

Protecting yourself and your family from Salmonella

Salmonella is a bacteria that may cause a food borne illnesses called salmonellosis. Symptoms of salmonellosis include: diarrhea, fever, chills, nausea, vomiting, abdominal pain and headache starting six to 72 hours after exposure to a *Salmonella* contaminated product. Some people can have an infection with no symptoms; asymptomatic infection can still spread the disease if proper precautions are not taken.

The symptoms usually last four to seven days and most persons recover without any treatment. The elderly, infants, pregnant women and persons with impaired immune systems may experience more severe symptoms requiring medical treatment and that may lead to long-lasting health effects or death.

Persons may become infected with *Salmonella* bacteria by consuming food derived from infected animals or consuming food contaminated by feces of infected humans or animals. Common Food sources include contaminated raw/undercooked eggs or egg products, raw milk/milk products, contaminated water, meat/meat products, poultry/poultry products and contaminated produce.

Handling infected animals (including pets) and/or their environments may also lead to *Salmonella* infection. In some cases infected animals may have no symptoms. Domestic and wild animals, including poultry, swine, cattle, rodents and pets such as iguanas, tortoises, turtles, cats, dogs, hamsters and hedgehogs have been found to be implicated in salmonellosis cases.

Infected persons may transmit the infection to others (fecal-oral transmission) for several days to several weeks after the onset of symptoms.

Cases of salmonellosis are reported in Saskatchewan throughout the year; however, the number of cases usually increase during certain times of the year such as Thanksgiving and Christmas. These increases are often linked to improper food handling techniques.

Q. How can I protect myself and my family from salmonellosis?

The risk of getting a *Salmonella* infection can be reduced by washing hands often and properly and following general food safety practices.

Wash your hands or the hands of family members requiring assistance, after participating in any activity that results in contamination of the hands, such as:

- handling animals,
- handling animal droppings, bedding, food,
- before eating or preparing food.
- after handling raw food; and
- after using the washroom.

Q. How do I properly wash hands?

1. Rinse hands under clean, warm, running water.
2. Apply soap.
3. Rub hands together vigorously for at least 20 seconds
4. Thoroughly rinse hands under clean, running water.
5. Dry hands with a clean towel.

Hands should be washed when visibly soiled. If you are unable to wash your hands right away, use a hand sanitizer until you are able to wash your hands with soap and water.

Q. What is safe food handling?

Safe food handling is taking steps when preparing food to reduce the risk of contaminating for with illness causing organisms. Here are some basic food safety tips:

- wash your hands before, during and after preparing food, especially raw food;
- wash fresh fruit and vegetables before eating;
- after handling raw meat, poultry and fish, ensure all food contact surfaces are washed, rinsed and sanitized. A mild sanitizing solution can be made by adding 1 tsp (5ml) bleach to 3 cups (750 ml) water;
- maintain your kitchen in a clean and hygienic manner free of insects or rodents.
- keep hot foods hot (at or above 60°C / 140°F) and cold foods cold (at or below 4°C / 40°F);
- thaw food safely in one of these ways:
 - as part of the cooking process;
 - in the refrigerator at 4°C (40°F) or lower;
 - completely submerged in cold running water; or
 - in a microwave oven (only when immediately cooking food after thawing)
- when thawing raw meat, poultry or fish the fridge, place on lowest shelf possible and in a container that will capture any liquids to prevent dripping on other foods.
- thoroughly cook meat, poultry and fish. Using a probe thermometer in the thickest part of the meat not touching a bone. A complete cooking temperatures chart for various meats can be found here <https://www.canada.ca/en/health-canada/services/general-food-safety-tips/safe-internal-cooking-temperatures.html#s2>.
- ensure the following internal temperatures are reached:
 - 63°C (145°F) or above for eggs
 - 70°C (158°F) or above for fish;
 - 74°C (165°F) or above for ground chicken/turkey, chicken/turkey pieces, and frozen raw breaded chicken products
 - 82°C (180°F) or above for whole chickens and turkey, and all other poultry.

- avoid cross contamination – keep uncooked food products separate from ready-to-eat and cooked foods;
- refrigerate leftovers within two hours. Cut large items into smaller portions and distribute large quantities of food into smaller containers to help food cool faster.
- reheat solid leftovers, such as turkey and potatoes, to at least 74°C (165°F). Bring gravy to a full, rolling boil and stir a few times while reheating.
- do not consume unpasteurized milk or milk products.

Q. Are there additional precautions I should take when handling turkeys?

If you follow the safe food handling practices outlined above, you will prevent or minimize the risk of contracting salmonellosis and other food borne illnesses. Here are a few extra precautions for poultry preparations:

- Cook stuffing separately in the oven in its own dish, or on the stove top, to a minimum internal temperature of 74°C (165°F). If you choose to stuff your turkey, stuff it loosely just before roasting, and remove all stuffing right after cooking.
- Store turkey meat separately from stuffing and gravy.

Q. Are there additional precautions I should take when handling raw eggs?

Salmonella enteritidis is a strain of *Salmonella* bacteria frequently isolated in humans. In North America, studies have shown that eating raw eggs, cracked eggs or poorly washed eggs increases the risks of acquiring *Salmonella enteritidis* infection.

To prevent illness or transmission of *Salmonella*, keep eggs refrigerated, cook eggs until yolks are firm, and thoroughly cook foods containing eggs. Consider using commercially pasteurized egg products for recipes such as eggs benedict, Caesar salad dressing and hollandaise sauce.

Q. What precautions can I take when handling pets and pet food?

Salmonella infection be transmitted through animals, droppings, and pet food. Pets (dogs, cats) can become infected with *Salmonella* but do not typically carry the bacteria if not infected. Most reptiles (lizards, snakes, turtles) carry *Salmonella* naturally in their intestinal gut, where it lives without making them sick.

Proper hand washing after handling pets, their food, and contact with their bedding, droppings, and environment is the best way to protect yourself and your family from a *Salmonella* infection.

Raw pet foods should be handled using the same precautions as handling raw human food (see food safety tips above). Moist food should be refrigerated promptly or discarded. All pet foods should be stored separately from human foods. Clean pet food dishes and water bowls after every meal.

Frozen mice used for feed can be contaminated with *Salmonella* and other bacteria and viruses. It is recommended that children five years and under should not handle either reptiles or frozen rodents used as reptile food.

Q. What should I do if I think I have Salmonella?

Call Healthline 811 or see your family physician. If your symptoms are severe or life-threatening call 911 or seek care in an emergency room.

Because many different illnesses cause the same symptoms as salmonellosis, the only way to diagnosis it is through laboratory tests on the stools of infected people. As *Salmonella* infections are typically self-limiting, antibiotics are not usually recommended. Your physician will be able to determine the best course of treatment for a confirmed *Salmonella* infection.

Q. Are there precautions I should take while travelling?

Every year thousands of Canadians travel to countries with different sanitation conditions than those found in Canada. *Salmonella* infections among travelers are often caused by eating contaminated food or drinking contaminated beverages. Always take precautions with food and water to avoid getting sick. Precautions include:

- Boil it, cook it, peel it or leave it!
- Always wash your hand before eating or preparing food, after using the bathroom, changing diapers, or having contact with animals or sick people.
 - Use alcohol-based hand sanitizer if soap and water are not available.
- Only eat foods that are well cooked and served hot. Avoid food served at room temperature.
- Drink water that has been boiled or disinfected or from a commercially sealed bottle.
- Use ice made only from purified or disinfected water.
- Brush your teeth with purified or bottled water.
- Avoid unpasteurized dairy products and fruit juices.

For further information, see the Government of Canada Travel website:

<https://travel.gc.ca/travelling/health-safety/food-water>

Q. Where can I find more information?

For more information on this fact sheet, contact your local public health inspection office:

<https://www.saskatchewan.ca/residents/health/public-health/public-health-inspectors>

For more information on *Salmonella* including recent *Salmonella* Public Health Notices, see the Health Canada *Salmonellosis* website:

<https://www.canada.ca/en/public-health/services/diseases/salmonellosis-salmonella.html>