic matter.	Effectiveness decreases greatly with an increase in pH (most active at pH 3.0; very low acting at pH 7.0); should not be used in water that is at 120°F or hotter; and might discolor equipment and surfaces.
Quaternary Ammonium Compounds	U to 200 ppm in water that is at least 75°F	30 seconds	Nontoxic, odorless, colorless, noncorrosive, nonirritating; stable to heat and relatively stable in the presence of organic matter; active over a wide pH range	Slow destruction of some microorganisms; not compatible with some detergents and hard water

Chemical	Concentration	Contact Time	Advantage	Disadvantage
Chlorine	50 ppm in water between 75 and 100°F	7 seconds	Effective on a wide variety of bacteria; highly effective; not affected by hard water; generally inexpensive	Corrosive, irritating to the skin, effectiveness decreases with increasing pH of solution; deteriorates during storage and when exposed to light; dissipates rapidly; loses activity in the presence of organic matter
Iodine	12.5-25 ppm in water that is at least 75°F	30 seconds	Forms brown color that indicates strength; not affected by hard water; less irritating to the skin than is chlorine; and activity not lost rapidly in the presence of organic matter.	Effectiveness decreases greatly with an increase in pH (most active at pH 3.0; very low acting at pH 7.0); should not be used in water that is at 120°F or hotter; and might discolor equipment and surfaces.
Quaternary Ammonium Compounds	U to 200 ppm in water that is at least 75°F	30 seconds	Nontoxic, odorless, colorless, noncorrosive, nonirritating; stable to heat and relatively stable in the presence of organic matter; active over a wide pH range	Slow destruction of some microorganisms; not compatible with some detergents and hard water

**Resources:**

USDA: FSIS

<https://www.fsis.usda.gov/wps/portal/fsis/topics/regulatory-compliance/compliance-guides-index/sanitation-performance-standards/sanitation-compliance-guide>

## Prepare for an Emergency



Severe weather events can mean power outages, floods, and other problems that can affect the safety of food. Knowing what to do before and after a weather event can help you reduce your risk of illness. By following these guidelines, you can also minimize the amount of food that may be lost due to spoilage.

Especially in storm-prone areas, power outages can be a common problem. Power outages can occur at any time of the year and it may take from a few hours to several days for electricity to be restored to residential areas. Without electricity or a cold source, food stored in refrigerators and freezers can become unsafe. Bacteria in food grow rapidly at temperatures between 40 and 140 °F, and if these foods are consumed, people can become very sick.

### **Steps to follow to prepare for a possible weather emergency**

- Keep an appliance thermometer in the refrigerator and freezer. An appliance thermometer indicates the temperature in the refrigerator and freezer. In the case of a power outage, it can help determine the safety of the food.
- Make sure the freezer is at 0 °F or below and the refrigerator is at 40 °F or below.
- Freeze containers of water ahead of time for ice to help keep food cold in the freezer, refrigerator, or coolers after the power is out. Freeze gel packs for use in coolers.
- Freeze refrigerated items such as leftovers, milk and fresh meat and poultry that you may not need immediately — this helps keep them at a safe temperature longer.
- Plan ahead and know where dry ice and block ice can be purchased.
- Have coolers on hand to keep refrigerated food cold if the power will be out for more than 4 hours.
- Group food together in the freezer - this helps the food stay cold longer.
- Store food on shelves that will be safely out of the way of contaminated water in case of flooding.

### **Resources:**

USDA Food Safety: [Preparing for an Emergency](#)

## **Cleaning your Refrigerator**



### **Keeping your Refrigerator Clean**

One very important step in keeping your food safe is keeping your refrigerator clean. Wipe up spills immediately — clean surfaces thoroughly with hot, soapy water; then rinse. Once a week, make it a habit to discard perishable foods that should no longer be served or consumed. To keep the refrigerator smelling fresh and help eliminate odors, place an opened box of baking soda on a shelf. Avoid using solvent cleaning agents, abrasives, and all cleansers that may impart a chemical taste to food or ice cubes, or cause damage to the interior finish of your refrigerator. Follow the manufacturer's instructions.

The exterior may be cleaned with a soft cloth and mild liquid dishwashing detergent as well as cleansers and polishes that are made for appliance use. The front grill should be kept free of dust and lint to permit free air flow to the condenser. Several times a year the condenser coil should be cleaned with a brush or vacuum cleaner to remove dirt, lint, or other accumulations. This will ensure efficiency and top performance.

### **Removing Odors**

If food has spoiled in a refrigerator — such as during a power outage — and odors from the food remain, they can be difficult to remove. The following procedures may have to be repeated.

- Wipe inside of unit with equal parts vinegar and water. Vinegar provides acid, which destroys mildew.
- Wash inside of unit with a solution of baking soda and water. Be sure to scrub all niche points, including the gaskets, shelves, sides, and door. Allow to air out several days.

- Fill unit with rolled newspapers. Close the door and leave for several days. Remove paper and clean with vinegar and water.
- Sprinkle fresh coffee grounds or baking soda loosely in the bottom of the unit, or place them in an open container.
- Place a cotton swab soaked with vanilla inside freezer. Close door for 24 hours.
- Check for odors.
- Use a commercial product available at hardware

## Proper Hand-washing



Hand-washing is essential to food safety! Viruses and bacteria can contaminate your hands; the germs can spread to food and cause foodborne illness. Follow these tips to keep your hands clean and the germs away!

### When To Wash Your Hands

Example of time when food service employees should wash their hands include, but aren't limited

- Before putting on gloves
- Before preparing food
- After touching body parts
- After using the restroom
- After coughing or sneezing
- After touching raw meat
- After touching contaminated equipment

### How To Wash and Dry Your Hands

When washing your hands, remember these tips:

- Use clean, warm water. Warm water helps dissolve grease, food, dirt or any soils.
- Wash your hands for at least 20 seconds
- Do **not** forget to wash under the fingernails and between the fingers
- In order to prevent recontamination, use a paper towel to turn off the water
- Proper hand drying is important because it serves as another method for reducing germs. Completely dry your hands with a single-use paper towel or hand dryer.
- Wet or damp towels provide the perfect condition for bacteria to grow

**Note:** Hand sanitizer is not an acceptable alternative to hand-washing!

For more information about proper hand-washing, review the following videos:

[A Flash of Food Safety Hand-washing: Why to Wash Your Hands](#)

[A Flash of Food Safety Hand-washing: How to Wash Your Hands](#)

### Resources:

U.S. Food & Drug Administration

<https://www.fda.gov/food/guidanceregulation/retailfoodprotection/industryandregulatoryassistanceandtrainingresources/ucm113827.htm#personal>