

Four Components of Food Safety

Clean, Separate, Cook and Chill

Food Skills
for Families



BC Centre for Disease Control
Provincial Health Services Authority

1. **Clean:** wash and sanitize often

- Wash your hands with soap and warm water for at **least 20 seconds**.
- Keep your cooking space clear, clean & sanitized.
- Use clean kitchen towels.
- Wash vegetables and fruits before preparing.

2. **Separate:** to prevent cross-contamination

- Keep raw meat, poultry, seafood and their juices from touching ready-to-eat foods; separate them in your grocery cart, when storing in your refrigerator and when preparing food at home.
- Use separate tools, cutting boards and utensils for raw foods, or, clean and sanitize single set tools between use.
- Taste test with a clean utensil.

Cleaning vs. Sanitizing

- **Cleaning:** physical removal of visible dirt.
- **Sanitizing:** removal of invisible bacteria.



3. **Cook:** food to safe temperature

- Use an internal probe food thermometer and insert into the centre of the food to check the temperature has been reached: you can't tell if food is cooked safely by looking at it.
- Cooking temperatures vary depending on the food, in general, foods are considered fully cooked when the internal temperature reaches 74°C or higher.
- Keep foods out of the danger zone (4°-60°C) as this is when harmful bacteria can grow in food; stay below 4°C and above 60°C.



Tip

Reheat foods to an internal temperature of 74°C or higher.

4. **Chill:** refrigerate promptly

- Cool large pots of soups, sauces and other foods faster by:
 - Placing the pot into a sink or basin of cold water.
 - Divide food into shallow containers.
 - Stirring with an ice wand.
- Keep the fridge at 4°C (40°F) or below. Use a fridge thermometer and check regularly.
- Do not put hot food directly into the fridge, it can raise the overall temperature of the fridge.
- Put leftover foods in the fridge to chill within 6 hours.



Takeaways

Clean

- Wash & sanitize often, especially when switching between handling raw vs. ready-to-eat foods
- Use clean kitchen towels & aprons.

Separate

- Separate raw meats and its juices from ready-to-eat foods.
- Use a clean utensil each time you taste test.
- Use different cutting boards for raw vs. ready-to-eat foods.

Cook

- Use a probe thermometer.
- Cook meat to an internal temperature of 74°C or higher.
- For a full list of recommended temperatures, refer to Health Canada's Safety in Numbers.

Chill

- Refrigerate leftovers within 2 hrs.
- Keep fridge at 4°C or below.

Food Cooling & Storage

Cooling and storing foods promptly, and correctly, can help prevent foodborne illness. Here are some tips.

Refrigerate Foods Promptly

- Refrigerate or freeze meat, poultry, eggs, fish, shellfish, ready-to-eat foods, and leftovers **within 2 hours** of being left out.
- Divide large amounts of leftovers into shallow containers for quicker cooling.
- Use refrigerated leftovers within 3 to 4 days; labelling with dates may be helpful.



Tip

During picnics or camping, refrigerate, or store foods in a cooler, within 1 hour if the temperature outdoors is above 32°C (90°F).

Storage Tips for Protein Foods

- Use up raw poultry, fish, or ground meats within 2 days.
- Use up raw beef, veal, lamb, or pork within 3 to 5 days.
- Eat lunch meats within 3 to 5 days of opening.
- Use refrigerated leftovers within 3 to 4 days.

Other foods may have a longer storage time in the refrigerator

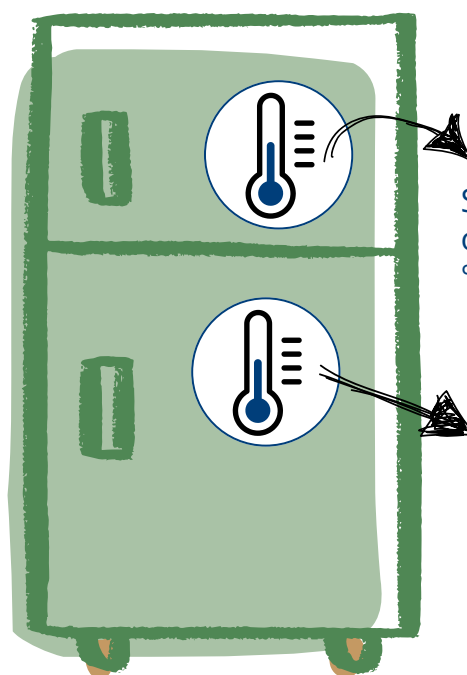
- Eggs can be stored for 3 to 5 weeks.
- Processed and brick cheese can be stored for 3 to 4 weeks.

Store at Safe Temperatures

Don't overfill your refrigerator (or cooler); cool air needs to circulate to keep food at safe temperatures.

Place a thermometer in your refrigerator and freezer to regularly check temperatures.

Don't forget to use a thermometer in your cooler too!



Set your freezer at, or below -18 °C (0 °F).

Set your refrigerator at, or below 4°C (40°F)



Power Outage Tips

During a power outage

- If you experience a power outage, try not to open your fridge or freezer until the power comes back on.
- A full fridge can hold their temperature for about 4 hours.
- A full freezer can hold its temperature about 48 hours.

Food contaminated with bacteria does not always smell bad or appear spoiled.

After a power outage

- Throw away all food that has an unusual colour or odour.
- Throw away all food that has been above 4°C for more than 2 hours.
- Foods in the freezer can be re-frozen if they are:
 - At 4°C or less OR
 - Still containing ice crystals



Preventing Cross Contamination

Harmful bacteria can spread from one food to another directly or indirectly. This can lead to foodborne illnesses if steps like handwashing, cleaning and sanitizing food contact surfaces are not taken.

Prevent cross-contamination and help maintain food safety with these 4 practices:

1. Clean

- Wash hands with soap and warm water before handling food and after using the toilet or touching other items (e.g., petting a dog, using your phone).
- Use clean, drinkable water to wash foods or utensils.
- Clean and sanitize all surfaces, countertops, and utensils before and after preparing food.
- Use clean cloths, or paper towels, to dry and wipe surfaces. Use different cloths for different jobs.



Direct contamination:

Occurs when one food is directly contaminated through contact with another. **Example:** Juices from meat products dripping onto vegetables in refrigerator.



Indirect contamination:

Occurs when an object becomes contaminated and then passes the contaminates from one food to another. **Example:** Food handler does not wash hands when changing tasks.

2. Separate

- Separate foods like raw meat, poultry, seafood, and eggs from other foods in your grocery shopping cart, grocery bags, and refrigerator.
- Use separate tools, cutting boards and utensils for raw meats, poultry, and seafood. Keep these items away from ready-to-eat foods such as fruits and vegetables.



3. Store Foods Properly

- Keep raw meats, poultry, and seafood in containers or sealed bags to prevent juices from dripping onto other foods.
- Defrost meats in a tray to catch liquids that drain off.
- Store raw meats on the bottom shelf of the fridge to prevent drips onto other foods.
- Marinate foods in the refrigerator, not on the counter. Don't reuse marinades used on raw foods.

4. Serve Safely

- Use clean plates and utensils for cooked food; do not reuse items that have touched raw meats or seafood without cleaning and sanitizing.



Tip

Keep hot foods hot & cold foods cold.

Bacteria can multiply quickly when food is left in the danger zone (between 4°C and below 60°C).





Cleaning Produce

Because a lot of fresh produce is not cooked before being eaten, it is important to handle it safely to prevent it from being contaminated with harmful microorganisms that can make you, and others sick.

Prepare

- Wash your hands with warm water and soap for at least 20 seconds.
- Clean and sanitize countertops, cutting boards and utensils before and after preparing food.
- Cut away very bruised or damaged areas on vegetables and fruits as harmful bacteria can thrive in these areas. Be sure to clean your knife with hot water and soap before using it again.



Tip

Sanitizing solution:

Mix 1tsp bleach + 1000ml water.

For solutions in different quantities, use Food Safe's Chlorine Dilution Calculator.



Wash

Wash vegetables and fruits thoroughly under clean, cool water.

- Washing helps remove bacteria that may be present on the surface of vegetables and fruits. Wash even if you plan on peeling and cutting the produce, especially with melons and cantaloupes.
- Use a clean produce brush to scrub items that have firm surfaces like oranges, melons, potatoes, carrots, etc. It is not necessary to use a special produce wash to clean fresh vegetables and fruits.
- Once cut, eat produce right away, otherwise refrigerate or freeze it.



Prevent Contamination

- Clean and sanitize cutting boards when moving from preparing produce, or ready-to-eat foods, to raw meats. If available, use separate cutting boards for produce and raw meat, poultry, fish and seafood.
- Place prepared vegetables and fruits in a separate clean container and away from raw meat, poultry, fish and seafood.
- Change kitchen cloths and towels daily or use paper towels to wipe kitchen surfaces to avoid the risk of cross-contamination and the spread of bacteria. Avoid using sponges, as they are harder to keep bacteria-free.



Best Before Dates & Expiry Dates

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Understanding “Best Before” and “Expiry” dates can help inform your decisions about food safety, food quality, and reducing food waste.

Best Before Dates

Foods with these labels:

Milk, meats, canned foods, cereals, frozen foods, salad dressings and snacks.

What They Mean:

The best before date does not mean the food is safe or unsafe to eat. It means how long an unopened product will keep its quality (i.e., freshness, taste, nutritional value) if stored correctly.



Tip

When in doubt, throw it out!



Expiry Dates

Foods with these labels:

infant formula, meal replacements or nutritional supplements.

What They Mean:

The expiry date does not mean the food is safe or unsafe to eat. It means the last day that the nutritional value is guaranteed. Consuming foods past the expiry date may mean the nutritional value of product is reduced.

