

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. 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.

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. 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. 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.

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

Wash your hands or the hands of family members requiring assistance, after participating in any activity that results in contamination of the hands, e.g. handling live animals, their droppings or anything in an environment where the animals have been. 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.

Handle food safely:

- wash your hands before, during and after handling raw food;
- wash fresh fruit and vegetables before eating them;
- keep cold food cold at 4°C (40°F) or lower;
- keep hot food hot at 60°C (140°F) or higher;
- keep frozen food at -18°C (0°F) or lower;
- thaw food safely:
 - in the refrigerator at 4°C (40°F) or lower;
 - completely submerged in cold running water;
 - in a microwave oven only when the food will be immediately subjected to a cooking process; or
 - as part of the cooking process.
- when thawing raw meat, poultry or fish in a refrigerated unit, place the food in a container that will collect any liquids that may be produced as the product thaws. This container should be placed on the lowest shelf of the refrigerator to prevent the raw liquids from contaminating other foods below.

- 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;
- avoid placing cooked food on the same plate that was used for raw meat, poultry or fish;
- refrigerate leftovers within two hours. Cooling time may be reduced by:
 - using shallow pans or ice baths (placing the container of food in a larger container or sink filled with ice);
 - cutting large items into smaller portions;
 - proportioning large quantities of food into smaller containers; and/or
 - stirring the food frequently
- remove the stuffing from the poultry cavity.
- thoroughly cook meat, poultry and fish. Using a probe thermometer ensure the following internal temperatures are reached:
 - 60°C (140°F) or above for rare beef steaks and roasts;
 - 63°C (145°F) or above for eggs (if prepared for immediate service); medium rare beef, lamb and veal steaks and roasts;
 - 68°C (155°F) or above for game farm meat products;
 - 70°C (158°F) or above for fish;
 - 71°C (160°F) or above for ground beef/pork/lamb/veal; food made with ground beef/pork/lamb/veal, e.g. sausages, meatballs; pork chops, ribs and roasts;
 - 74°C (165°F) or above for ground chicken/turkey; food made with ground chicken/turkey or mixtures containing poultry, meat, fish, or eggs; chicken and turkey breasts, legs, thighs and wings; stuffing (inside a carcass); stuffed pasta; hot dogs; leftovers; egg dishes (if not prepared as specified above); and stuffed fish; or
 - 82°C (180°F) or above for chicken and turkey, whole bird*.

* Insert the thermometer in the thickest part of the inner thigh or breast without touching the bone.

- do not consume unpasteurized milk or milk products;

- avoid cross contamination – keep uncooked food products separate from ready-to-eat foods;
- use food before the “Best Before Dates”; and
- maintain your kitchen in a clean and hygienic manner free of insects or rodents.

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.

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 frozen pet food?

Not only can *Salmonella* infection be transmitted through animals, it can also be transmitted through pet food. Frozen baby mice are sometimes fed to pet lizards, snakes or other reptiles. These frozen mice may be contaminated with enteric bacteria and viruses. Children, the elderly, and individuals with immunodeficiency are particularly at risk for *Salmonella* infection. They should avoid handling the frozen rodents used as reptile food or the reptiles. It is recommended that children five years and under should not handle either reptiles or frozen rodents used as reptile food.

After handling reptiles or frozen rodents used as reptile food, individuals should thoroughly wash their hands with soap and water and use a disinfectant to thoroughly clean any surfaces that have been in contact with frozen rodents.

Be sure to wash your hands with warm, soapy water for 20 seconds before and after handling pet food (including frozen pet treats) and feeding dishes. Frequent and thorough hand washing keeps pet foods from being contaminated with bacteria and other microorganisms that may be present on our hands and prevents the spread of contamination from pet food to yourself or your family.

Pets such as dogs, cats, snakes, reptiles have bacteria in their mouths and these microbes can be spread to the pet food and water bowls. Clean pet food dishes and water bowls after every meal. If the food is left in the dish and not cleaned properly, it creates an ideal environment for bacteria to grow and spread to other pets and household members. Moist food should be refrigerated promptly or discarded. Pet food and treats should be stored in dedicated containers in a cool dry location. Always wash and dry pet food storage containers before refilling them with new food.

Q. What should I do if I have been exposed to possible sources of contamination such as live animals or frozen pet food and experience persistent or severe symptoms?

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. Further testing can be conducted to determine the appropriate antibiotic to use in treatment.

Q. Are there precautions I should take while travelling?

Every year thousands of Canadians travel to countries with poor sanitation where some travelers contract Salmonellosis or other illnesses. Laboratory confirmed cases of diarrheal illness in returning Canadian travelers reported to Public Health Agency of Canada (PHAC) have led to several international investigations. Safe travel information can be obtained from a travel clinic or visiting the PHAC's website: http://www.phac-aspc.gc.ca/tmp-pmv/well-way_bon-depart-eng.php.

For more information on this fact sheet, contact your local health region office. <http://www.saskatchewan.ca/residents/health/understanding-the-health-care-system/saskatchewan-health-regions/regional-public-health-inspectors>