



Pathological Foodborne Illness Caused by *Salmonella* Infection in Humans

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ABOUT THE STUDY

The intestinal tract system is affected through a common bacterial infection called *Salmonella* Infection. *Salmonella* usually inhabits the intestines of animals and humans and is excreted in feces. Humans are most commonly transmitted through contaminated water and food. Contaminated foods are often of animal origin, such as poultry, pork, beef, chicken, milk eggs, and also including all vegetables, can be contaminated. Many raw foods of animal origin are generally contaminated, but fortunately, cooking kills *Salmonella* [1]. Food can also be contaminated by unwashed hands in infected grocery stores that have not washed their hands thoroughly after using the toilet.

Salmonella may also be found in the feces of some pets, and people can become infected if they do not wash their hands after contact with animals. Some people with *salmonella* infection have no symptoms. Most people develop diarrhea, fever, and stomach (abdominal) cramps within 8 to 72 hours after exposure most healthy people recover within a few days to a week without special treatment. In some cases, diarrhea can cause severe dehydration and requires immediate medical attention. Life-threatening complications can also occur if the infection spreads beyond the intestines. The risk of *Salmonella* infection is increased when traveling to countries without safe drinking water and proper hygiene. Symptoms usually begin 6 hours to 6 days after infection and last up to 4 to 7 days. However, some people have no symptoms for a few weeks after infection, while others have symptoms for a few weeks. The *Salmonella* strain can cause infections of the "spinal fluid and brain" of the urine, blood, bones, joints, or nervous system, which can cause serious illness. Most people recover from *Salmonella* infection within 4-7 days without antibiotics [2]. People infected with *Salmonella* need to drink extra fluid for the duration of diarrhea. The antibiotic treatment is recommended for people with serious illness and weakened immunity due to HIV infection or chemotherapy treatment, adults over 50 with medical problems such as Heart disease, infants (children under 12 months), and Adults over 65 years old. Most people with *Salmonella* diarrhea recover

completely, but some may take months to normalize their bowel habits (frequency and consistency of bowel movements) [3].

Some people with *Salmonella* infection develop joint pain called reactive arthritis after the infection has stopped. Reactive arthritis can last months or years and can be difficult to treat. Some people with reactive arthritis develop eye irritation and painful urination. Children under the age of 5 are most likely to have *Salmonella* infections. Infants who are not breastfed (children under 12 months) are more likely to have *Salmonella* infections. Infants, adults over the age of 65, and people with weakened immunity are most likely to have a serious infection. People taking certain medications (such as stomach acid lowering medications) are at increased risk of infection [4].

Salmonella is becoming more resistant to essential antibiotics and may limit treatment options for people with severe infections. One way to delay the development of antibiotic resistance is to use antibiotics properly. Proper use of antibiotics in humans and animals (only when necessary, as directed) helps prevent the spread of antibiotic resistance and resistant strains. Consult the doctor if there are any symptoms like Diarrhea and fever above 102°F, Diarrhea for 3 days or more that does not improve, Bloody stool, Prolonged vomiting that prevents liquids from being held down signs such as dehydration, no urine, Thirst, and throat, Dizziness when standing up [5]. Follow guidelines for cleanliness, separation, cooking, and refrigeration to protect the entire family from *Salmonella* infections and other types of food poisoning.

Wash your hands with soap with clean running water for 20 seconds before and after handling food, especially after touching raw or undercooked eggs, meat, chicken, seafood, or juices. Wash utensils, chopping boards, dishes, and countertops with hot soapy water. Don't wash raw eggs, meat, chicken, and shellfish before cooking. When washed, bacteria can spread to other foods, utensils, and surfaces. Disinfect the surface of the kitchen with a freshly made solution of 1 tablespoon of unscented liquid chlorine bleach in 1 gallon of water. Keep raw meat, chicken, seafood, and eggs separate from other groceries in

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the refrigerator. Keep the eggs in the original carton and store them in the main part of the refrigerator, not at the door. Keep raw meat, chicken, and seafood separate from ready-to-eat foods such as salads. Use separate chopping boards and plates for produce and raw meat, chicken, seafood, and eggs. Do not place cooked foods on plates that previously contained raw or undercooked dishes [6].

CONCLUSION

Use a food thermometer to make sure the food is cooked to a safe internal temperature. 145°F for beef, pork, ham, veal, and mutton (rest for 3 minutes before engraving or eating), 145°F for finned fish (or cook until the meat is opaque), Minced beef, minced pork, veal, and minced lamb are 160°F, Egg dishes are 160°F, 165°F for poultry (chicken, turkey, duck) containing minced beef and minced turkey, 165°F for a casserole, Heat the food above 165°F in the microwave, Boil the eggs properly. Do not eat raw eggs or eggs with whites or yolks. Keep the refrigerator below 40°F.

Do not leave fresh food in the refrigerator for more than 2 hours. If food is exposed to temperatures above 30°C (eg. hot cars or summer picnics), refrigerate or freeze within an hour.

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