



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 6 to 72 hours after exposure to a *salmonella* contaminated product. The symptoms usually last 4 to 7 days and most persons recover without any treatment. The elderly, infants, 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.

Several species of *salmonella* isolated from the food borne illness have been reported in recent years. Cases of salmonellosis are reported in Saskatchewan throughout the year. However, the number of cases usually increases during certain times of the year such as Thanksgiving and Christmas.

How can I protect myself and my family from salmonellosis?

Handle food safely.

- wash your hands before, during and after handling raw food;
- 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;
- never place 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; or
 - stirring the food frequently

Be sure to 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 sanitary manner free of insects or rodents.

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.

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 and poorly washed eggs are one of the risks for acquiring *Salmonella enteritidis* infection. Recently, eggs were implicated in nationwide upsurge of cases of Salmonellosis and a massive recall of eggs in the USA.

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.

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 5 years and under should not handle either frozen rodents used as reptile food or the reptiles.

After handling either frozen rodents used as reptile food or the reptiles, 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.

Are there precautions I should take while travelling?

Thousands of Canadians travel to countries with poor sanitation every year. Salmonellosis is frequently contracted by travelers. 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 public health office.

Regina Qu'Appelle	Regina	(306) 766-7755
Saskatoon	Saskatoon	(306) 655-4620
Prairie North	North Battleford	(306) 446-6400
Prince Albert Parkland	Prince Albert	(306) 765-6600
Kelsey Trail	Melfort	(306) 752-6310
Five Hills	Moose Jaw	(306) 691-1500
Cypress	Swift Current	(306) 778-5280
Sun Country	Weyburn	(306) 842-8618
Sunrise	Yorkton	(306) 786-0600
Heartland	Rosetown	(306) 882-6413
Mamawetan Churchill River	La Ronge	(306) 425-8512
Keewatin Yatthe	Buffalo Narrows	(306) 235-5811

For more information, go online to: <http://www.health.gov.sk.ca/rha-community-list>

Responsibility for interpretation of the content of this fact sheet rests with the user. Information in this fact sheet is provided solely for the users information and, while thought to be accurate, is provided strictly as is and with out warranty of any kind, either express or implied. The Province of Saskatchewan hereby disclaims any liability or responsibility for any injury or damage resulting from the use, directly or indirectly, of the information contained herein.