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URL of this page: Salmonella is the name of a group of bacteria. In the United States, it is a common cause of foodborne illness. Salmonella occurs in raw poultry, eggs, beef, and sometimes on unwashed fruit and vegetables. You also can get infected after handling pets, especially reptiles like snakes, turtles, and lizards. Symptoms include: Symptoms usually last 4-7 days. Your health care provider diagnoses the infection with a stool test. Most people get better without treatment. Infection can be more serious in older adults, infants, and people with chronic health problems. If Salmonella gets into the bloodstream, it can be serious. The usual treatment is antibiotics. Typhoid fever, a more serious disease caused by Salmonella, is not common in the United States. It frequently occurs in developing countries. NIH: National Institute of Allergy and Infectious Diseases The information on this site should not be used as a substitute for professional medical care or advice. Contact a health care provider if you have questions about your health. Learn how to cite this page Salmonella are a group of bacteria that can cause gastrointestinal illness and fever called salmonellosis. Salmonella can be spread by food handlers who do not wash their hands and/or the surfaces and tools they use between food preparation steps, and when people eat raw or undercooked foods. Salmonella can also spread from animals to people. People who have direct contact with certain animals, including poultry and reptiles, can spread the bacteria from the animals to food if they do not practice proper hand washing hygiene before handling food. Pets can also spread the bacteria within the home environment if they eat food contaminated with Salmonella. Symptoms Most people infected with Salmonella will begin to develop symptoms 12 to 72 hours after infection. The illness, salmonellosis, usually lasts four to seven days and most people recover without treatment. Most people with salmonellosis develop diarrhea, fever, and abdominal cramps. More severe cases of salmonellosis may include a high fever, aches, headaches, lethargy, a rash, blood in the urine or stool, and in some cases may become fatal. The U.S. Centers for Disease Control and Prevention estimated that approximately 450 persons in the United States die each year from acute salmonellosis. Due to the range in severity of illness, people should consult their healthcare provider if they suspect that they have developed symptoms that resemble a Salmonella infection. At-Risk Groups Children younger than five, the elderly, and people with weakened immune systems are more likely to have severe salmonellosis infections. Learn more about People at Risk of Foodborne Illness. Foods Linked to U.S. Outbreaks of Salmonellosis Past U.S. outbreaks of salmonellosis have been associated with meat products, poultry products, raw or undercooked eggs and dough, dairy products, fruits, leafy greens, raw sprouts, fresh vegetables, nut butters and spreads, pet foods and treats. Preventing Foodborne Illness at Home Consumers should follow these steps: Wash the inside walls and shelves of the refrigerator, cutting boards and countertops, and utensils that may have contacted contaminated foods; then sanitize them with a solution of one tablespoon of chlorine bleach to one gallon of hot water; dry with a clean cloth or paper towel that has not been previously used. Wash and sanitize surfaces used to serve or store potentially contaminated products. Wash hands with warm water and soap following the cleaning and sanitation process. Children, the elderly, pregnant women, and ill persons with weakened immune systems should avoid eating raw sprouts of any kind. People with pets should take special care to avoid cross-contamination when preparing their pet's food. Be sure to pick up and thoroughly wash food dishes as soon as pets are done eating, and prevent children, the elderly, and any other people with weak immune systems from handling or being exposed to the food or pets that have eaten potentially contaminated food. Consumers can also submit a voluntarily report, a complaint, or adverse event (illness or serious allergic reaction) related to a food product. Advice for Restaurants and Retailers In the event that retailers and/or other food service operators are found to have handled recalled or other potentially contaminated food in their facilities, they should: Contact their local health department and communicate to their customers regarding possible exposure to Salmonella. Wash the inside walls and shelves of the refrigerator, cutting boards and countertops, and utensils that may have contacted contaminated foods, then sanitize them with a solution of one tablespoon of chlorine bleach to one gallon of hot water; dry with a clean cloth or paper towel that has not been previously used. Wash and sanitize display cases and surfaces used to potentially store, serve, or prepare potentially contaminated foods. Wash hands with warm water and soap following the cleaning and sanitation process. Conduct regular frequent cleaning and sanitizing of cutting boards and utensils used in processing to help minimize the likelihood of cross-contamination. Additional Information Outbreak of Foodborne Illness Food Safety for Pregnant Women Consumers who have symptoms should contact their health care provider to report their symptoms and receive care. To report a complaint or adverse event (illness or serious allergic reaction), visit Industry and Consumer Assistance. Follow us on X Salmonellosis is a bacterial infection that affects millions of people worldwide each year, making it one of the most common foodborne illnesses globally. This infection occurs when people consume food or water contaminated with Salmonella bacteria, which can cause a range of uncomfortable and potentially serious symptoms. While most people recover without specific treatment, understanding this disease is crucial for prevention, especially for those working in food service or studying public health. Table of Contents Salmonella is a genus of rod-shaped bacteria that belongs to the family Enterobacteriaceae. There are two main species that cause human illness: Salmonella enterica and Salmonella bongori, with S. enterica being responsible for the vast majority of human infections. Within these species, there are over 2,500 different serotypes or strains, including the well-known S. Typhimurium and S. Enteritidis. When Salmonella bacteria enter the human digestive system, they attach to and invade the cells lining the intestines. Once inside these cells, they multiply rapidly and spread to neighboring cells. This invasion triggers the body's immune response, causing inflammation and the symptoms associated with salmonellosis. The infection process The infection process typically follows these stages: Ingestion of the bacteria through contaminated food or water Survival through the acidic environment of the stomach Attachment to intestinal epithelial cells Invasion of the intestinal mucosa Multiplication within the cells Inflammatory response by the body This process leads to the typical symptoms of salmonellosis, which we'll discuss in more detail below. Common sources of Salmonella contamination Salmonella bacteria live in the intestinal tracts of humans and animals, particularly poultry and livestock. They're excreted through feces, which can then contaminate food, water, and surfaces. Foods commonly associated with Salmonella While Salmonella can contaminate almost any food, certain foods pose a higher risk: Raw or undercooked eggs: Eggs can be contaminated even before the shell forms. Consuming raw eggs in foods like homemade mayonnaise, hollandaise sauce, and some desserts poses a significant risk. Raw or undercooked poultry: Chicken, turkey, and other poultry products are common sources of Salmonella. Raw or undercooked meat: Particularly ground beef, as the grinding process can spread bacteria throughout the meat. Unpasteurized milk and dairy products: The pasteurization process kills Salmonella, so unpasteurized products carry a higher risk. Fresh produce: Fruits and vegetables can become contaminated if washed with contaminated water or if they come into contact with manure used as fertilizer. Spices and nuts: These have been implicated in several Salmonella outbreaks in recent years. Other sources of transmission While food is the primary source of Salmonella infection, other sources include: Water: Drinking water contaminated with fecal matter Person-to-person contact: Through the fecal-oral route, especially in settings with poor hygiene Contact with infected animals: Particularly reptiles like turtles, lizards, and snakes, which commonly carry Salmonella Cross-contamination: Using the same cutting boards, knives, or countertops for raw meats and other foods without proper cleaning Recognizing the symptoms of Salmonellosis The symptoms of salmonellosis typically appear 6 to 72 hours after infection, with most people showing signs within 12 to 36 hours. This incubation period can make it challenging to identify the exact source of infection. Common symptoms The primary symptoms of salmonellosis include: Diarrhea: Often watery and may contain blood or mucus Abdominal cramps and pain: Can range from mild to severe Fever: Usually between 38-39°C (100-103°F) Nausea and vomiting: Particularly in the early stages of infection Headache: Often accompanying fever Muscle pain: General body aches may occur Duration and severity Symptoms typically last for 4 to 7 days, and most people recover without specific treatment. However, the severity and duration can vary depending on several factors: The specific Salmonella strain: Some strains cause more severe symptoms than others The amount of bacteria ingested: Larger doses typically lead to more severe illness Host factors: Age, overall health, and immune status can affect severity High-risk groups While salmonellosis can affect anyone, certain groups face a higher risk of severe illness: Infants and young children: Their immune systems are still developing Elderly individuals: Immune function naturally declines with age Pregnant women: Changes in the immune system during pregnancy can increase susceptibility People with compromised immune systems: Including those with HIV/AIDS, cancer, diabetes, or on immunosuppressive medications Complications of Salmonellosis While most cases of salmonellosis resolve without complications, severe cases can lead to serious health issues, particularly in high-risk individuals. Dehydration The most common complication is dehydration due to persistent diarrhea and vomiting. Signs of dehydration include: Decreased urination Dry mouth and tongue Sunken eyes Reduced tear production Lethargy or irritability Skin that doesn't bounce back quickly when pinched Severe dehydration can lead to electrolyte imbalances, kidney failure, and even death if not treated promptly, especially in children and the elderly. Bacteremia In some cases, Salmonella bacteria can enter the bloodstream, a condition known as bacteremia. This can lead to infections in other parts of the body, including: Meningitis (infection of the membranes surrounding the brain and spinal cord) Endocarditis (infection of the heart valves) Osteomyelitis (infection of the bones) Arthritis (infection of the joints) Reactive arthritis Some people develop reactive arthritis, also known as Reiter's syndrome, days or weeks after a Salmonella infection. This condition causes joint pain and inflammation, particularly in the knees, ankles, and feet. It may also affect the eyes and urinary tract. Long-term carrier state A small percentage of people who recover from salmonellosis continue to carry and shed the bacteria in their feces for months or even years, potentially infecting others. This is more common with certain Salmonella serotypes like S. Typhi, which causes typhoid fever. Diagnosis and treatment of Salmonellosis Proper diagnosis and treatment are essential for managing salmonellosis and preventing complications. Diagnostic methods Healthcare providers typically diagnose salmonellosis through: Stool culture: The most definitive method, involving laboratory testing of a stool sample to identify the presence of Salmonella bacteria Blood tests: In cases of suspected bacteremia Medical history and physical examination: To assess symptoms and possible sources of infection Treatment approaches The treatment for salmonellosis depends on the severity of the infection: Fluid and electrolyte replacement: For mild to moderate cases, the primary focus is preventing dehydration through oral rehydration solutions or, in severe cases, intravenous fluids Antibiotics: Generally not recommended for uncomplicated cases as they may prolong the carrier state. However, they're essential for severe infections, bacteremia, or for high-risk individuals Antimotility agents: Medications that slow intestinal movements are typically avoided as they may prolong the infection Rest and supportive care: Including a bland diet during recovery Preventing Salmonellosis: Key strategies Prevention is the most effective approach to managing salmonellosis. Several strategies can significantly reduce the risk of infection. Food safety practices Proper food handling is crucial for preventing Salmonella contamination: Clean: Wash hands, utensils, and surfaces thoroughly before and after handling food, especially raw meat, poultry, and eggs Separate: Keep raw meat, poultry, and seafood separate from ready-to-eat foods to prevent cross-contamination Cook: Ensure foods are cooked to the appropriate internal temperature to kill bacteria. Use a food thermometer to verify: Poultry: 74°C (165°F) Ground meats: 71°C (160°F) Whole cuts of beef, pork, lamb, veal: 63°C (145°F) with a 3-minute rest time Eggs: Until both white and yolk are firm Chill: Refrigerate perishable foods promptly at 4°C (40°F) or below to slow bacterial growth Personal hygiene Good personal hygiene practices help prevent the spread of Salmonella: Handwashing: Wash hands thoroughly with soap and water for at least 20 seconds, especially: Before and after handling food After using the toilet After changing diapers After handling animals or their waste Avoid high-risk foods: Particularly if you're in a high-risk group Proper sanitation: Clean and disinfect bathrooms regularly, especially if someone in the household has salmonellosis Institutional and industry measures Beyond individual actions, broader measures are essential for preventing salmonellosis: HACCP systems: Hazard Analysis Critical Control Point systems in food production and processing facilities Regular inspections: Of food production facilities, restaurants, and other food service establishments Employee training: On proper food handling and hygiene practices in the food industry Pasteurization: Of milk, dairy products, and juices Irradiation: Of certain foods to kill bacteria Vaccination: Of poultry and livestock to reduce Salmonella prevalence Public health importance of Salmonellosis in India In India, salmonellosis represents a significant public health challenge due to several factors specific to the country's context. Epidemiological patterns The epidemiology of salmonellosis in India has distinct characteristics: High prevalence: Especially in densely populated urban areas and during the monsoon season when water contamination increases Unique serotype distribution: With S. Typhi and S. Paratyphi (which cause enteric fever) being more common than in many other countries Antimicrobial resistance: Growing concern about multi-drug resistant Salmonella strains Challenges in management and prevention Several challenges complicate the management and prevention of salmonellosis in India: Limited access to clean water: In many areas, increasing the risk of waterborne transmission Street food culture: Popular street foods often prepared in conditions with limited hygiene facilities Traditional food practices: Including the consumption of raw milk products in some regions Diagnostic limitations: Especially in rural areas where laboratory testing may be unavailable Self-medication: Common practice of antibiotic use without prescription, contributing to antimicrobial resistance Surveillance and control strategies In response to these challenges, several strategies are being implemented: Integrated Disease Surveillance Programme (IDSP): Monitoring foodborne disease outbreaks, including salmonellosis Food Safety and Standards Authority of India (FSSAI): Establishing and enforcing food safety standards Public education campaigns: Raising awareness about food safety and hygiene practices Water safety initiatives: Improving access to clean water and promoting water treatment methods Conclusion Salmonellosis remains one of the most prevalent foodborne illnesses globally, with significant public health implications, particularly in developing countries like India. While the bacteria can cause uncomfortable and sometimes serious symptoms, most cases can be prevented through proper food handling, cooking, and hygiene practices. Understanding the causes, symptoms, and prevention strategies for salmonellosis is essential not just for public health professionals but for everyone involved in food preparation and service. By implementing proper food safety measures at home, in restaurants, and throughout the food production chain, we can significantly reduce the incidence of this preventable disease. As future health professionals, recognizing the symptoms early and knowing when to seek medical attention can prevent complications, especially in vulnerable populations like children, the elderly, and those with compromised immune systems. The multifaceted approach to prevention—encompassing individual practices, institutional measures, and public health policies—demonstrates how collaborative efforts across different sectors are necessary to effectively combat this persistent public health challenge. What do you think? Have you ever considered how many opportunities exist in your daily food handling routine to prevent Salmonella contamination? What additional measures could be implemented in India's food safety systems to better address the unique challenges in preventing salmonellosis? Official websites use .gov A .gov website belongs to an official government organization in the United States. Secure .gov websites use HTTPS A lock () or https:// means you're safely connected to the .gov website. Share sensitive information only on official, secure websites. Salmonella is a bacteria that can make you sick when you eat food contaminated with it. The illness is called salmonellosis or salmonella infection, and it's very common. There are over a million cases of salmonella infection in the United States each year, according to the CDC. Symptoms include an upset stomach, diarrhea, fever, and pain and cramping in your belly. Most people get better on their own at home within 3 to 7 days. Digestive problems like stomach pain and diarrhea are the main symptoms of a salmonella infection. (Photo Credit: Moment/Getty Images) Salmonella and E. coli are similar kinds of bacteria, but they belong to different families. They differ in their sources and severity. Salmonella. You can get this through undercooked poultry, eggs, meat, and sometimes produce. It can also be spread through contact with infected animals, like reptiles and birds.E. coli. This bacteria can be found in contaminated beef, unpasteurized milk and juice, and produce. It can also be spread by feces (poop) from humans and animals.Symptoms. Both cause digestive issues like diarrhea (sometimes bloody), fever, cramps, and nausea.Severity. Both can cause unpleasant illness. But certain strains of E. coli can lead to more serious health problems and complications, like kidney failure. People and animals can carry salmonella in their intestines and their feces. The bacteria often spread through contaminated foods. Common food sources of salmonella infection include:Raw and undercooked meat, including chicken, turkey, duck, beef, veal, and porkRaw or undercooked fruits or vegetablesUnpasteurized milk and other dairy products, including soft cheese, ice cream, and yogurtRaw or undercooked eggsProcessed foods like chicken nuggets and nut buttersYou can also get salmonella directly through:Poor handwashing. You might pass along the bacteria by not washing your hands well after using the bathroom or changing a diaper.Pets. Animals like dogs, cats, birds, and reptiles can carry the bacteria.Salmonella in chickenChicken is one of the biggest sources of salmonella infection. According to the CDC, one in 25 packages of chicken at the grocery store have salmonella in them. You can get salmonella from chicken if it's not cooked properly, or if juice from raw chicken gets on a surface and food you eat touches it. Children, especially those under 5, are more likely than adults to get sick from salmonella. Older adults and people with weak immune systems are also more likely to be infected. Other risk factors include:International travel. Salmonella is more common in places with poor sanitation.Taking certain drugs. Cancer drugs or steroids can weaken your immune system. Antacids lower how much acid is in your stomach, which makes it easier for salmonella to survive there. Antibiotics can kill "good" bacteria in your body and make an infection harder to fight.Immune problems. You're also at risk if you live with a disease that decreases your immune function, such as HIV, sickle cell disease, or malaria.Inflammatory bowel disease. This can damage the lining of your intestines, making it easier for salmonella to take hold.Most of the signs and symptoms of a salmonella infection are stomach-related. They include:Cramps in your stomachBloody poopDiarrheaCold and chillsFeverHeadacheUpset stomachThrowing up Salmonella incubation periodSymptoms of salmonella poisoning tend to start 12 to 96 hours after an infection. In some cases, it could be up to a week.When should I call a doctor?See your doctor if you're still having general symptoms more than a week after first getting the infection.A young child, an older adult, or someone who has a weakened immune system should see a doctor if they have any of these symptoms:Bloody poopAn ongoing high feverDehydration, when they've lost too much fluid. Signs include peeing only in small amounts, a dry mouth, and sunken eyes.You can become dehydrated if you don't get enough fluids to replace what you lose because of diarrhea.A few people who get a salmonella infection also get pain in their joints. You might hear a doctor call it reactive arthritis or Reiter's syndrome. This condition can also cause pain while peeing and itchy, stinging, or sore eyes. If the salmonella infection gets into your blood, it can infect other parts of your body, including:The tissues around your brain and spinal cordThe lining of your heart or bone marrowThe lining of your blood vesselsYour doctor can usually diagnose a salmonella infection by listening to your symptoms. They might also test a sample of your poop. But it's likely that you'll be feeling better by the time your results come back from the lab. If you don't get better within a week, your doctor might want to do more tests, like blood tests, to see if something else is causing your illness. Treatment for salmonella poisoning usually focuses on rehydrating your body and restoring lost electrolytes, which are minerals that help balance the level of fluids in your body. If you have diarrhea, drink a lot of water and other fluids. Your doctor might suggest that you drink a rehydration liquid like Pedialyte. If your dehydration is severe, your doctor may want to get fluids directly into your system through an IV.Salmonella medicationsMost people recover from salmonella without medication. But if your case is severe or long-lasting, your doctor might recommend:Anti-diarrheal medication, such as loperamide (Imodium). These medications help relieve cramping and slow down the speed that fluids and stool move through your bowels so you have less diarrhea and more formed stools. Antibiotics might be prescribed for severe illness. When two or more people get salmonella from the same food or drink source, it's called an outbreak.In the event of a salmonella outbreak, be sure to:Know which type of food is involved in the contamination and avoid it. If you have some at home, throw it away or take it back to the store where you bought it. Wash any surface the food may have touched using hot soapy water or your dishwasher.Monitor yourself for symptoms and call your doctor if you have diarrhea, fever, or vomiting.If you're pregnant and get a salmonella infection, there is a very rare chance it could cause miscarriage. In about 4% of cases, a salmonella infection causes bacteremia, a condition that causes bacteria in the bloodstream and can lead to a pregnancy loss.It's also rare but possible that you could pass a salmonella infection to your baby in the womb. If your baby is born with salmonella, they can have meningitis that causes swelling around their brain and spinal cord.In most cases, you don't need to stop breastfeeding if you get salmonella, but you should talk to your doctor first. Salmonella can hide in a variety of foods, but you can do a lot of things to help ensure the bacteria stay away:Don't eat raw or undercooked eggs or meat.Don't eat or drink anything with unpasteurized milk or juice.Don't wash raw poultry, meat, or eggs before cooking. Washing can spread bacteria to other items and places in your kitchen.Wash raw fruits and vegetables well, and peel them if possible.Don't prepare food for other people if you're vomiting or have diarrhea.Refrigerate food properly, both before cooking it and after serving it.Wash your hands well with soap and warm water before and after handling food.Keep kitchen surfaces clean before preparing food in them.Don't mix cooked food with raw food or use the same utensils to prepare them. For example, don't use the same knife to cut raw chicken and then to slice mushrooms, and use different plates or cutting boards to slice them on.Cook meat to its correct minimum temperature. Use a food thermometer to be sure.Wash your hands with soap and water after touching animals, their toys, and their bedding.Salmonella is a bacteria that can infect you if you eat contaminated food or handle an animal that has it. It causes diarrhea, a fever, upset stomach, and cramping. Treatment involves rehydrating yourself and, in some cases, diarrhea medication or antibiotics. Symptoms typically go away within 3-7 days. How long are you contagious with salmonella?You can spread salmonella to other people as long as the bacteria is still in your body. This may be several days or as long as several months. If you take antibiotics, this can increase the amount of time the bacteria stays in your system. How long does salmonella live on surfaces?If salmonella gets onto a countertop or other surface in your home, it can live for up to 32 hours. Salmonella: Information for healthcare professionals and laboratories. Centers for Disease Control and Prevention. . Accessed Dec. 22, 2021.Salmonella: Questions and answers. Centers for Disease Control and Prevention. . Accessed Dec. 22, 2021.Nontyphoidal salmonella infections. Merck Manual Professional Version. . Accessed Dec. 22, 2021.Salmonella (salmonellosis). U.S. Food and Drug Administration. . Accessed Dec. 22, 2021.Hohmann EL. Nontyphoidal salmonella: Gastrointestinal infection and carriage. . Accessed Dec. 22, 2021.Salmonella questions and answers. USDA Food Safety and Inspection Service. . Accessed Dec. 22, 2021.Roadmap to reducing salmonella. USDA Food Safety and Inspection Service. . Accessed Dec. 22, 2021.Symptoms and causes of diarrhea. National Institute of Diabetes and Digestive and Kidney Diseases. . Accessed Dec. 27, 2021.Freedman S. Oral rehydration therapy. . Accessed Dec. 22, 2021.Raw milk questions and answers. Centers for Disease Control and Prevention. . Accessed Dec. 27, 2021.Medical review (expert opinion). Mayo Clinic. Dec. 30, 2021. Pop quiz: what is Salmonella? If you've ever had a run-in with this bacteria, you know it can cause a food-borne illness called salmonellosis, a form of food poisoning. But you may not know that Salmonella bacteria sicken an estimated 1.35 million people every year in the United States. What's more, it's the leading cause of hospitalizations and deaths due to food poisoning. And Salmonella bacteria can be sneaky — not only by triggering unusual complications, but infecting people in startling ways, says Dr. Elizabeth Hohmann, an infectious disease specialist at Massachusetts General Hospital. One patient she treated showed up with an abdominal aortic aneurysm — a dangerous bulge in the lower section of the body's largest artery — that looked infected. Testing revealed a culprit some would find surprising: Salmonella. "It's just an interesting organism and it can be kind of scary," she says. How do people get infected by Salmonella? Many of the foods Salmonella bacteria lurk in are raw or undercooked. Breaded raw chicken products like nuggets and chicken Kiev are one way it may reach your table. But a variety of foods have been implicated — including organic basil, cantaloupes, ground beef, nut butters, raw cookie dough, eggs, raw or unpasteurized milk, and flour. Backyard poultry are another source of Salmonella outbreaks. Even small pets such as turtles and frogs, along with dog food, have contributed to multistate outbreaks in recent years. You can also become infected by handling contaminated food and spreading the bacteria from your hands to your mouth. Additionally, you can spread it to others on your hands or even on your clothes without becoming sick yourself. "It's a bug that's carried in stool and animal feces and is also present in the environment," Dr. Hohmann says. "So it can set up shop in lots of different inanimate objects, soils, and machinery, especially in moist environments." What symptoms can Salmonella cause? Most of the time Salmonella infection leads to gastroenteritis, usually causing just an upset stomach, abdominal cramps, and diarrhea. These symptoms can start as soon as six hours after ingesting the bacteria. Typically, symptoms resolve on their own within two to three days. Some people have such mild symptoms they're barely noticeable. "The classic case might be a college student who eats a burrito from a sketchy place, gets sick for a couple of days, gets better, and doesn't think anything of it," says Dr. Hohmann. Sometimes symptoms are more serious, such as severe abdominal cramping and bloody diarrhea, or unexplained high fever and marked fatigue. These symptoms require a call to your doctor. How is salmonellosis treated? Most people will get better on their own without any medicines. Replacing lost fluids by sipping water or electrolyte drinks to avoid dehydration will help. Call a doctor if you have diarrhea and a fever higher than 102° F diarrhea that doesn't improve after three days bloody stools vomiting so severe it prevents you from keeping liquids down. Treating the infection with medicine comes with an annoying paradox, Dr. Hohmann says. If doctors decide to prescribe antibiotics, the person taking the medicine may shed the organism for longer than if they were never treated. "Then that person may have the opportunity — either through poor personal hygiene, sex, or working as a food worker — to spread it to others," she explains. "It's challenging." What complications can Salmonella lead to? A small percentage of those infected can have Salmonella in their blood, which can spread the infection to other parts of the body such as the urinary tract, bones, joints, or central nervous system (brain and spinal fluid). And, like Dr. Hohmann's patient with the abdominal aortic aneurysm, on rare occasions Salmonella can lead to unusual blood vessel complications in people who already have atherosclerosis, blockage of the arteries caused by plaque buildup. What steps can you take to avoid Salmonella? We all can take steps to avoid the food poisoning, illness, and hospitalizations that Salmonella exposure can cause. Dr. Hohmann and the CDC suggest these strategies: Using hot water and soap, wash cutting boards or plates on which you cut into raw foods — including vegetables and fruit — before using those surfaces for other purposes. If possible, use separate cutting boards for produce, meat, and fish. Refrigerate or freeze foods that are perishable, prepared, or left over within two hours to thwart salmonella growth. Always wash hands well with soap and water before preparing food and after contact with animals, using the toilet, or changing diapers. If you have a sick pet, take extra care handling its feces and wash your hands thoroughly afterward. Take additional steps to help more vulnerable people stay healthy: Don't let young children touch high-risk animals, such as turtles, frogs, chickens, or ducks. "And if you're taking young children to a petting zoo, they should not be petting animals unless you can disinfect their hands immediately afterward," she says. Older adults and those with compromised immune systems should take extra care to wash and cook foods thoroughly. People who have had a transplant (such as a kidney transplant) should not keep reptiles or amphibians as pets. "You hate to make people paranoid, so that we're washing our lettuce leaves with soap, but it's worth thinking about these things, particularly if you have people in your household who are susceptible — which is an increasing number of people," Dr. Hohmann says. Symptoms of salmonella appear anywhere from a few hours to a few days after exposure to Salmonella bacteria. Symptoms of salmonella affect your stomach and intestines (GI tract) and include:Diarrhea (sometimes bloody).Fever.Stomach pains or cramps.Nausea and vomiting.Headache.You may have some or all these symptoms.Do you always throw up with salmonella?No, you don't always throw up when you have Salmonella poisoning. The most common symptoms are diarrhea and fever, though you do sometimes throw up.What does salmonella poop look like?When you have a salmonella, your poop is usually runny and you may have to go a lot. It may have blood in it. Call or visit your healthcare provider if you have blood in your poop.What causes salmonella?Salmonella poisoning is caused by the bacteria Salmonella. When more Salmonella bacteria get into your body than it can destroy, you get an infection that causes fever, diarrhea and other stomach (gastrointestinal) issues.Salmonella bacteria live in the guts of people and animals, but the things we eat, drink and touch can also be contaminated, including:Raw eggs and eggshells.Raw red meat, seafood and poultry.Fruits and vegetables.Unpasteurized milk or cheese.Untreated water.The fur, feathers, scales, skin and poop (feces) of animals and the places they live.Surfaces around someone who's infected with Salmonella bacteria.How do you get salmonella?The most common way to get salmonella is from undercooked food or improper food prep, for instance:Eating uncooked or undercooked meat, poultry, seafood or eggs.Eating contaminated fruits and vegetables.Drinking contaminated water or unpasteurized milk.Not washing your hands while preparing food and eating.You can also get salmonella from animals and people who are infected with Salmonella bacteria. You can get Salmonella bacteria on your hands when you touch an animal, then transfer it to your mouth. Almost any animal can have a Salmonella infection or carry Salmonella bacteria on its fur, feathers, scales or skin. This includes:Amphibians (frogs and toads).Reptiles (turtles, lizards and snakes).Birds (chicken, ducks, turkey and wild birds).Farm animals (cows, goats, sheep and pigs).Pets (dogs, cats, birds and small animals).What food is Salmonella found in?Almost any uncooked foods could be contaminated with Salmonella bacteria, but most people get sick from uncooked or undercooked poultry or eggs.Does Salmonella have a smell?No, Salmonella bacteria doesn't have a smell. Food contaminated with Salmonella bacteria usually smells and looks normal.Is salmonella contagious?Yes, salmonella is contagious — you can get a Salmonella infection from another person or even your pet. If you don't wash your hands after going to the bathroom or while you are sick, you can contaminate surfaces and foods and spread Salmonella to other people.

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