



## Salmonellosis

(*Salmonella*)

### What is salmonellosis?

Salmonellosis is an infection caused by *Salmonella* bacteria. The infection generally affects the intestinal tract, but can occasionally spread to the blood stream and on to other body sites, causing severe illness.

### Who is at risk for salmonellosis?

Any person can be infected with *Salmonella*. Children who are 5 years old and younger, adults older than 65, and people with impaired immune systems are more likely to have a severe infections.

### What are the symptoms of salmonellosis?

People infected with *Salmonella* bacteria may experience mild to severe diarrhea, abdominal pains, fever and occasionally vomiting for several days. Blood stream and focal infections, such as meningitis or endocarditis, are infrequent but can be quite serious, particularly in the very young or elderly.

### How soon do symptoms appear?

The symptoms generally appear 12 to 36 hours after exposure, but they can occur as quickly as six hours or as long as 72 hours after exposure. In some instances, incubation periods of up to 16 days are possible.

### How is *Salmonella* spread?

*Salmonella* live in the intestinal tracts of humans and other animals, including birds. People can become infected by ingesting food or water contaminated with *Salmonella* or after contact with infected animals. Contaminated foods are often of animal origin – such as beef, poultry, milk or eggs – but all foods, including vegetables, can become contaminated. Food may also become contaminated by an infected food handler who forgot to wash his or her hands with soap and running water after using the bathroom.

*Salmonella* can be found in the feces of some pets, especially those with diarrhea. People can be infected if they do not wash their hands after contact with infected pets. Reptiles, such as lizards and turtles, are particularly likely to harbor *Salmonella*, and people should always wash their hands immediately after handling a reptile, even if the reptile appears healthy. Adults should ensure that children wash their hands after handling a reptile.

### When and for how long is a person able to spread the disease?

The time period that a person can shed *Salmonella* in his or her stool is extremely variable and can last from several days to several weeks, even after symptoms stop. Sometimes people not showing symptoms can carry the disease for months. This is especially true of infants or people who have been treated with antibiotics. About one percent of infected adults and five percent of children younger than five years shed *Salmonella* in their stool for more than a year.

### How is a person diagnosed?

Laboratory tests can identify *Salmonella* in the stool of an infected person. In some cases, the bacteria may be identified in urine, infected wounds or blood samples.

### What is the treatment?

Most people with salmonellosis will recover on their own in four to seven days. Some may require fluids to prevent dehydration. Antibiotic therapy is recommended only for patients with severe illness or those at high risk for severe disease.

## Does past infection make a person immune?

No.

## Should children or others be excluded from child care, school, work or other activities if they have *Salmonella*?

A child should be excluded from child care if he/she has:

- Vomited two or more times within the previous 24 hours, unless the vomiting is determined to be caused by a noninfectious condition and the child is not in danger of dehydration
- Diarrhea, if stool is not contained in the diaper or if diarrhea frequency exceeds two or more stools above normal for that child
- A fever or is unable to participate and the staff determines that they cannot care for the child without compromising their ability to care for the health and safety of the other children in the group

A child or an adult should be excluded from school or work if diarrhea cannot be contained. Food handlers should be excluded from handling food until diarrhea ceases and two successive negative stool cultures are obtained or the worker has been asymptomatic for seven days. Health care workers who provide patient care and people who care for infants and young children should be excluded until they are asymptomatic. Health care workers and child care providers should refer to their facility policy for specific guidelines on when to return to work.

## What can be done to prevent the spread of *Salmonella*?

- Always treat raw eggs, poultry, beef and pork as if they are contaminated, and handle accordingly.
- Wrap fresh meats in plastic bags at the market to prevent blood from dripping on other foods.
- Refrigerate foods promptly; minimize holding foods at room temperature.
- Cutting boards and counters used for preparation should be washed with soap immediately after use to prevent cross contamination with other foods.
- Avoid eating raw or undercooked meats.
- Use a food thermometer to ensure that cooked foods reach a safe minimum internal temperature. For further information, please visit [www.foodsafety.gov/keep/charts/mintemp.html](http://www.foodsafety.gov/keep/charts/mintemp.html).
- Avoid eating raw or undercooked eggs, or undercooking foods that contain raw eggs.
- Thoroughly wash all fresh produce before consuming.
- Avoid using or drinking raw or unpasteurized milk.
- Carefully wash hands with soap and running water before and after food preparation, after handling pets, and after using the restroom.

## Additional Information:

Additional information is available by calling the North Dakota Department of Health at 800.472.2180.

**This disease is a reportable condition. As mandated by North Dakota law, any incidence of this disease shall be reported to the North Dakota Department of Health.**

## Resources:

1. *Red Book: 2015 Report of the Committee on Infectious Diseases*. 30<sup>th</sup> ed. [Children in Out-Of-Home Care]. Kimberlin, DW; Brady, MT; Jackson, MA; Long, SS. American Academy of Pediatrics. 2015: 132-151.
2. *Red Book: 2015 Report of the Committee on Infectious Diseases*. 30<sup>th</sup> ed. [*Salmonella* infection]. Kimberlin, DW; Brady, MT; Jackson, MA; Long, SS. American Academy of Pediatrics. 2015: 695-702.
3. Heymann, D. L. (2015). *Control of Communicable Diseases Manual, 20<sup>th</sup> Edition*. Salmonellosis. American Public Health Association. 2015: 532-539.
4. Centers for Disease Control and Prevention. (2015). Salmonella. [www.cdc.gov/salmonella/](http://www.cdc.gov/salmonella/).
5. North Dakota Administrative Code. (2016). 33-33-04-28.9-11. [www.legis.nd.gov/information/acdata/pdf/33-33-04.pdf](http://www.legis.nd.gov/information/acdata/pdf/33-33-04.pdf).