



# PREVENTING BACTERIAL FOODBORNE ILLNESS

## CoP Meeting – IPAC HUB

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# WHAT IS FOODBORNE ILLNESS?

- When a person gets sick from eating food that is contaminated with harmful germs.
- These pathogens can be bacteria, viruses, parasites, or fungi.
- More than 4 million Canadians get food poisoning on annual basis.
- Health Canada sets federal policies and standards for food safety.
- The Canadian Food Inspection Agency (CFIA) enforces the standards.
- Following simple steps (clean, separate, cook, and chill) can prevent most food-related illness.



## FOOD-RELATED ILLNESSES, HOSPITALIZATIONS & DEATHS IN CANADA



**1 IN 8 PEOPLE**



(4 MILLION CANADIANS)  
GET SICK EACH YEAR FROM  
**CONTAMINATED FOOD.**

**OVER 11,500  
HOSPITALIZATIONS  
AND 240 DEATHS  
OCCUR EACH YEAR  
DUE TO FOOD-RELATED ILLNESSES.**

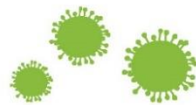
\* Includes both estimates for 30 foodborne pathogens and unknown causes of acute gastrointestinal illness.

## THE COMMON CULPRITS IN CANADA ARE:

\*Estimated number each year

### NOROVIRUS

The leading cause of  
food-borne illnesses  
and hospitalizations.



Illnesses: **1 million**  
Hospitalizations: **1,180**  
Deaths: **21**

### LISTERIA

The leading cause  
of deaths related to  
food-borne illness  
each year.



Illnesses: **178**  
Hospitalizations: **150**  
Deaths: **35**

### SALMONELLA

Contributes to 1 in  
4 hospitalizations  
of all food-borne  
illnesses.



Illnesses: **88,000**  
Hospitalizations: **925**  
Deaths: **17**

### E. COLI O157

One of the top  
food-borne bacteria  
causing severe illness.



Illnesses: **12,800**  
Hospitalizations: **245**  
Deaths: **8**

### CAMPYLOBACTER

The third leading  
cause of food-borne  
illnesses and  
hospitalizations.



Illnesses: **145,000**  
Hospitalizations: **565**  
Deaths: **5**

## FOOD SAFETY TIPS

### CLEAN

your hands, kitchen surfaces and  
utensils with warm, soapy water.



### COOK

food to safe internal temperatures –  
use a digital food thermometer.



### SEPARATE

raw foods, like meat and eggs, from cooked foods,  
fruit and veggies to avoid cross-contamination.

### CHILL

food and leftovers within 2 hours.



Public Health  
Agency of Canada

Agence de la santé  
publique du Canada

For more information, visit [Canada.ca/FoodSafety](https://Canada.ca/FoodSafety)

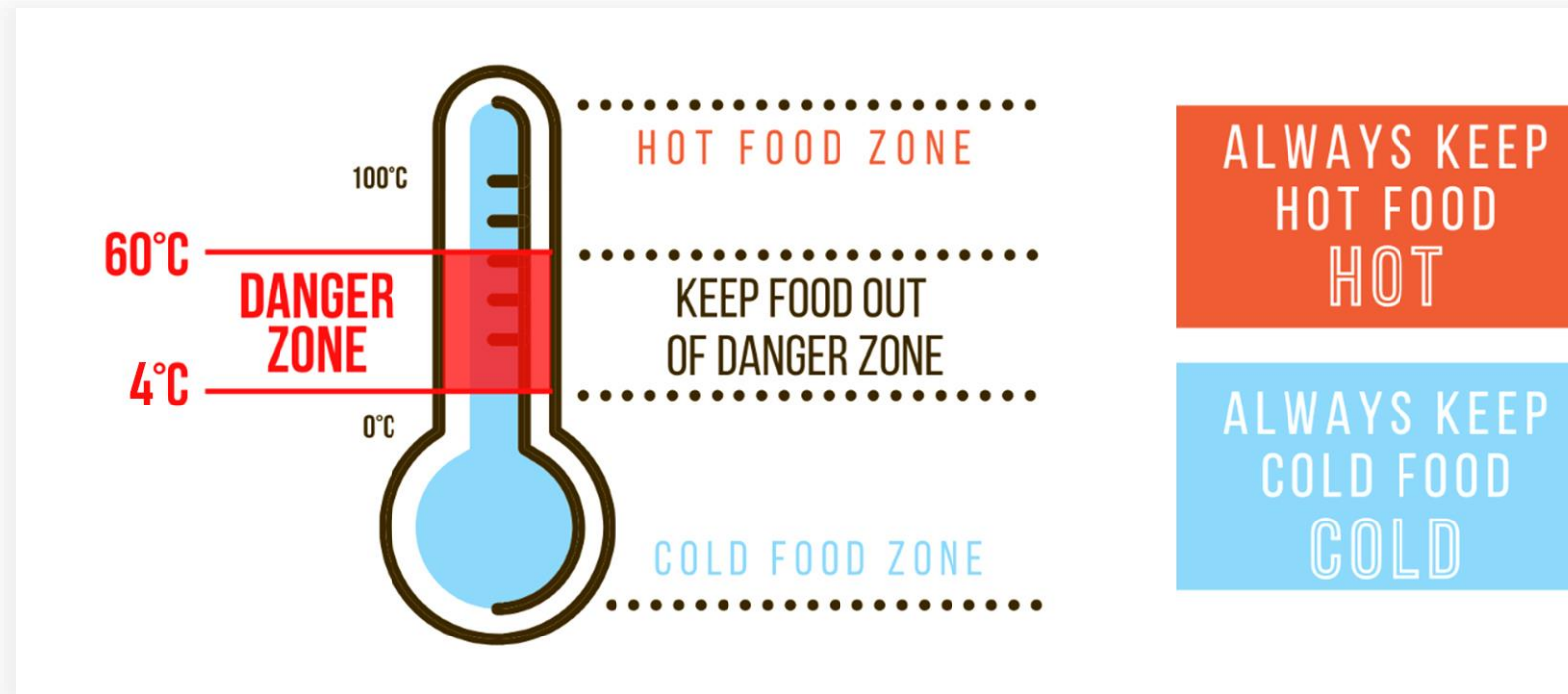
Canada

Source: [www.canada.ca](https://www.canada.ca)

# BACTERIAL FOODBORNE INFECTIONS

- Occurs when food contaminated with harmful bacteria is consumed and continues to grow in the intestines, resulting in an infection.
- Some bacteria can cause illness by production of toxins like *S. aureus*, *C. botulinum*, *S. dysenteriae*, and *B. cereus*.
- Harmful bacteria can infect food at any point during the production chain.

# TEMPERATURE DANGER ZONE



Risk of food-related illness caused by bacteria increases during the summer months due to warmer weather and increase in outdoor activities.



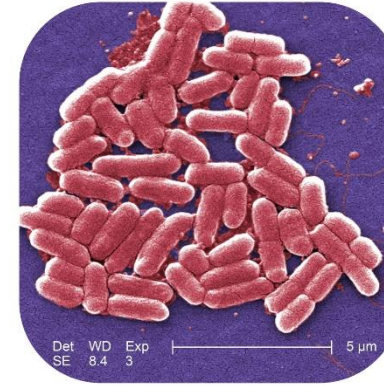
# COMMON BACTERIA BEHIND FOODBORNE ILLNESS



*Salmonella*



*Shigella*



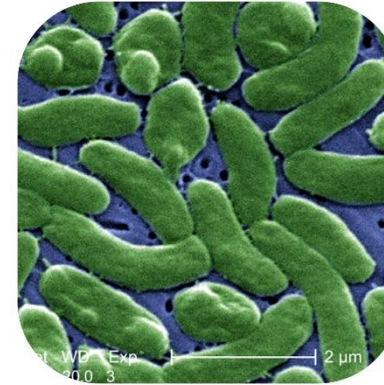
*E. coli O157:H7*



*Campylobacter*

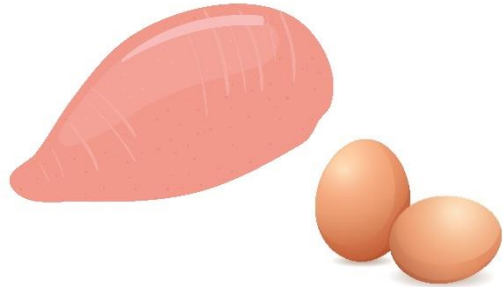


*Listeria*



*Vibrio*

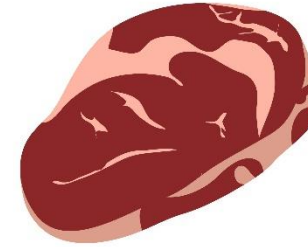
# COMMON BACTERIA BEHIND FOODBORNE ILLNESS



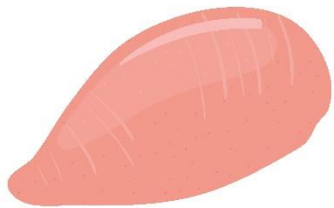
*Salmonella*



*Shigella*



*E. coli O157:H7*



*Campylobacter*



*Listeria*



*Vibrio*

# WHO ARE AT HIGHER RISK OF FOOD POISONING?

- Adults aged 65 and older
- Children younger than 5 years
- People with weakened immune systems
- Pregnant women



# SIGNS, SYMPTOMS, AND SEVERITY

- The incubation period for bacterial foodborne pathogens can be as short as **1-24 hrs** (*B. cereus*, *C. perfringens*, *S. aureus*) to **2-10 days** (*Salmonella*, *Shigella*, *E. coli*, *Campylobacter*), and sometimes even a few weeks.
- General symptoms for foodborne illness may include:
  - Diarrhea
  - Vomiting, nausea
  - Abdominal pain and cramps
  - Headache, muscle aches
  - Low-grade fever, and fatigue

## SIGNS, SYMPTOMS, AND SEVERITY (CONT.)

- Symptoms usually last from a couple of days to a week for most people and they recover without treatment.
- For pathogen like *Listeria*, duration of illness could be from days to weeks.
- People in high-risk group are more likely to get sick and could have more serious illness.
- Frequent diarrhea and vomiting can occur multiple times a day resulting in dehydration, fatigue, and weakness.
- Symptoms of dehydration include decrease in urination, dry mouth and throat, and feeling dizzy when standing up.

## FIVE SIGNS of SEVERE FOOD POISONING



Bloody diarrhea



Fever higher than 102°F



Vomiting so often you  
can't keep liquids down



Dehydration



Diarrhea for more  
than 3 days

Image adapted from: [www.cdc.gov](http://www.cdc.gov)

# HOW DO THEY SPREAD?

- By eating food or drinking water contaminated by the bacteria
- Consuming raw or undercooked:
  - Meats (includes beef, pork, lamb, and goat)
  - Poultry (includes chicken and turkey)
  - Eggs, egg products, and seafood
- Consuming raw fruits and vegetables, or ready-to-eat foods contaminated with the juices of raw meat
- Drinking unpasteurized milk, juice, and cider
- Via **fecal-oral route** when proper hand hygiene is missing

# PREVENTIVE MEASURES – SAFE HANDLING AND COOKING

- Use one cutting board for raw meat and poultry, and a separate board for fruits, vegetables, and foods that are not going to be cooked.
- Cook all meat and poultry to a [safe internal temperature](#) and use a food thermometer to check.
- Ground meat should be cooked to at least **71°C/160°F**.
- Poultry should be cooked to **74°C/165°F**.
- Avoid using raw eggs in foods that will not be cooked.
- Chill leftovers at **4°C/40°F** within 2 hrs after preparation.



## Cook Meat and Eggs to Safe Internal Temperatures

**71°C**



**Pork and Ham**

**Lamb, Veal**



**Beef**

After cooking,  
let meat rest  
for 3 minutes  
before serving.

**70°C**



**Seafoods**

**71°C**



**Ground Beef**

**74°C**



**Egg Dishes**

**74°C**



**Chicken**

**Leftovers**

**82°C**



**Whole Poultry**

Image adapted from: [www.cdc.gov](http://www.cdc.gov)



## SAFE HANDLING AND COOKING (CONT.)

- Thoroughly wash and clean all utensils, cutting boards, and countertops.
- Avoid eating foods that contain raw or undercooked eggs.
- Avoid drinking raw or unpasteurized milk.
- Avoid eating raw or undercooked seafood.
- Do not thaw raw poultry at room temperature on the counter.
- Raw poultry is ready to cook and does not need to be washed first.
- Most importantly, **wash your hands** before and after handling food.



# FRUITS AND VEGGIES – ROMAINE CALM AND WASH ON

- The safest produce to eat is cooked. The next safest is **washed**.
- Always keep produce separate from raw meat, poultry, and seafood.
- Use a separate cutting board for fruits and vegetables.
- Chill cut, peeled, or cooked produce as soon as possible, or within 2 hrs.
- Washing produce with soap, detergent, or commercial produce wash is *not recommended*. Clean water is sufficient.
- Dry fruit and vegetables with a clean paper towel to absorb excess moisture, extending the life of produce.



# The Brussels Times

BELGIUM

BUSINESS

ART & CULTURE

EU AFFAIRS

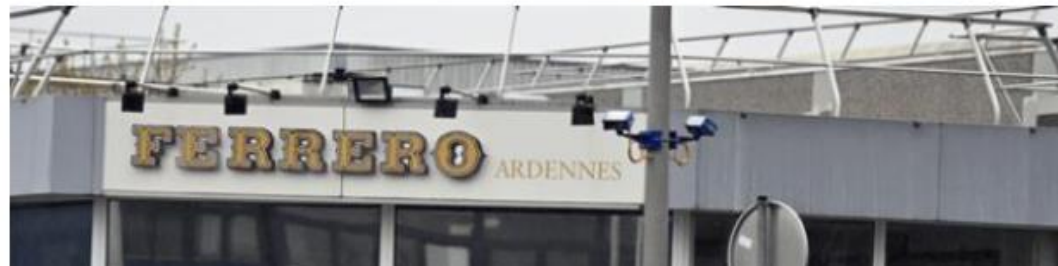
WORLD

BELGIUM UNLOCK

## Cause of salmonella contamination in Kinder chocolate determined, says Ferrero

Friday, 27 May 2022

By Belle de Jong



Source: [www.brusselstimes.com](https://www.brusselstimes.com)

Canada

## Salmonella outbreak in Canada linked to American red onions

16 people have been hospitalized; no deaths

CBC News - Posted: Jul 31, 2020 10:20 AM EDT | Last Updated: July 31, 2020



Source: [www.cbc.ca](http://www.cbc.ca)



**BBC** Sign in Home News Sport Reel Worklife Travel

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US & Canada

## Colorado cantaloupes kill up to 16 in listeria outbreak

28 September 2011



Listeria thrives in low temperatures and outbreaks are rarely associated with fresh produce

Source: [www.bbc.com](http://www.bbc.com)

**BBC** Sign in Home News Sport Reel Worklife Travel

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US & Canada

## Colorado cantaloupe farmers charged in listeria outbreak

27 September 2013



Jensen Farms co-owner Eric Jensen was seen examining his cantaloupe crop in September 2011

Source: [www.bbc.com](http://www.bbc.com)

# SOME DANGEROUS FOOD SAFETY MISTAKES



- Not washing your hands before and after handling food.
- Eating raw batter or dough, including cookie dough, and foods with uncooked eggs or uncooked/raw flour.
- Thawing or marinating food on the counter/room temperature.
- Peeling and cutting fruits and vegetables without washing them first.
- Tasting or smelling food to see if it's still good.
- Washing raw meat, chicken, or turkey before cooking.



# IMPORTANT CONSIDERATIONS FOR OUTBREAK MANAGEMENT

- A **confirmed outbreak** of gastroenteritis is defined as two or more cases of clinically compatible signs and symptoms that can be epidemiologically linked to one another.
  - ✓ Cases are associated by exposure if onset of symptoms is within a **48-hour period**.
  - ✓ Laboratory confirmation is not required.
- Begin a line listing by adding surveillance data from the daily sheets. Prepare separate line lists for clients/residents and staff. If useful, keep a separate line listing for each affected unit/floor.
- Special attention should be given to rule out **non-infectious** causes of gastroenteritis symptoms such as new medications, use of laxatives, or other non-infectious diseases.

## OUTBREAK MANAGEMENT (CONT.)

- The IPAC lead for the home must update the line listing and inform the Public Health Unit liaison on a daily basis or as previously arranged.
- Post outbreak signage at the home entrance and affected units/areas, discouraging visitors during the outbreak period.
- Provide education to staff, residents, and visitors on what to expect, such as restrictions while visiting and the PPE required when providing direct care, when there is a gastroenteritis outbreak.
- Communicate with family of clients/residents who are placed on Additional Precautions and provide regular updates until outbreak is declared over.

# IPAC MEASURES AND RECOMMENDATIONS

- Place a client/resident on **Contact Precautions** immediately who is a suspected or confirmed case of gastroenteritis. Gloves and a fluid-resistant gown should be worn by staff when providing care to a client/resident on Contact Precautions.
- Additional Precautions should be in place for at least **48 hours** *after* symptoms have resolved.
- Practice hand hygiene frequently.
- Staff who are symptomatic should be excluded from work until they are symptom-free for at least **48 hours**.
- Staff should also use gloves and gowns when handling soiled linen for laundry and always practice hand hygiene after doffing or removing dirty gloves.

# CLEANING AND DISINFECTION

- Increase routine cleaning of all high-touch surfaces.
- Increase the cleaning and disinfecting of all surfaces in the ill resident's immediate environment.
- Disinfect shared resident equipment after each use.
- If possible, dedicate specific equipment to each ill resident.
- Clean soiled carpets and soft furnishings with hot water and detergent or **steam clean**. Vacuum cleaning is not recommended.



# QUESTIONS?



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