

Handle Food Safely

Reduce the Risk of Foodborne Illnesses

This fact sheet is for informational purposes only. It is not intended to take the place of medical advice, diagnosis or treatment. Always talk to a health care professional about any health concerns you have, and before you make any changes to your diet, lifestyle or treatment.

Clean, Separate, Cook, Chill

Your kitchen is a place to create delicious and nutritious meals that are shared with friends, families and loved ones. Did you know that food can also be a way of sharing unwanted things like pathogens? Pathogens are disease-causing agents. They include bacteria (germs), viruses, parasites and toxins (poisons) produced by some bacteria or chemicals that may get into food. Although not traditionally considered a foodborne illness, allergens in certain foods (like peanuts) may also cause mild to severe reactions in some people.

Some pathogens, like bacteria and viruses, can multiply to millions in a few hours at the right temperature. You cannot see, smell or taste bacteria or other germs that can cause foodborne illness. Food contaminated with pathogens may not look or smell spoiled.

Thousands of people in Ontario suffer from foodborne illness (also called food poisoning) each year. Foodborne illness may cause a variety of symptoms, including:

- nausea
- vomiting
- diarrhea
- fever

- stomach cramps
- stomach pain

You can start feeling sick anywhere from hours to weeks after eating contaminated food. People most often get sick within a couple of days after eating contaminated food.

Sometimes there can be long-term complications and even death.

Some people, including those with weakened immune systems, are most likely to become sick. They include:

- seniors
- infants and young children
- pregnant women
- people with weakened immune systems

If you have symptoms of foodborne illness and you think you have a foodborne illness:

- do not go to work in a food premise (e.g., restaurant, cafeteria), daycare centre or health care facility until your symptoms have subsided
- visit your doctor, and
- notify your local public health unit right away.

Reduce the risk of foodborne illness by following these four steps :

1. Clean
2. Separate
3. Cook
4. Chill

4 Steps to Handling Food Safely

STEP 1. Clean

Clean your hands, surfaces and equipment. Do it often and do it well! Bacteria can get onto hands, cutting boards, knives, dishcloths, countertops and the food itself.

Handwashing tips

1. Get your hands wet with warm running water.
2. Lather your hands with soap for 15 to 20 seconds.
3. Rinse hands thoroughly and pat dry with a paper towel.
4. Use the paper towel to turn the tap off.

When should you wash your hands?

Wash your hands before preparing, handling, serving or eating food.

Wash your hands after:

- using the toilet
- changing diapers
- assisting others with the toilet
- contact with animals and their feces
- sneezing, coughing or blowing your nose
- touching your face, mouth or hair
- handling raw meat or other uncooked foods, or the surfaces they have been on (e.g., cutting boards, countertops)
- handling dirty utensils or dishes
- handling money
- smoking
- touching pets
- cleaning

- handling garbage

Equipment cleaning tips:

Clean kitchen equipment and dishes with hot water and dish detergent, rinse and then sanitize. To sanitize dishes and cutting boards, do the following:

- Add 2.5mL (1/2 teaspoon) of household bleach to every 1 litre (4 cups) of warm water you put in a clean sink.
- Soak dishes and cutting boards for at least 45 seconds.
- Let them air dry completely before use.

To sanitize kitchen counters, tables, taps, sinks and appliances (including fridge door handles), follow these steps:

1. Mix 5 mL (1 teaspoon) of household bleach per 750 mL (3 cups) of water.
2. Put the mixture in a clean, labeled spray bottle.
3. Squirt the mixture on countertops and other surfaces.
4. Wipe with a clean cloth or paper towel.
5. Make a fresh solution often.

An alternative sanitizer can be used, providing it is non-toxic and gives the same result as the diluted household bleach solution.

To clean dishcloths, aprons and towels, run them through the washing machine often.

STEP 2. Separate

Pathogens can be transmitted from contaminated foods to other foods or surfaces in the kitchen. For example, if you cut raw meat on a cutting board and then cut vegetables or other ready-to-eat food items on the same board without washing and sanitizing the board in between, you can transfer the disease-causing bacteria from the raw meat to vegetables and other ready-to-eat food. This is called cross contamination. It occurs when bacteria spread from one food item to another. **Keep raw and ready-to-eat foods separate to prevent cross contamination!**

Common sources of cross contamination are:

- cutting boards, countertops, plates and other food surfaces
- slicers, mixers and grinders
- serving utensils, knives and tongs
- hands
- insects
- food probe thermometers (these are used to test the inside temperature of food)
- juices from raw meats dripping onto cooked or ready-to-eat foods

Separation tips:

- Store raw meat, poultry and seafood on the bottom shelf of the fridge.
- Use separate cutting boards (e.g., always the same one for raw meat and a different board for fruits and vegetables).
- Wash, rinse and sanitize cutting boards, utensils and food probe thermometers after each use and before re-using.
- Never put cooked food on a plate, cutting board or surface used for raw meat, poultry, seafood or eggs, without having the surfaces cleaned and sanitized first.
- Marinate foods in the refrigerator and do not use the same marinade for basting.

STEP 3. Cook

Cook food to a high enough temperature and keep it out of the danger zone! The danger zone is the temperature range between 4°C (40°F) and 60°C (140°F), where bacteria can grow rapidly.

- To properly cook meat, poultry, fish or eggs, heat them to a high enough temperature for a long enough time to prevent harmful bacteria from multiplying (see temperature chart).
- After cooking, keep hot food at 60°C (140°F) or hotter until it is served.
- Serve hot food while hot, or put it in the fridge or freezer as soon as possible once cooled (within two hours of preparation).

Cooking tips:

- Use uncontaminated food and water from a safe and reliable source.
- Use a food probe thermometer to measure the inside temperature of cooked foods (e.g., meat, poultry, fish) to check that they are cooked to a high enough temperature.
- Do not eat hamburgers rare. Always cook hamburgers and other ground meat to the correct inside temperature.
- Cook fish to the correct inside temperature until it flakes easily with a fork.
- Use a microwave oven properly by first covering the food, then stirring and rotating for even cooking. This will help to avoid cold spots in the food.
- Bring sauces, soups and gravy to a full boil every time you re-heat them.
- Heat leftovers thoroughly to 74°C (165°F).

Temperature rules for safe cooking

Cook until the inside temperature of the food reaches the temperatures shown below and then continue cooking for at least 15 seconds. Use a thermometer to ensure the temperature desired is met. Clean and sanitize the thermometer after each use.

Whole poultry (e.g., chicken, turkey, duck)	82°C (180°F)
Stuffing in poultry	74°C (165°F)
Cut or ground poultry Cut poultry (e.g., breast, thighs, wings) Ground poultry	74°C (165°F)
Food mixtures Food mixtures (e.g., soups, stews, casseroles, stock, gravy) containing poultry, eggs, meat or fish	74°C (165°F)
Meat Beef, lamb, veal or goat (roasts and steaks – medium done) Pork or fresh cured ham Ground meat other than poultry (e.g., beef, pork)	71°C (160°F)
Fish	70°C (158°F)

STEP 4. Chill

Keep cold foods cold! This will reduce the risk of foodborne illness because cold temperatures slow down the growth of bacteria.

- Keep food at 4°C (40°F) or colder in the refrigerator
- Keep food at -18°C (0°F) or colder in the freezer

Refrigerator tips:

- Refrigerate meat, poultry, fish, eggs and dairy products within two hours of purchase or preparation.
- Store eggs in the main body of the refrigerator, rather than the fridge door.
- Transfer hot food to small, shallow containers before refrigeration. This helps food cool quickly in the fridge.
- Do not over-pack the fridge. Cool air must circulate to keep food safe.
- Use thermometers in refrigerators and coolers to check that they stay cold enough.

Defrosting tips:

Here are some safe and effective ways to defrost your food:

- Defrost food in the fridge. Place the food on a lower shelf in a container and allow 10 hours per kilogram to thaw.
- Defrost food under cold running water.
- Defrost food in the microwave. Cook it immediately after thawing.

Never defrost food on the kitchen counter. The outer layers of food will defrost first, before the inside thaws, allowing the growth of bacteria on the outer layer of the food.

General Food Safety Tips:

- Do not smoke while preparing food.
- Do not drink raw/unpasteurized milk and milk products.
- When baking, resist temptation and do not lick the spoon clean of dough, batter or frosting that contains raw egg. Raw egg may contain bacteria such as Salmonella. Even though kids love to lick the spoon, they're the ones most likely to get sick
- Do not handle food when you are sick – especially if you have been vomiting or have diarrhea.
- Keep food covered at all times unless it is being prepared or served.
- For transport or storage, keep food tightly covered in clean food containers or single-use food bags, wraps or foil.
- If you are transporting hot food from one location to another, put the covered food in an insulated thermal container or wrap in foil and cover with heavy towels. Use a thermometer to ensure that the food stays at 60°C (140°F) or hotter.
- If you are transporting cold or cooling food from one location to another, put the covered food in a cooler with ice or frozen gel packs. Use a thermometer to check that the food stays at 4°C (40°F) or colder.