



Food Management

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Food-borne illness is a common problem. The Centers for Disease Control and Prevention estimates that approximately 76 million cases of food-borne illness occur each year in the USA. Although the majority of illnesses are mild, an estimated 325,000 persons are hospitalized. Food-borne illness is caused by a variety of bacteria, toxins, and viruses that do not necessarily make foods look, smell, or taste unusual.

A unique concern for homeless programs is the management of donated food. Maintaining the safety and quality of donated food is critical. Potentially hazardous foods require particular vigilance to prevent food-borne illness. These foods include meats, poultry, seafood, cooked rice, cooked beans, and dairy products such as cheese, eggs, and milk.

Food Donation

For homeless programs, food donations are a valued gift. However, care must be exercised to assure that the food does not become a health hazard for the guests of homeless programs and shelters. A few simple procedures can help prevent food-borne illness.

Evaluate the Suitability of Food Items for Donation

Excellent for donation:

- canned foods such as beef stew, sauces, vegetables, or fruit;
- fresh or frozen vegetables or fruits that are purchased within 24 hours of donation;
- rice and pasta;

- coffee and tea;
- other dry staples.

Accept with extreme caution:

- uncooked meats and poultry, even if frozen or refrigerated and stored at the appropriate holding temperature;
- fish and shellfish, even if frozen or refrigerated and stored at the appropriate holding temperature.

Never accept:

- cooked or raw meats or poultry that have not been kept frozen or refrigerated;
- cooked or raw meats or poultry containing stuffing;
- food from public gatherings such as buffets, weddings, or tasting events;
- other potentially hazardous food that has been cooked and has not been stored at appropriate holding temperatures;
- unpasteurized juices;
- milk and eggs, including products made from milk or eggs such as cheese and sauces;

*Chef Stephen Paquin (center) and his staff in the kitchen at Barbara McInnis House have taken great pride in meeting the varied dietary needs of guests with acute and chronic medical problems.
Photo by James O'Connell MD*

Preparing Food at McInnis House. Food is pureed here for a man with a fractured mandible and a wired jaw. Access to special diets for homeless persons with medical problems such as diabetes is very difficult. Photo by James O'Connell MD



- cooked beans or rice;
- food with expiration dates that have passed.

Maintain Foods at Proper Holding Temperatures

- Cold foods should always be refrigerated at 45°F (7°C) or below. Hot foods should always be kept hot (140°F/60°C or higher) until served.
- Make sure all foods are securely wrapped or stored in containers with airtight lids.
- Do not accept cans with dents or damage to the seam or without the original label attached.
- Separate raw meat, poultry, and seafood from other items to avoid cross-contamination.
- Do not accept toxic items, such as soap powders, cleaners, detergents, or abrasives without an appropriate place to store them that is separate from food.
- Ask donors to call ahead to check on specific program needs and available resources to accept the food items, such as adequate storage capacity.

Reception of Donated Food

- Clean all surfaces that you will be using when the food arrives.
- Do not accept potentially hazardous food that has not been held at proper temperatures during storage or preparation.

- Use a food thermometer to check the temperature of donated food and reject any item in the danger zone.
- Always check frozen foods for large ice crystals that can be a sign of improper handling. Ice crystals may indicate that food was partially thawed and then refrozen.
- Check the packaging of donated food.
- Consider using the FIFO method: First In, First Out. Rotating food supplies decreases spoilage and waste.
- Do not re-use disposable containers. Aluminum pans food should be recycled but not re-used.
- **WHEN IN DOUBT, THROW IT OUT!**

Food Handlers (Employees and Volunteers)

Successful shelter food programs often use the services of volunteers in addition to employees. Volunteers often make it possible to feed hundreds of people each day. Food handling and preparation for large numbers of people requires adherence to food safety principles. In addition, homeless programs serve many persons who are at particular risk of food-borne illness because of underlying health problems.

Hands

All persons involved in food preparation must thoroughly wash their hands with soap and warm water. Critical times for handwashing include:

- prior to any food preparation;
- between different kitchen procedures;
- after handling the trash or taking out the garbage;
- after using the restroom or changing a diaper.
- **WHEN IN DOUBT, WASH YOUR HANDS!**

Recommended Way to Wash Your Hands

- wet hands with warm water;
- use soap;
- rub your hands briskly together to loosen dirt and germs for about 20 seconds;
- pay special attention to finger nails and areas around rings;
- rinse thoroughly under running water;
- dry hands with a paper towel or with an air dryer;
- use paper towel to shut off the water.
- alcohol-based hand gels are not currently approved for use in food service establishments. However, there may be unique circumstances, such as temporary limited access to hand washing facilities, when the use of alcohol-based hand gels may have some benefit.
- gloves are not a substitute for good hand washing. When they are used for a procedure such as slicing meat, remove and discard the gloves and wash your hands before starting a new task.

Hair

- All personnel working with food must use a baseball cap, scarf, hair net, or other hair restraint to keep hair out of food. These coverings minimize touching one's hair.

Illness in a Food Handler

- An ill food handler (employee or volunteer) should be excused from work. This includes persons with a cough or a cold, regardless of fever. Bacteria and viruses are easily spread through droplets when coughing or sneezing.
- Food handlers with diarrhea or vomiting pose a higher risk of food-borne illness and should refrain from working. Whenever close contacts or family members of a food handler are ill with gastrointestinal illness (vomiting or diarrhea), the employee or volunteer should not work directly with food.

Such illnesses spread easily within a family, and some family members may carry and spread germs even though they are without symptoms.

- Volunteers or employees with sores, open wounds, or infected skin on the hands or face should not prepare food. They should be assigned other functions for the program that do not involve direct contact with food. Open lesions should be covered with a bandage and changed as needed. Skin infections can contaminate food with bacteria (especially *Staphylococcus*), which can result in serious food-borne illnesses.

Preparation

Equipment and Environment

- Wash equipment and surfaces often.
- Use hot soapy water to wash cutting boards, dishes, utensils, and counter tops after preparing each food item and before starting the next item.
- To sanitize washed surfaces and utensils, put 1 teaspoon of bleach in 1 quart of water and use a spray bottle if necessary. This solution should be made fresh daily.
- Cutting boards:
 - always use a clean cutting board;
 - use one cutting board for produce and a separate one for raw meat, poultry, and seafood;
 - replace worn or deeply grooved cutting boards;
 - cutting boards used for meat or poultry must be washed and sanitized before cutting other foods, such as vegetables.
- Knives used for meat or poultry should be washed and sanitized before use with vegetables or other foods.
- Use utensils for mixing and stirring. Never use ungloved fingers or hands for food preparation.

Thawing Food

- Foods should be thawed in a refrigerator
 - never defrost at room temperature!
- In a microwave, follow the directions provided by the microwave manufacturer and cook the food immediately.
- In cold water (less than 70°F/21°C), but make sure the sink or container is clean before use. Immersion in cold water allows

the middle to thaw without exposing the edges to room temperatures:

- wrap food item airtight;
- submerge food item in cold water and change the water every 30 minutes; or completely submerge food item in constantly running cold water.
- Refrigerate or cook food immediately after thawing.

Marinating

- Always marinate in the refrigerator.
- Use food-grade plastic, stainless steel, or glass containers for marinating.
- Marinades used for raw meat, poultry, or seafood should not be used in cooked foods unless boiled before application.
- Never reuse marinades for other foods.

Produce

- Wash fruits and vegetables with cool tap water.
- Do not use soap.
- Consider using a brush for thick-skinned produce.

Tasting Food

- Food should be at a safe internal temperature before tasting.
- Use a clean utensil each time food is tasted. Never put a used utensil back into the food.

Cooking

- Use a food thermometer to check the internal temperature of food items. The internal temperature is the temperature of the food determined by a food thermometer, not the temperature of the oven.
- Check the temperature in several places to make sure that the food item is evenly heated.
- Wash and sanitize thermometers after each use.
- There are several styles and types of food thermometers. Additional information on food thermometers is available at <http://www.fsis.usda.gov/oa/thermy/ktherms.htm>.
- Placement of food thermometers:
 - beef, pork, or lamb roasts - midway in the roast, avoiding the bone;
 - hamburgers, steaks, or chops - thickest

part, away from bone, fat, or gristle;

- whole poultry - thickest part of the thigh (avoiding the bone);
- stuffed poultry - the center of the stuffing should be checked after the thigh reads 180°F (82°C) (stuffing must reach 165°F (74°C));
- poultry parts - thickest area, avoiding the bone. The food thermometer may be inserted sideways if necessary;
- casseroles and other combination dishes - thickest portion of the food or the center of the dish.
- Heat all potentially hazardous hot foods to an internal temperature of at least 165°F (74°C).
- While guests are being served, maintain the internal temperature at 140°F (60°C).
- Never partially cook food (especially meat) for the purpose of completing the cooking at a later time.
- Stuffing should be placed in meat or poultry just prior to roasting.
- With frozen meat, lengthen the cooking time by 50% of that recommended for meat at room temperature. For example, if the recommended cooking time is 1 hour for a roast at room temperature, for a frozen roast the cooking time would be 1½ hours.
- Do not use recipes in which eggs remain raw or partially cooked. Pasteurized eggs should be used in place of raw eggs whenever possible.

Microwave Cooking

- Remove large bones before cooking meat. Bones prevent thorough cooking.
- Stir or rotate food half way through microwaving time for more even cooking.
- Partial cooking in a microwave may be done only if the food is to be completely cooked immediately.

Reheating Food

- Cooked, commercially vacuum-sealed, ready-to-eat foods, such as hams and roasts, are safe to reheat.
- Foods cooked ahead and cooled or leftovers should be reheated to 165°F (74°C).
- Reheat sauces, soups, and gravies to a boil.
- Slow cookers, steam tables, or chafing dishes are not recommended for reheating food.

Preparation of Baby's Milk

- When infant formulas are used, fully prepared formulas in individual bottles offer the least chance of contamination. Bottles with plastic inserts are a good alternative.
- Plastic or glass bottles can easily be cleaned with hot soapy water and then sanitized with a mild bleach and water solution.
- Contamination can happen not only when the bottle is prepared but also when open bottles of milk or cans of formula are handled by others in communal refrigerators.
- The ideal rule calls for a new bottle with each feeding. This is often impractical, and any bottle that will be used for more than one feeding should be refrigerated immediately after use.
- Discard unused formula or use the leftovers within a few hours.

Storage

- Cover food immediately after use with plastic or foil, or store in containers with tight-fitting lids. Do not over fill the containers.
- Refrigerate food immediately after use. Do not over fill the refrigerator.
- Cooked food does not need to cool before storage.
- Remove stuffing from meats prior to refrigerating. Label all foods including the preparation date.
- Leftover hot food that was not held at a temperature of 140°F (60°C) or above while being served should be discarded.
- Freeze food at 0°F (-17°C) or less. Articles to be frozen should be placed in freezer bags or wrapped in freezer paper or aluminum foil in order to avoid freezer burns. Freezer burns can destroy the taste and texture of the food.

Staples

- Store items such as uncooked pasta, rice, and flour in airtight containers and place them in cool, dry areas that are at least six inches off the floor.
- Close all boxes after use, and date and label all staples in your storage areas for easy identification by all staff.
- To avoid chemical or physical contamina-

tion, never store food near items such as soap, detergent, insect spray, abrasives, steel wool pads, or cleaners.

Dishwashing

- Dishes, pots, pans, and utensils should ideally be washed in a dishwasher with a rinse cycle set at 180°F (82°C).
- If this is not possible, soiled dishware and utensils should be washed and rinsed and then sanitized in a dilute bleach solution to prevent the growth of bacteria. A mixture of 1/4 cup of bleach (Clorox™) in one gallon of water is sufficient for this purpose.
- Allow dishes, pots, pans, and utensils to air dry. Dishtowels can spread bacteria and other germs.
- Sanitize towels with a mixture of a bleach and water (1/4 cup bleach to one gallon water) after you use them to wipe counters and cutting boards and before you use them for any other procedure. Outbreaks of food-borne illnesses can be traced to contaminated towels or cutting boards used in a facility.

Summary

Homeless shelters and programs can take many steps to reduce the risk of food-borne illness. If a cluster of illness (particularly gastrointestinal) is noted, be sure to contact the local health department. Prompt consultation with the health department is essential to evaluate the situation and institute appropriate control measures to ensure the health and well being of the guests, the staff, and the community. ■

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References

Helpful Food Safety Websites

- Food Safety and Inspection Service: www.fsis.usda.gov/
- Government Food Safety Information: www.foodsafety.gov/
- Centers for Disease Control and Prevention: www.cdc.gov/foodsafety