CONDITION

Salmonellosis

Salmonellosis is an infection caused by Salmonella bacteria that usually leads to diarrhea, fever, and stomach cramps.

WHAT IT IS
Infection caused by Salmonella bacteria

BODY SYSTEM
Digestive system, sometimes bloodstream and other organs

MAIN SYMPTOMS
Diarrhea, fever, stomach cramps, vomiting

WHAT CAUSES IT
Infection from contaminated food, water, animals, or people

HOW IT IS DIAGNOSED
Stool culture or molecular testing

MAIN TREATMENT
Fluids and supportive care, sometimes antibiotics

CAN IT BE CURED?
Yes - most cases clear with supportive care

IS IT AN EMERGENCY?
Sometimes - severe dehydration, confusion, or fainting

LONG-TERM OUTLOOK
Full recovery usual; some develop lasting joint symptoms

Overview

Salmonellosis is an infection caused by Salmonella bacteria. It most often affects the intestines, causing diarrhea, fever, and stomach cramps. People sometimes call it Salmonella food poisoning, although the bacteria can also spread through water, animals, and contact with another person.

This article focuses on non-typhoidal salmonellosis, the form usually linked to food and animals. Typhoid and paratyphoid fever are different illnesses caused by particular types of Salmonella . They are more common in places with limited access to safe water and sanitation and require different medical care.

Most people with salmonellosis recover within about a week without antibiotics. The main concern is losing too much water and salt through diarrhea or vomiting. A smaller number of

people develop an infection in the bloodstream or another part of the body.

Infants, older adults, and people with weakened immune systems are more likely to become seriously ill.

Symptoms

Symptoms usually begin between 6 hours and 6 days after exposure to the bacteria. They commonly last 4 to 7 days, although bowel habits can take longer to return to normal.

Common symptoms include:

Diarrhea and vomiting can cause dehydration, meaning the body does not have enough fluid. Signs include a dry mouth, strong thirst, dark urine, passing less urine, dizziness, or unusual tiredness. A baby may have fewer wet diapers, no tears when crying, or a sunken soft spot on the head.

Some people carry and pass the bacteria without having obvious symptoms.

- Watery diarrhea, which may sometimes contain blood or mucus
- Stomach pain or cramps
- Fever
- Nausea or vomiting
- Headache and reduced appetite

Causes and risk factors

You develop salmonellosis by swallowing Salmonella bacteria. The bacteria live in the intestines of infected people and animals and leave the body in stool.

Common sources include raw or undercooked poultry, meat, and eggs. Unpasteurized milk or juice can also carry the bacteria. Fruit, vegetables, sprouts, and processed foods may become contaminated during farming, preparation, or storage.

Cross-contamination can happen in a kitchen. For example, bacteria from raw chicken may spread to a cutting board, hands, utensils, or ready-to-eat food.

Reptiles, amphibians, backyard poultry, and some other animals can carry Salmonella while appearing healthy. Infection can follow contact with the animal, its food, bedding, tank, cage, or surrounding area.

The bacteria can also spread between people when hands are not washed properly after using

the toilet, changing a diaper, or helping someone with diarrhea.

Anyone can develop salmonellosis. The chance of severe illness is higher among:

- Babies and young children
- Adults aged 65 or older
- People with weakened immune systems
- People taking medicines that reduce stomach acid
- People with certain long-term health conditions

Diagnosis

Symptoms alone cannot confirm salmonellosis because several infections can cause similar diarrhea and cramps.

A stool sample can be tested for Salmonella . A culture grows the bacteria in a laboratory. A molecular test, sometimes called a PCR or gastrointestinal panel, looks for its genetic material. Culture may still be needed to identify the exact strain and learn which antibiotics like amoxicillin or doxycycline can treat it.

Blood tests and blood cultures may be used when there are signs that the infection has spread beyond the intestines. Testing is not always needed for mild diarrhea that is already improving.

Public health teams may contact you after a confirmed result. Their questions can help identify an outbreak or contaminated food. Information about recent meals, travel, animal contact, and other people with symptoms can be useful.

Treatment and management

The main treatment is replacing lost fluid and salts. Take frequent small drinks if nausea makes drinking difficult. An oral rehydration solution contains a balanced mixture of water, sugar, and salts and may be especially helpful for children, older adults, or anyone with frequent diarrhea.

Continue eating as tolerated. There is usually no need to follow a highly restricted diet. Breastfeeding can generally continue when a baby has diarrhea.

Antibiotics are not routinely used for uncomplicated salmonellosis. In otherwise healthy people, they may not shorten the illness and can cause side effects. They may also allow the bacteria to remain in the stool for longer.

Antibiotics may be appropriate for severe infection or for someone at increased risk of

infection spreading to the bloodstream. The choice depends on the test results, local antibiotic resistance, age, and other health conditions.

Do not use anti-diarrhea medicine without professional advice, particularly if you have fever or bloody diarrhea. Some of these medicines slow the intestines and may make the illness last longer.

Careful handwashing remains important during recovery. Avoid preparing food for other people while you have diarrhea.

Complications

Dehydration is the most common complication. Severe dehydration may affect blood pressure, kidney function, and alertness, but early replacement of fluids often prevents this.

Sometimes the bacteria enter the bloodstream. This is called bacteremia. From there, infection can spread to places such as the bones, joints, heart valves, or tissues around the brain. These complications require medical treatment and are more likely in people at higher risk of severe illness.

A small number of people develop reactive arthritis after the intestinal infection. This causes joint pain and swelling, sometimes with eye irritation or pain when passing urine. Symptoms may last for months and occasionally longer.

Some people also have an extended period of loose stools or altered bowel habits after the infection has cleared.

Prevention

Salmonellosis cannot always be prevented, because contaminated food may look, smell, and taste normal. You can reduce the risk through safe food handling and careful hygiene.

Wash your hands with soap and water after using the toilet, changing diapers, handling raw food, touching animals, or cleaning animal areas. Alcohol hand sanitizer can help when soap and water are unavailable, but it does not replace washing visibly dirty hands.

Keep raw meat, poultry, and eggs separate from ready-to-eat foods. Use separate utensils and cutting boards when possible. Cook food thoroughly and use a food thermometer rather than relying only on color. Refrigerate perishable food promptly.

Do not wash raw poultry. Splashing water can spread bacteria around the sink and nearby surfaces. Choose pasteurized milk and juice, and wash produce under running water.

After handling reptiles, amphibians, or backyard poultry, wash your hands before touching food or your face. Do not kiss or cuddle these animals, and do not clean their equipment in areas used to prepare food.

Living with it and what to expect

Most people improve over several days and recover without lasting health problems. Fever and stomach cramps may settle before the diarrhea stops. Energy and appetite can return gradually.

Bowel movements may remain softer or more frequent for a while after the main illness. Some people continue to pass Salmonella in their stool for several weeks, even after they feel well. Good hand hygiene reduces the chance of passing it to others.

Stay away from work, school, or childcare while you have diarrhea. Rules about returning can be stricter for food handlers, healthcare workers, childcare staff, and young children in daycare. Local public health officials may require symptom-free time or follow-up stool tests in some situations.

Arrange routine follow-up if joint pain, ongoing bowel changes, or fatigue continue after the infection. These symptoms do not always mean the bacteria are still present, but they may need assessment.

Having salmonellosis once does not provide reliable lifelong protection. You can become infected again by another exposure.

When to get medical help

Contact a healthcare professional promptly if diarrhea or vomiting is not improving after a couple of days, or sooner if you are at higher risk of serious illness. Medical advice is also appropriate for blood in the stool, a high or persistent fever, severe stomach pain, or difficulty keeping fluids down.

Seek prompt advice for a baby, an older adult, or someone with a weakened immune system who develops possible salmonellosis. These groups can become dehydrated or develop invasive infection more quickly.

Get urgent medical help for signs of significant dehydration, including:

Call emergency services for collapse, severe confusion, trouble breathing, blue or mottled skin, or other signs of possible sepsis. Sepsis is a dangerous whole-body response to infection.

- Very little or no urine
- Repeated fainting or severe dizziness
- Inability to drink or keep fluids down
- Unusual sleepiness, weakness, or confusion
- A baby with very few wet diapers or difficulty waking

Common questions

Is Salmonella the same as food poisoning?

Salmonella is one cause of food poisoning, but not all food poisoning is caused by Salmonella . Viruses, other bacteria, parasites, and toxins can cause similar symptoms. Salmonellosis can also come from animals or another person rather than food.

How long is salmonellosis contagious?

You are most likely to spread the bacteria while you have diarrhea. However, Salmonella may remain in stool for several weeks after symptoms stop. Wash your hands carefully and follow any public health instructions about work, school, or childcare.

Do I need antibiotics for Salmonella?

Most otherwise healthy people with uncomplicated salmonellosis do not need antibiotics. Fluids and rest are usually the main treatment. Antibiotics may be used when infection is severe, has entered the bloodstream, or is more likely to cause complications.

What should I eat while recovering?

Eat foods you can tolerate and take frequent drinks. Small meals may be easier if you feel nauseated. Oral rehydration solution can replace water and salts lost through diarrhea. Avoid preparing food for other people until the diarrhea has stopped.

Can I go to work with salmonellosis?

Do not attend work while you have diarrhea. Return rules may differ if you handle food or work in healthcare or childcare. A local public health team or workplace policy may require additional time away or testing.

Can I catch Salmonella twice?

Yes. A previous infection does not give dependable long-term immunity. Safe food handling, handwashing, and careful hygiene around animals remain important after recovery.

Sources

- Centers for Disease Control and Prevention. "About Salmonella Infection"
- Centers for Disease Control and Prevention. "Clinical Overview of Salmonellosis"
- Shane AL, Mody RK, Crump JA, et al. "2017 Infectious Diseases Society of America Clinical Practice Guidelines for the Diagnosis and Management of Infectious Diarrhea." Clinical Infectious Diseases . 2017;65(12):e45-e80
- US Food and Drug Administration. Bad Bug Book: Handbook of Foodborne Pathogenic Microorganisms and Natural Toxins . Second edition. Chapter on Salmonella species
- World Health Organization. "Salmonella (Non-Typhoidal)" fact sheet
- NHS. "Salmonella" health information