

FOOD HANDLERS GUIDELINES **IN THE PREVENTION OF FOODBORNE ILLNESSES**

Foodborne illnesses are caused by the ingestion of contaminated foods. The widespread and multiple nature of foodborne disease outbreaks can represent costly and potentially serious illness, business interruption and, in some instances, adverse publicity. Reliance's Loss Control Services has issued this bulletin to assist food serving establishments in the development and enhancement of food-handling practices.

Methods most crucial in preventing the transmission of foodborne illnesses include TEMPERATURE CONTROLS, PERSONAL HYGIENE, WASHING AND SANITIZING, AND FOOD PROTECTION. Since agents causing foodborne illnesses can occur naturally, proper temperature controls are the only means by which many of these can be destroyed. Agents can also be introduced by substandard personal hygiene, sanitizing, and food protection practices. In order of their relative importance, methods of prevention are as follows:

TEMPERATURE CONTROLS

Temperature control deficiencies account for approximately 90 percent of all foodborne illness cases.

Thermometers are needed to be sure that refrigeration and hot holding units are working properly. The danger zone under which microbiological agents can reproduce is between 45/F and 140/F. Probe thermometers should be used consistently to check core temperatures of cooked meats and stored foods.

Thermometer ranges should be from 40/F through 170/F. A functional refrigeration thermometer should be in each unit. The following types of temperature control methods and procedures should be followed.

Cold Holding

Keep all cold food at 45/F or cooler (U.S. Food and Drug Administration is considering 41/F as a future standard). Check temperatures with a probe thermometer. Chill all foods to below 45/F before putting them on ice, which should maintain that temperature. Place containers in ice up to the level of food.

Hot Holding/Cooking

Hold hot food at 140/F or hotter. Check temperature with a core thermometer. Cook foods to a 165/F core temperature before placing in hot holding units and preheat the holding unit to 140/F before placing food inside.

Reheating

Rapidly reheat foods to 165/F or hotter before serving them again. This minimizes the reproduction of biological agents. Stir often to ensure even heating. Check temperatures with a probe thermometer. Equipment such as steam tables, crock pots, or steamers that cannot reheat foods rapidly should not be used.

Cooling

Improper cooling is the number one cause of foodborne illnesses. All foods must be cooled to below 45/F within less than four hours. The cooling of solid and liquid foods should utilize the shallow pan method, as follows:

- \$ Use shallow pan less than four inches deep.
- \$ Refrigerate uncovered while food is still hot.
- \$ Use probe thermometer to check temperature.
- \$ Stir often to ensure even and more rapid cooling.
- \$ Store on high shelf so nothing can fall into pan.

Ice and Water Method

- \$ Place a metal pan of hot food in large food sink with the drain closed.
- \$ Fill the sink with ice to the level of food in the metal pan.
- \$ Add cold water to ice.
- \$ Stir to cool food evenly.
- \$ Add more ice as original ice melts.
- \$ Check temperature with probe thermometer.
- \$ Cool to less than 45/F within four hours.
- \$ Put food in refrigerator.

Thawing

Do not thaw potentially hazardous foods (meat, dairy products, eggs) at room temperature or in warm water. Three approved methods include:

1. Thawing in refrigeration units.
2. Thawing under cold running water in a prep sink.
3. Thawing in a microwave followed by immediate cooking or serving.

Remember the danger zone for microbial contamination is temperature between 45/F and 140/F.

PERSONAL HYGIENE

Substandard personal hygiene is the second leading cause of foodborne illnesses. Hands that are not clean pass bacterial, viral, parasitic, and chemical agents to foods. Precautions are as follows:

Hand Washing

Wash hands often in approved sinks (not prep or dishwashing sinks) and use warm water and soap and always wash hands after,

- \$ Using the rest room
- \$ Smoking
- \$ Touching raw meat
- \$ Coughing or sneezing
- \$ Touching money or dirty things
- \$ Between handling dirty dishes and clean ones
- \$ Before touching food, utensils, and equipment

Hand Drying

Dry hands with an air dryer or on clean towels of paper or roller linen. Aprons, clothing or cloth hand towels should not be used for drying hands.

Cuts, Wounds and Abrasions

Hands should be checked for any infected wounds. Infected wounds are generally red and may ooze pus. If infected, do not work with food, utensils, or equipment. Non-infected cuts should be bandaged and the hand covered with a waterproof, leakproof, tight -fitting plastic glove.

Illnesses and Work

Employees should not allow individuals sick with colds, influenza, diarrhea, vomiting, sore throats, or runny noses to work. Importantly, individuals with infectious or communicable diseases should not work around food. Illness reporting requirements should be established.

Clothing and Work Habits

Hair should be kept under control during food preparations, preferably in a net. Clean clothing and regular bathing as well as clean work habits should be followed.

WASHING AND SANITIZING

Dishes and utensils need to be sanitized. Careful washing precedes sanitizing. Washing and sanitizing can be done either by hand or machine.

Manual Dishwashing

Hand washing should include the following (three sink method):

1. Scrape and/or pre-rinse food from dishes and utensils.
2. Wash with detergent and hot (120/F) water in first sink.
3. Rinse with clean hot water to remove any soap or food in the middle sink.
4. Sanitize in the third sink with a ratio of one teaspoon bleach to one gallon of clean warm water. Other EPA and Health Department approved chemical sanitizers can be used. Use proper ratios as excess concentrations can leave residue and cause illness.
5. Air dry dishes and utensils. Towel drying can spread germs.

Automatic Dishwashing

Machine washing should use the following guidelines:

1. Scrape and/or pre-rinse food from dishes and utensils.
2. Follow manufacturer's directions and utilize full utensils.
3. Hot water rinse machines should wash at 150/F and rinse at temperatures of at least 180/F.
4. Chemical spray rinses should utilize wash water at 120/F and rinse temperature no lower than 75/F in a 50 part per million bleach solution (1 tsp/gallon).
5. Air dry dishes and utensils.
6. Cracked or worn dishes should be discarded since they provide a porous media for bacterial growth.

Equipment Cleaning

All equipment that touches food that cannot fit in the dishwasher should be washed and sanitized regularly. This includes washing and sanitizing equipment before it is used on another piece of food. Equipment used constantly should be broken down, washed, and sanitized every two hours.

Equipment that is too big to fit in a sink or dishwasher should be:

1. Washed with a clean cloth and warm soapy water.
2. Rinsed with clean water.
3. Sanitized with a solution of one or two teaspoons of bleach per gallon of water.

Always rinse or sanitize any food preparation surface or equipment between using it for raw and cooked food or between different foods. One recent study suggests that wooden cutting boards are preferred to synthetic types. Recent research suggests wood has natural chemicals that destroy or control bacterial growth.

Sinks

- \$ Wash, rinse and sanitize sinks before using them to prepare food or for dishwashing.
- \$ Never wash hands in food preparation or dishwashing sinks.
- \$ Never put mops or other cleaning equipment in food preparation or dishwashing sinks.

Wiping Cloths

Wiping cloths should be kept in a clean sanitizing solution. They should be used to wipe all kitchen and dining surfaces, including cutting boards, prep counters, tables and work tables. Sanitizing solutions are one teaspoon to one gallon of water. Cloths should be rinsed before placing them in a sanitizing solution and laundered regularly.

FOOD PROTECTION

Protection

Stored foods must be protected from contamination. All foods must be stored (except foods being cooled). Food stored in rooms or walk-in units should be at least six inches above the floor. Always store raw meat, poultry, and fish in leakproof containers on the bottom shelf. If one container of food has to be stacked on the other, make sure the bottom container has a sealed cover. Never stack hot foods, as this slows and prevents even cooling.

Handling

Foods should be touched with fingers or hands as little as possible. When this is necessary, ensure that hands and fingers are clean. Use tongs, scoops, or utensils whenever possible.

Gloves

- \$ Gloves should not be a substitute for hand washing.
- \$ Gloves must be used only once and discarded.
- \$ Gloves should be used only when utensils cannot be used.
- \$ Gloves can transmit germs.
- \$ Kevlar gloves should be washed and sanitized whenever changes in food species occur.

Perishables

When preparing large quantities of food, remove only a small amount at a time from the refrigerator or hot holding unit and keep the rest of the food at desired temperatures.

Chemical Storage

All chemicals and cleaners must be stored below and away from food, preferably in their own cabinets or rooms. Chemicals and cleaners must be labeled and stored in their own containers.

Self-Service Buffet/Open Food Lines

Open displays must be covered or have sneeze guards.

Insects/Rodents

Monthly and/or as needed pest control service programs must be in place. Insect and rodents seen should be immediately reported to supervisors and the pest control service as this signals the need for more cleaning and maintenance.

Trash and Garbage

Trash and garbage should be stored away from food in covered containers.

Food Sources

All foods should come from licensed (reputable) suppliers. It should be prepared in approved locations and not be cooked at home or brought to work.

It is suggested that food serving establishments refer to local, county, or state regulations where they have been developed. Contact Reliance Loss Control Services for further information on the nature of foodborne illnesses and agents.