

Fact Sheet for Animal Owners

Salmonella Dublin

This Fact Sheet is intended for owners, custodians and/or handlers of cattle that have been diagnosed with *Salmonella* Dublin infection by a veterinarian. This fact sheet provides basic information only. It must not be used in the place of medical advice, diagnosis or treatment. Always talk to a health care professional about any health concerns you have.

What is *Salmonella* Dublin?

Salmonella Dublin is a serotype of *Salmonella* bacteria that is primarily carried by and causes illness in dairy and beef cattle. *Salmonella* Dublin can be transmitted from animals to people. The bacteria can cause severe illness in humans. Other animals are rarely infected with *Salmonella* Dublin but can develop serious illness and contribute to its spread including dogs, sheep, goats, horses, pigs, mice, rats, and mink. Many strains of *Salmonella* Dublin are resistant to several different antibiotics making it more difficult to treat.

How do people get *Salmonella* Dublin?

Salmonella Dublin is most often spread to people by the consumption of raw, unpasteurized milk or milk products such as raw milk cheese. Infected cows shed the bacteria in their milk. It can also be acquired from insufficiently cooked meat such as ground beef.

Animal caregivers are at risk of infection through direct contact with infected cattle. *Salmonella* Dublin bacteria are shed in infected animals' feces, milk, or vaginal discharge. People can also be exposed indirectly when handling manure, bedding, or contaminated equipment or surfaces in the pen. Transmission occurs when you touch your mouth, nose, or eyes before thoroughly washing your hands.

How does *Salmonella* Dublin affect people?

Salmonella Dublin can cause severe infections in humans. While cases in humans are rare in Ontario, a high proportion of humans infected with *Salmonella* Dublin develop a bloodstream infection. These infections can be life-threatening and frequently require hospitalization and specific antibiotics to fight the infection. Increasing resistance to antibiotics can make infections more difficult to treat. Some groups are more vulnerable to infection including young children, those with weakened immune systems, and older people.

How does *Salmonella* Dublin affect animals?

The most common sign of *Salmonella* Dublin in cattle is respiratory disease in calves 2 weeks to 6 months of age that fails to respond to treatment. As in people, *Salmonella* Dublin causes a blood

stream infection. Infection can spread through the bloodstream to other organs and the infection can be fatal. *Salmonella* Dublin typically causes high mortality in susceptible calves. Less frequently, infection is associated with illness and abortion in mature cattle.

Surviving animals have a high probability of becoming carriers of the disease. Carrier animals can maintain the infection within a herd by periodically shedding the bacteria and infecting new animals.

How can I protect myself, staff, and visitors to my farm from getting infected with *Salmonella* Dublin?

- Restrict visitor access, especially to the calf area. Children younger than 5 years of age, adults older than 65 years and people with weakened immune systems should not access the cattle or cattle housing
- Wear gloves while handling sick cattle
- Practice frequent hand washing, especially after handling animals and always before eating or drinking
- Wear coveralls while handling animals and remove before leaving the barn. Wash separately from other household laundry.
- Wear appropriate personal protective equipment (coveralls, medical face mask, eye protection) when cleaning out pens and avoid using a pressure-washer which can spray bacteria into the air
- Do not consume unpasteurized milk or milk products

How can I prevent further spread of *Salmonella* Dublin among my animals?

- Maintain a clean, well bedded calving area and do not use for sick animals
- Remove calves from the calving area after birth
- Isolate sick calves to reduce exposure to healthy calves
- Change or disinfect boots between groups of cattle (young vs old, dry vs lactating) and always after caring for sick calves
- Frequently wash and sanitize feeding equipment used for calves
- Housing and other surfaces that come into frequent contact with manure should be cleaned and disinfected

Who should I contact if I suspect *Salmonella* Dublin or have more questions?

- For concerns about human health, contact your healthcare provider or local public health unit
- For concerns about animal health, contact your veterinarian

This document was produced in collaboration with Public Health Ontario.