

PLANNING FOR VOLUNTEER FOODSERVICE

A Guide to Safe Food Handling for Volunteers



**Department of Agriculture
Food Protection Division
Food Safety & Enforcement Section**



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INTRODUCTION

Safe food handling practices are fundamental when ensuring that foods being served to the public are safe to eat. This booklet is designed to help guide volunteers in preparing and serving food safely for gatherings such as community dinners, church functions, etc.

The information contained within this booklet is intended only as a guide, and is not to be used as a substitute for regulations or codes established to govern food handling practices in a commercial setting. Information regarding provincial regulations and practices can be accessed by visiting the Nova Scotia Department of Agriculture, Food Safety and Enforcement Section website at:

<http://www.novascotia.ca/agri/programs-and-services/food-protection>

Follow the information provided within this booklet to ensure that functions held within your community are providing safe food. Food Safety Specialists of the Nova Scotia Department of Agriculture are available for assistance with any questions you may have regarding your function.

You and the Food Safety Specialists share a common goal:

**TO ENSURE THAT THE PUBLIC IS SERVED
SAFE, QUALITY FOOD**

FOODBORNE ILLNESS

WHAT IS FOODBORNE ILLNESS?

Foodborne illness is sickness caused by the ingestion of food containing microbiological, chemical or physical hazards. A foodborne outbreak occurs when two or more people experience the illness after eating the same foods. Individuals with compromised immune systems have a higher risk of falling ill. Such individuals include; pregnant women, children, the elderly and those with underlying health issues.

A person does not always get sick immediately after eating contaminated food. The “incubation period”, or time it takes a person to develop symptoms, can range from hours, to days, or even weeks.

Common symptoms of foodborne illness can include:

- ⇒ Nausea
- ⇒ Vomiting
- ⇒ Diarrhea
- ⇒ Fever
- ⇒ Stomach cramps

IN CASE OF SUSPECTED FOODBORNE ILLNESS

Follow these guidelines if a foodborne illness is suspected:

- ⇒ Cease distribution of food items that are thought to have caused illness
- ⇒ Preserve and store food items as analysis may be required
- ⇒ Contact your local Health Authority for further recommendations
- ⇒ Seek professional medical advice if warranted

AVOIDING HAZARDS

Hazards are harmful substances that when found in food can cause foodborne illness. They can be biological, chemical, or physical in nature. Because the majority of foodborne illness is due to biological hazards, identifying and preventing such hazards associated with food is key in preventing foodborne illness.

BIOLOGICAL HAZARDS

Biological hazards include bacteria, viruses, parasites, protozoa and fungi. Pathogenic microorganisms, or pathogens, are microbes that cause disease in humans. Because it is impossible to see, smell, or taste pathogens, proper food handling practices must occur.

Bacteria

Most food items that arrive in your facility are already contaminated with bacteria. Proper cooking will destroy bacteria, but freezing will

not. If improper food handling practices are used, bacteria present will grow and multiply. As a general rule, the more bacteria present, the greater the risk, however some types of pathogens require only a few organisms to cause illness.

Some bacteria produce spores that are not destroyed under normal cooking conditions or by freezing. When conditions are right the spore can become a bacterial cell which could potentially lead to illness.

Several bacteria have the ability to produce toxins that cannot be eliminated by cooking or freezing. Because of this, it is necessary to practice safe food handling techniques to prevent toxin formation.

Viruses

Viruses need a living host to grow and therefore cannot reproduce in food; however they can survive and be transferred through food.

Viruses are destroyed by cooking but not freezing.

Adequate personal hygiene, especially hand washing, is the best way to prevent the spread of viruses to food.

Parasites

Parasites are single-celled organisms that need a living host to grow. This means they cannot reproduce in food but can be present in raw fish, wild game, etc.

Proper cooking or freezing destroys parasites.

Fungi

Fungi act as spoilage microorganisms in food. In some cases, fungi may cause illness.

- ⇒ Mold: Molds cause illness; therefore it is best to throw away spoiled or moldy food.

- ⇒ Yeasts: Yeasts especially like to grow in jams, jellies, and honey. Signs of yeast spoilage may include pink discoloration, sliminess, or an alcohol smell. Any food spoiled by yeast should be thrown out.

CHEMICAL HAZARDS

Chemical hazards are toxic substances, which can cause foodborne illness if the chemical gets into the food. Examples of chemical hazards include detergents, sanitizers, pesticides, and dissolved metals. In order to limit their presence in food:

- ⇒ Keep all chemicals labeled and in their original containers

- ⇒ Store chemicals in a separate, secure area away from food and food preparation areas
- ⇒ Do not spray pesticides in food storage or preparation areas. Hire a certified pest control applicator to address any pest issues.
- ⇒ Do not use pewter, copper, or galvanized metal with acidic foods.

PHYSICAL HAZARDS

Physical hazards have the potential to cause illness or injury if ingested. Examples include glass, plastic, jewelry, bandages, and hair. Limit physical hazards by:

- ⇒ Storing and properly covering all food containers
- ⇒ Avoid wearing jewelry while handling food
- ⇒ Wear hair restraints (hair nets or hats)
- ⇒ Keep all food preparation areas free of rodents and insects
- ⇒ Know your surroundings

PLANNING FOR COMMUNITY EVENTS:

WHAT TO THINK ABOUT?

When planning a community function designate a reliable person to oversee and organize the event. This individual should use these guidelines as a tool to educate food handlers on the importance of safe

food preparation, storage, and service. The person in charge should guide the volunteers, answer any questions, and oversee the event.

There is a lot to think about when preparing food for a large group. Different problems arise when preparing food for community functions that would not necessarily occur while cooking at your home for your family. Some things to think about:

FOOD HANDLER TRAINING

Volunteer food handler training courses are available by request. Contact your local Food Safety Specialist for further information.

THE FOOD

When planning a menu for community functions you must be aware of the following types of foods:

Potentially Hazardous Foods (PHFs)

PHFs are foods that satisfy the requirements for the growth of pathogenic microorganisms. PHFs are moist, high in protein, and have a neutral or slightly acidic pH. Examples include meats, poultry, dairy products, fish, shellfish, eggs, tofu, sliced melons, sprouts, soy-protein foods, and cooked rice, beans, and pastas.

Ready-to-Eat Foods (RTEs)

RTEs are foods that are normally consumed without further processing or preparation. Examples include washed vegetables to be used in salad, prepared desserts or fruit trays. **REMEMBER to wash all fruits and vegetables thoroughly under running water.**

Food Source

Realize that foods, especially raw foods, may be contaminated before you purchase them and with increased handling, the risk of cross contamination increases. Proper and safe food handling techniques ensure hazards are removed, destroyed, or reduced to safe levels.

It is recommended that all meat, poultry, and seafood products come from an approved source.

Do not purchase any bulging, leaking, rusted or severely dented canned goods because the product may be compromised.

Check “best before” or “expiry” dates to make sure foods are not spoiled before using them to cook.

TRANSPORTATION AND SERVING

During transportation and serving of foods it is important that adequate temperatures be maintained.

When transporting foods:

- ⇒ Place cold foods in a cooler with ice packs and maintain at 4°C (40°F) or lower. There should always be a thermometer in the cooler to monitor the temperature.
- ⇒ Hot foods should be covered and placed in an insulated container for transportation to keep foods at or above 60°C (140°F).

When serving foods:

- ⇒ Use tongs to touch food; the handles of tongs or other serving utensils should not be in contact with the food
- ⇒ Do not touch the rims of glasses or the “business ends” of cutlery
- ⇒ For self-service a sneeze guard is recommended
- ⇒ Keep hot foods hot and cold foods cold
- ⇒ PHFs should not remain at room temperature for more than two hours. If it does, the food must be discarded
- ⇒ Discard leftovers; food served but not consumed should be discarded

THE VENUE

Indoor Venue

Your preparation kitchen must have adequate equipment to ensure food is handled safely through preparing and serving.

- ⇒ All food surfaces must be smooth, non-absorbent and easily cleanable
- ⇒ There must be hand wash facilities equipped with liquid soap and paper towel
- ⇒ Proper dishwashing equipment capable of wash/rinse/sanitize is required
- ⇒ Adequate refrigeration space is required to safely store food volumes

You must provide a supply of hot and cold running water under adequate pressure. The water supply must be potable (safe to drink). If you are using a well for your water you must ensure that bacteriological water testing results are satisfactory and up to date. You may be required to provide bacteriological results to the Food Safety Specialist.

Outdoor Venue

When considering an outdoor venue for your event you must contact the local Food Safety Specialist in your area for approval.

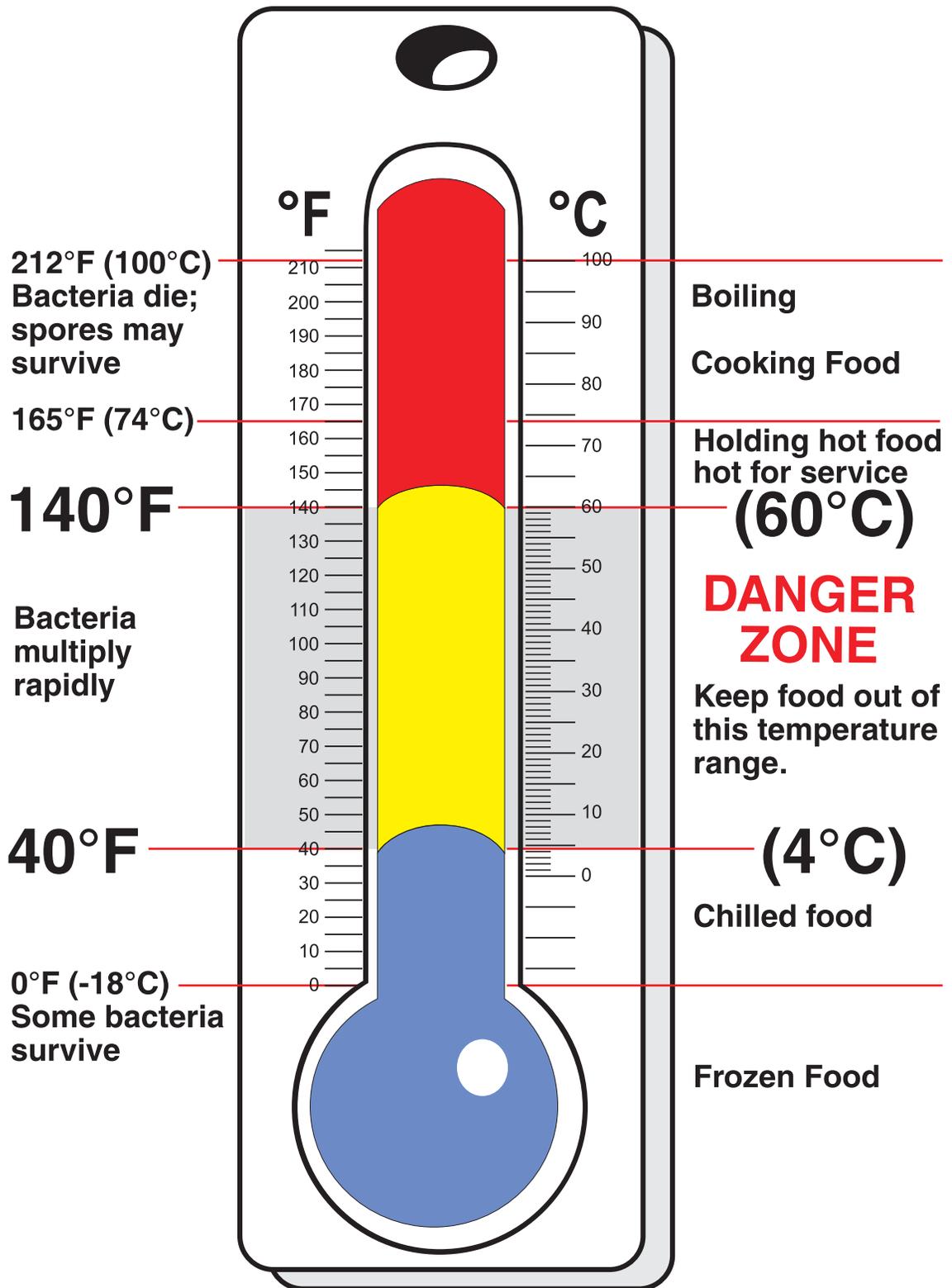
PREPARING FOR COMMUNITY EVENTS: **THE FOUR FOOD SAFETY PRINCIPLES**

Foodborne outbreaks are common therefore food safety is everyone's responsibility. Follow these food safety tips to ensure safe food handling practices at your community event.

The most important factor for safe food handling and preventing foodborne illness is keeping foods out of the **TEMPERATURE DANGER ZONE**. **"Keep hot foods hot and cold foods cold"**, this will help prevent many foodborne illnesses from occurring.

Bacteria that cause foodborne illness multiply quickly in the range between refrigeration temperature and hot holding temperature. This range is called the **TEMPERATURE DANGER ZONE** (4°C and 60°C (40°F-140°F)).

The Danger Zone



Taking the temperature of the food using a proper food thermometer is the only sure way of knowing that food is not in the **TEMPERATURE DANGER ZONE**. Check the temperature of food with either a metal stem probe or digital read type thermometer.

Thermometer Calibration

To calibrate your thermometer use either the Ice Water Method or the Boiling Water Method

Ice Water Method

- ⇒ Fill a large glass with finely crushed ice, add clean tap water to the top of the ice and stir well
- ⇒ Immerse the stem of a food thermometer in the ice/water mixture a minimum of 5 cm being careful not to touch the bottom or sides of the glass
- ⇒ Wait 30 seconds until the reading stabilizes
- ⇒ With the thermometer stem still in the ice/water mixture, hold the calibration nut and turn the head of the thermometer so the pointer reads 0°C (32°F)

Boiling Water Method

- ⇒ Using a pot, bring clean tap water to a full running boil
- ⇒ Immerse the stem of a food thermometer in the boiling water a minimum of 5 cm being careful not to touch the bottom or sides of the pot
- ⇒ Wait 30 seconds until the reading stabilizes
- ⇒ With the thermometer stem still in the boiling water, hold the calibration nut and turn the head of the thermometer so the pointer reads 100°C (212°F)

*Check thermometer instructions for information on calibration nuts and proper calibration. Even if a thermometer cannot be properly calibrated it should be checked for accuracy using either method.

KEEP IT COLD

Refrigeration

- ⇒ All potentially hazardous foods should be stored at 4°C (40°F) or lower to limit bacterial growth
- ⇒ Refrigerate or freeze perishables, prepared foods, and leftovers within two hours of shopping or preparing
- ⇒ Use only food grade containers to store food. Remember to label, date and cover food before storing it
- ⇒ Allow for adequate air circulation to keep food safe. Do not overload the refrigerator
- ⇒ Record temperatures regularly to confirm that foods are being stored properly
- ⇒ Ensure there is a working thermometer in each refrigeration unit

Frozen Food Storage

Store frozen foods at a temperature of 0°C (32°F) or lower. To maintain quality a temperature of -18°C (0°F) or lower is recommended.

Thawing Foods

Proper thawing techniques can keep bacteria from multiplying to harmful numbers and contaminating food. PHF's should be thawed quickly or in a manner that will prevent the rapid growth of

pathogenic microorganisms. Foods should be cooked immediately after thawing.

Thaw foods:

- ⇒ In the refrigerator
- ⇒ In the microwave and cook immediately afterward
- ⇒ Under cold running water or submerged in cold water that is changed every 30 minutes. Ensure that the sink or container holding the water is cleaned before use and the food product is wrapped
- ⇒ As part of the cooking process (consider this when determining cooking time)

Cooling Foods

Improper cooling is the number one food handling practice that can lead to foodborne illness. Cool from:

- ⇒ 60°C (140°F) to 21°C (70°F) within 2 hours
- ⇒ 21°C (70°F) to 4°C (40°F) or below within the next 4 hours

To cool foods properly:

- ⇒ Solid foods should be divided into smaller portions. For example, slice whole portions of meat into individual serving sizes, refrigerate at a depth not exceeding two inches
- ⇒ Place soups or stews in shallow metal pans. To cool quickly, place in an ice water bath and stir, refrigerate at a depth not exceeding two inches
- ⇒ Use an ice wand designated for cooling

KEEP IT HOT

Cooking Foods

To minimize the risk of foodborne illness “Cook to Serve” is the recommended technique. The only way to ensure pathogenic microorganisms have been killed during the cooking process is to measure the internal temperature of the food with a thermometer. To measure food temperatures properly:

- ⇒ Insert a thermometer into the thickest part of the food item to make sure that it is hot enough. Check at other points throughout the food product.
- ⇒ Wash the thermometer after each use with hot, soapy water, and sanitize.

Reheating Foods

Reheating foods involves bringing food up to a high enough temperature to kill any microorganisms that may be present. Foods that have been cooked in advance and cooled should be reheated to an internal temperature of 74°C (165°F) within 2 hours before serving. The temperature should be verified through the use of a thermometer. Reheat sauces, soups, and gravies to a boil.

When handling foods, consider the amount of time it has spent in the danger zone. Time/Temperature control is the most effective method for reducing the growth of microorganisms. Never keep PHFs in the danger zone for over 2 hours. If foods are left in the danger zone for less than 2 hours, the food can be safely refrigerated or reheated and used immediately.

When using a microwave to reheat:

- ⇒ Only use microwave safe containers
- ⇒ Stir contents regularly to ensure the entire product reaches proper internal temperature of 74°C (165°F)
- ⇒ Use a thermometer to verify reheating temperatures

Hot Holding

- ⇒ Hold hot foods at 60°C (140°F) or higher at all times
- ⇒ Hot holding equipment such as steam tables, chafing dishes and warming trays are only intended to maintain foods above 60°C (140°F). Cold foods cannot be reheated in hot hold equipment
- ⇒ Hot holding for extended periods of time may reduce the quality of the food product
- ⇒ Check food temperatures regularly to ensure adequate hot holding temperatures

Recommended Minimum Internal Cooking Temperatures

Pork, Veal, Lamb:	70°C (158°F)
Whole Poultry:	85°C (185°F)
Poultry Pieces:	77°C (170°F)
Ground Poultry:	74°C (165°F)
Poultry Stuffing:	74°C (165°F)
Beef steaks/roasts:	63°C (145°F) for medium rare 71°C (160°F) for medium 77°C (170°F) for well done
Ground Meat:	70°C (158°F)
Fish:	70°C (158°F)
Eggs:	63°C (145°F)
Egg Dishes:	74°C (165°F)
Reheating all foods:	74°C (165°F) within 2 hours

KEEP IT SEPARATE

Preventing Cross Contamination

Cross contamination occurs when pathogenic microorganisms are transferred from one surface to another, possibly contaminating an otherwise safe surface or food product. Use the following food safety tips to prevent cross contamination:

- ⇒ Raw and cooked or ready-to-eat foods should be separated from each other to limit cross contamination
- ⇒ Ready-to-eat foods should be stored above any raw meat, poultry, or seafood in the refrigerator
- ⇒ Use different, designated cutting boards for fresh produce, raw meat, poultry, and seafood
- ⇒ Work surfaces should be smooth, non-absorbent and easily cleanable to minimize contamination. Do not use worn cutting boards
- ⇒ Use a clean plate for cooked meats, poultry and seafood. Do not reuse a plate that has had raw food on it unless it has been properly cleaned and sanitized
- ⇒ Separate tasks to avoid contamination

KEEP IT CLEAN

Personal Hygiene

Personal hygiene is of utmost importance when it comes to preventing foodborne illness. To practice good personal hygiene:

- ⇒ Do not work or handle food when you are sick
- ⇒ If you have a cut, bandage it and wear gloves
- ⇒ Wear a hairnet or hat to prevent hair from getting into food
- ⇒ Limit yourself from wearing jewelry or anything that could fall into the food

- ⇒ Wear clean clothes. Do not use your apron as a cleaning towel
- ⇒ Store all personal belongings in a designated location away from food preparation areas

Wash your hands:

- ⇒ Before preparing food
- ⇒ After using the restroom
- ⇒ After eating or smoking
- ⇒ After coughing or blowing nose
- ⇒ After handling garbage, cleaning, or clearing tables
- ⇒ Before beginning each new task
- ⇒ After any chance of potential contamination

Cleaning and Sanitizing Surfaces

- ⇒ Wash all surfaces and equipment between uses with hot, soapy water. Rinse well and then sanitize with a chlorine solution (5ml or ½ teaspoon of bleach in 1 liter of water) and let air-dry
- ⇒ Use paper towels or clean cloths to wipe up kitchen surfaces or spills
- ⇒ Remember to wash/rinse/sanitize all dishware. Dishware and cutlery should remain in the sanitizing solution for two minutes

FIGHT BAC!

CLEAN
Wash hands
and surfaces
often.



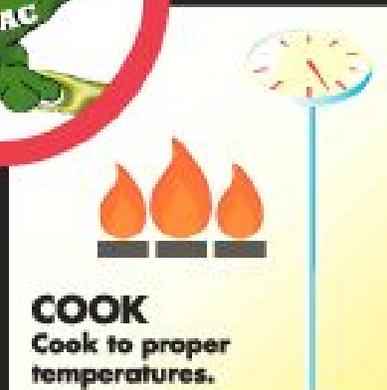
SEPARATE
Don't cross-contaminate.



CHILL
Refrigerate promptly.



COOK
Cook to proper
temperatures.



Keep Food Safe From Bacteria™

CONTACT INFORMATION

To contact your local Food Safety Specialist, please visit our website at:

<http://novascotia.ca/agri/contactus/staffdir/>

Additional food safety tips and various facts sheets can also be found on our website at:

<http://novascotia.ca/agri/programs-and-services/food-protection/factsheets-publications>

