



Lecture title: Listeriosis

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Summary:

is an infection caused by the bacterium *Listeria monocytogenes*.

The disease occurs worldwide. Few people get listeriosis, but it is an important disease because of its high death rate due to encephalitis and bacteremia.

What animals get listeriosis (species affected)

In animals, listeriosis is most common in ruminants (sheep, goats and cattle) but occasional cases have occurred in rabbits, guinea pigs, dogs, cats, pigs, poultry, canaries, parrots and other species. A wide variety of domestic and wild mammals, birds, fish and crustaceans can carry the bacteria without getting sick.

How can my animal get listeriosis (Sources of infection)?

Listeria bacteria are widespread in the environment in soil, plants, mud and streams. Cattle, sheep and goats usually get sick from eating (oral) contaminated corn silage (livestock feed that is harvested while green and partially fermented in a silo or bunker). Poor quality silage with a high pH (low acid content) has been involved in most outbreaks because the bacteria can multiply in this environment..

Infected animals can shed *L. monocytogenes* in the feces, milk and uterine discharges. It is also found in aborted fetuses and occasionally in the nasal discharges and urine of symptomatic animals. Soil or fecal contamination results in its presence on plants and in silage.

The form and clinical signs in animals

In ruminants, listeriosis can cause encephalitis , abortion or septicemia. Signs include depression, loss of appetite, fever, lack of coordination, salivation, facial paralysis, and circling. Disease is more common in younger animals (1 to 3 years old). Infection can also cause mastitis in cows.

Can I get listeriosis? Route of transmission



Yes. Humans can become infected with *Listeria*. Most infections are caused by eating the bacteria in food (**oral**), but the bacteria can also be spread by inhalation (**aerosol**) or **direct contact**. Most cases in the United States involve newborns. Women can become infected during pregnancy but usually show no signs of illness, however, their fetus or newborn infant can die from the infection. The elderly or individuals with weak immune systems are also at greater risk for the disease. A skin infection form of the disease can occur in people who handle sick animals.

Clinical Signs in man:

Listeriosis is usually a serious problem only in pregnant women, newborns, the elderly, and immunocompromised or debilitated hosts.

Pregnant women may experience either a mild, flu-like syndrome or gastrointestinal signs, or an asymptomatic infection. This may be followed in a few days to weeks by abortion, stillbirth, premature birth or septicemia in the newborn.

Newborns may be infected either in *in utero* or from bacteria found in the vagina during delivery. These infants can develop septicemia, disseminated granulomatosis, respiratory disease or meningitis; symptoms may be present at birth or develop within a few days to several weeks.

In elderly, immunocompromised or debilitated persons, *L. monocytogenes* can cause meningitis, meningoencephalitis or, less frequently, septicemia. The clinical signs of a central nervous system (CNS) infection may include confusion, seizures, cranial nerve deficits, ataxia, tremors or myoclonus.

How can I protect my animal from listeriosis:

Feeding good quality corn silage with a low pH (high acid content) can decrease the risk of listeriosis to ruminants. Avoid spoiled or moldy silage and silage from the top layer (few inches) which has been exposed to air. Any leftover silage should be removed from the feedbunk after feeding. Rodents should be controlled. Animals sick with listeriosis should be isolated from other animals. If an animal aborts, the placenta and fetus should be properly disposed of to prevent animal and human contact.



How can I protect myself from listeriosis:

Thoroughly cook all food, especially meats. Wash fruits and vegetables before eating them. Do not eat or drink unpasteurized milk products. Pregnant women or people with weak immune systems should avoid soft style cheeses and deli meats. When assisting ruminant animals during the birthing process, wear gloves. Always wash your hands after touching animals