



THE UNIVERSITY OF TENNESSEE
Occupational Health Program

Listeriosis

1.0 Introduction

Listeriosis is a serious infection caused by the bacteria *Listeria monocytogenes*. The pathogen can be found in variety of environments, including soil, water, decaying vegetation and animals. The bacteria may even survive under refrigeration or other types of food preservation measures. Listeriosis is usually contracted in humans by eating contaminated food. Pregnant women, newborns, older adults and individuals with weakened immune systems are more susceptible to the becoming sick with the disease. It is rare for other groups to get sick with *Listeria* infection.

2.0 People at Risk

Individuals at greatest risk for Listeriosis include:

- Pregnant women usually suffer from mild illness when contracting *Listeria* infection.
- Unborn fetus or newborn infants with listeriosis experience more severe symptoms due to immature immune systems.
- Adults aged 65 or older and individuals with weakened immune symptoms may develop severe infections of the bloodstream which can progress to sepsis, and can also migrate into the brain causing meningitis or encephalitis.
- Veterinarians and other animal workers can be exposed by inhalation (aerosol) or direct contact with animals carrying the *Listeria* bacteria.
- *Listeria* can also cause a skin infection form of the disease from individuals who handle *Listeria* infected animals

3.0 Transmission

- **Transmission to Animals**-*Listeria* is widespread and often found in soil, plants, and streams. Cattle, sheep, and goats usually contract *Listeria* from eating contaminated corn silage, particularly from livestock feed that is harvested while green and partially fermented in a silo or bunker.
- **Transmission to Humans**- The primary source for *Listeria* in humans is consumption of contaminated food. Veterinarians and other animal workers are at greater risk of exposure through inhalation of the bacteria in aerosols or by direct contact while caring for infected animals. *Listeria* can also cause a skin infection in people who handle animals infected animals.

4.0 Signs and Symptoms

Animal signs and symptoms:

- encephalitis
- abortion of fetus
- blood poisoning
- depression, loss of appetite

- fever
- lack of coordination
- salivation
- facial paralysis
- circling

Human Signs and Symptoms:

- fever
- diarrhea
- Pregnant women: fever, fatigue, muscle aches, can progress to miscarriage, stillbirth or premature delivery, or life-threatening infection of the newborn
- People other than pregnant women: headache, stiff neck, confusion, loss of balance, and convulsions, in addition to fever and muscle aches.

5.0 Diagnosis, Prevention and Treatment

Diagnosis-Listeriosis is typically diagnosed when a bacterial culture grows *Listeria monocytogenes* from a body tissue or fluid such as blood, spinal fluid or the placenta.

Prevention in animals is best accomplished by feeding good quality corn silage with low pH. Avoid feeding soiled or moldy silage or silage from the top layer which has been exposed to the air. Any leftover silage should be removed from the feed bunk after feeding. Rodents also should be controlled in feed areas.

Prevention in humans is accomplished by frequent handwashing and wearing glove while caring for animals. Avoid consuming unpasteurized dairy products or soft cheeses made with unpasteurized milk. Melons have been tied to listeriosis outbreaks and should be consumed immediately after cutting, or keep cut fruit stored refrigerated. Sprouts require humid conditions which may promote *Listeria* growth and should be avoided by pregnant women. Do not eat sprouts that are raw or lightly cooked. Refrigerate hot dogs, lunch, and deli meat and don't let the juices from their packages get on other foods, utensils, or food prep surfaces.

Treatment- If experiencing symptoms consistent with Listeriosis and you engage in activities with a high risk for exposure (e.g. veterinarian, animal care worker), be sure to inform your health care provider. *Listeria* is treated with antibiotics, most commonly with ampicillin in combination with gentamycin or trimethoprim-sulfamethoxazole.

6.0 Resources

[CDC Listeriosis Link:](#)

For further information related to possible zoonotic disease exposure, or further related resources, please contact UT Occupational Health Nurse Bryan Cranmore RN, COHN at bcranmore@utk.edu, or for urgent response the OHP nurse can be reached at 865-755-8924

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