

About...Salmonellosis

What is salmonellosis?

Salmonellosis (sal-mun-nel-lo-sis) is a contagious disease caused by *Salmonella* bacteria, which are found in the intestines of many healthy animals, including poultry, farm animals (cattle, pigs, chicks, and ducklings) and domestic animals (dogs, cats, and birds), wild birds, reptiles, and amphibians. There are thousands of types of *Salmonella* bacteria, most of which can infect humans. Illness from *Salmonella* bacteria can vary from mild diarrhea to serious disease. On average, 635 cases of salmonellosis are reported in Indiana every year.

How is salmonellosis spread?

Salmonella is passed in the stool, and people become infected by ingesting feces from an infected animal or person (fecal-oral route).

There are many ways to become infected with *Salmonella*:

- Eating contaminated foods:
 - Raw or undercooked eggs (e.g., eggs-over-easy) or homemade ice cream and eggnog.
 - Raw or undercooked seafood, meats, or poultry (e.g., chicken or turkey)
 - Unpasteurized dairy products (e.g., milk and cheese). It is illegal to sell unpasteurized dairy products in Indiana.
 - Unwashed raw fruits, vegetables, or herbs that have been contaminated by feces, raw meats, fertilizers, or untreated water.
- Swallowing untreated water, e.g., from lakes or streams.
- Having direct contact with the stool of infected livestock, birds, petting zoos, and reptiles.
- Having contact with an infected person's stool:
 - Not washing hands after contact with stool from a contaminated surface or diaper/linen and ingesting the bacteria.
 - Having sex that involves contact with stool.

The most common sources of *Salmonella* outbreaks are raw or undercooked eggs and poultry, unpasteurized dairy products, untreated water, and contaminated raw fruits, vegetables, or herbs. Pet food and treats have also been implicated in outbreaks. Persons who work in certain occupations, such as food handlers, day care providers, and health care providers, have a greater risk of transmitting infection to others.

What are the symptoms of salmonellosis?

- Diarrhea, which may have blood or mucus
- Stomach cramps
- Fever
- Upset stomach
- Vomiting

Symptoms usually begin 12-36 hours (range of 6-72 hours) after exposure and last 4-7 days. Infected people may carry *Salmonella* in their bodies for weeks or months without symptoms and unknowingly infect others.

Rarely, *Salmonella* can get into the blood and infect organs such as the heart, lungs, and bones. Death from salmonellosis is rare. Children under 5 years of age, the elderly, and people with weakened immune systems are at the greatest risk for severe complications.

How do I know if I have salmonellosis?

A person having diarrhea lasting more than 24 hours should consult a health care provider. The health care provider may collect a stool sample to test for *Salmonella*.

How is salmonellosis treated?

Most people recover within 5 to 7 days without medical treatment. Since diarrhea can cause dehydration, an infected person should drink plenty of fluids.

Is salmonellosis a reportable disease?

Yes. Health care providers or laboratories must report cases of salmonellosis to the local health department (LHD) or the Indiana State Department of Health (ISDH) within 72 hours of diagnosis. The LHD will contact all cases diagnosed with *Salmonella* so a possible exposure can be determined to help prevent others from becoming ill.

How can salmonellosis be prevented?

In general, salmonellosis can be prevented by strictly adhering to the following guidelines:

- Practice good hygiene:
 - Thoroughly wash hands with soap and water after using the restroom; after assisting someone with diarrhea and/or vomiting; after contact with animals and reptiles; after swimming; before, during, and after food preparation; and after exposure to raw meat products (please refer to [Quick Facts about Hand Washing](#)).
 - Clean food preparation work surfaces, equipment, and utensils with soap and water before, during, and after food preparation, especially after contamination with raw meat products.
- Separate raw and cooked foods:
 - Avoid cross-contamination by keeping uncooked meat products separate from produce, ready-to-eat foods, and cooked foods.
 - Use separate equipment and utensils for handling raw foods.
 - Clean food-preparation work surfaces and utensils with soap and water before, during, and after food preparation, especially after contact with raw meat products.
- Maintain safe food temperatures:
 - Ensure proper temperatures are maintained during refrigeration (<40°F), freezing (<2°F), holding (keep food hot or at room temperature for no longer than 2 hours), and chilling (chill immediately and separate into smaller containers if needed).
 - Thoroughly cook all food items to USDA recommended safe minimum internal temperatures:
 - 145°F – steaks, roasts, and fish
 - 160°F – pork, ground beef, and egg dishes
 - 165°F – chicken breasts and whole poultry
- Eat safe foods and drink safe water (Remember: Contaminated foods may look and smell normal):
 - Do not eat undercooked meat, poultry, or eggs.
 - Do not eat foods past the expiration date.
 - Do not eat unpasteurized dairy products; it is illegal to sell unpasteurized dairy products in Indiana.
 - Wash all produce before eating raw or cooking.
 - Use treated water for washing, cooking, and drinking.
- Handle animals safely:
 - Wash hands after contact with livestock, petting zoos, pets (including reptiles and amphibians), especially if they are suffering from diarrhea, and after contact with pet food/treats (including live or frozen rodents).
 - Keep pets out of food-preparation areas.
 - Do not clean pet or reptile cages in the kitchen sink or in the bathtub.
 - Reptile safety:

- Reptiles should not be allowed to roam the house.
 - Reptiles should not be kept in day care facilities or classrooms.
 - Children under 5 years of age, pregnant women, and persons with weakened immune systems should not handle reptiles.
- Protect others:
 - Persons with diarrhea and/or vomiting should not prepare food or provide health care for others and should limit direct contact with others as much as possible.
 - Persons with diarrhea and/or vomiting should not attend a day care facility or school.
 - Persons with diarrhea and/or vomiting shall be excluded from employment involving food handling (Indiana Retail Food Establishment Sanitation Requirements, 410 IAC 7-24-122).

Where can I learn more about salmonellosis?

To search Indiana data and statistics:

www.in.gov/isdh/dataandstats/disease/diseases_index.htm

To search the Indiana Food Protection Program:

<http://www.in.gov/isdh/regsvcs/foodprot/index.htm>

To search disease information:

http://www.cdc.gov/ncidod/dbmd/diseaseinfo/salmonellosis_g.htm

<http://www.cfsan.fda.gov/~mow/chap1.html>

To search for national data, statistics, and outbreaks:

www.cdc.gov/mmwr/

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