



Salmonellosis

Alternate Names: Salmonellosis.

Species Affected: Most animals and humans.

What causes salmonellosis? Different kinds (also called serotypes or serovars) of *Salmonella* bacteria, which infect the intestines of animals and people. Some *Salmonella* serotypes are host-specific, meaning that they tend to cause disease in a specific kind of animal (e.g., *S. Gallinarum* in poultry, *S. Dublin* in cattle, *S. Cholerasuis* in pigs). Most *Salmonella* serotypes can infect most animals and people.

How are *Salmonellas* transmitted? *Salmonellas* are shed in the scat of infected animals and people contaminating water, feed, and the environment. Animals and people get infected by eating *Salmonellas* (i.e. fecal-oral transmission). In heavily contaminated places *Salmonellas* carried by dust may enter through respiration or through contact with the eyes. Mice, flies and other pests, as well as most reptiles (e.g. snakes, lizards, and turtles) are potential carriers of *Salmonella*.

What are the clinical signs of salmonellosis? Depend on the *Salmonella* serotype, age, and immune status. Very young, very old, and immune compromised animals and people are at higher risk of severe salmonellosis with septicemia (bacteria in the blood), fever, enteritis (gut inflammation), diarrhea, dehydration, and death.

Signs of salmonellosis also vary by type of animal affected, for example: sheep may abort, dogs may have pneumonia and cats, conjunctivitis (pink eye). Pregnant mares may shed *Salmonella* during birth and infect their foal causing septicemic salmonellosis.

Healthy adults (people and animals) may become carriers of *Salmonella* without any signs of disease and may intermittently shed the bacteria.

What are the consequences of salmonellosis? Depending on the above-mentioned factors, direct consequences to the infected animal or person range

from no illness to death. Some serovars of *Salmonella* are a food safety risk, others are a health risk to animal owners and handlers.

How is salmonellosis detected? It can be suspected based on clinical signs and clinical history. Laboratory tests on animal samples (like blood or manure) or on environmental samples (like feed or barn swabs) are necessary to confirm the presence of disease-causing *Salmonella*. Tests include bacterial growth and isolation by microbiology techniques and use of PCR (Polymerase Chain Reaction, a molecular test to detect genetic material) to identify the serovar.

How is salmonellosis prevented? Good husbandry and biosecurity practices help prevent the introduction of disease-causing *Salmonellas* into animal populations. Biosecurity includes sourcing animals from farms with a known health status, quarantining new arrivals to observe their health before mixing with the resident herd, maintaining clean and well-bedded maternity pens, preventing contamination of feed with mice droppings. When salmonellosis is detected on farm, infected animals should be moved away from healthy animals, if possible, sick animals should be cared for by a designated person using designated tools and equipment. If not possible, healthy animals should be cared for first. Areas where sick animals were present as well as tools and equipment in contact with manure from sick animals should be thoroughly washed and disinfected. People tending for animals with salmonellosis should be made aware of the risks to their health. Thorough hand washing, use of eye and respiration protection, as well as avoiding eating, drinking, or smoking around animals decrease the risk of infection with *Salmonella*. Raw milk from *Salmonella* carriers is a food safety risk, milk from these animals should be pasteurized. Hand washing after touching animals or their environments is always a good idea. Pest control (rodents and flies) is necessary to prevent further spread of *Salmonellas*.

Vaccination against some serotypes of *Salmonellas* is available for some animal species, consult with your veterinarian to determine if vaccination of your flock/herd is advisable.

Livestock industry organizations in Canada have specific *Salmonella* control programs in place.

How can salmonellosis be treated? Septicemic salmonellosis is treated with the correct antibiotic as prescribed by a health professional. Supportive care such as IV fluids, anti-inflammation medicine, rest, low-stress environments, extra bedding, and warmth help animals recover.

Treatment of intestinal *Salmonellas* with antibiotics is controversial and should be discussed with your veterinarian. Inappropriate use of antibiotics leads to selection of drug-resistant bacteria.

Is salmonellosis reportable? Depending on the *Salmonella* serovar salmonellosis is a Notifiable disease in British Columbia. Detection of *Salmonella* Dublin, *S. Enteritidis*, *S. Heidelberg*, or *S. Typhimurium* in any animal must be notified within 24 hours to the [Office of the Chief Veterinarian](#).

Is salmonellosis zoonotic (transmitted from animals to humans)? Yes. Humans get infected with *Salmonellas* by eating the bacteria from contaminated foods (i.e. food poisoning). Improper hand washing after touching sick animals, healthy *Salmonella* carriers (e.g. Reptiles, rodents, birds) or their environments increases the risk of salmonellosis in humans.

References:

- Grünberg, W. (2022, October). *Salmonellosis in Animals*. Merck Veterinary Manual. <https://www.merckvetmanual.com/digestive-system/salmonellosis/salmonellosis-in-animals>