

## Listeria

**Infectious agent:** *Listeria monocytogenes*

**Occurrence:** Occurs worldwide. In North America rate incidence of infection requiring hospitalization is approximately 1/200,000. Tends to occur sporadically but can cause outbreaks. About 30% of clinical cases occur in infants.

**Reservoir:** Can be found in soil, forage, silage and sometimes water. Asymptomatic fecal carriage is common in humans (up to 10%). *Listeria monocytogenes* can be found in a variety of foods, including unpasteurized milk and cheeses, and ready-to-eat meats. Listeria can grow in contaminated refrigerated foods.

In this outbreak, it has been linked to meats from the Maple Leaf processing plant in Ontario. A massive nation-wide food recall has been undertaken.

**Transmission:** The most common exposure in humans is through non-pasteurized milk and cheeses and ready-to-eat meats. The incubation period of Listeria ranges from 3-70 days, with median of 3 weeks so cases may continue to develop for some time after the recall. Infected persons can shed the organism in their stool for several months, so there may be secondary cases later.

**Symptoms/signs of Listeriosis:** fever, muscle aches, occasionally nausea, vomiting, diarrhea. Severe cases can present as septicemia or meningoen­cephalitis.

Possible rare complications: endocarditis and abscesses

Pregnant women usually experience a mild febrile illness but can present as fever and abortion. Infant can be stillborn or born with septicemia or meningitis, regardless of maternal symptom severity. (Case fatality rate can be ~50% if onset of infection is within the first 4 days.)

**Population at risk:** *Older adults; immune-compromised; pregnant women and newborns.* Most healthy people can ingest the organism and not become ill. Children and young adults are relatively resistant to severe disease.

Cooking kills *Listeria*, so only those who have consumed ready-to-eat meats are at potential risk in current outbreak.

**Investigations:** Blood culture if systemic symptoms; CSF culture if meningoen­cephalitis. In the situation of a stillborn infants culture placenta, amniotic fluid. *Stool cultures are not done; serology is not available.* Mild cases need no investigation. Food cultures will only be done as part of a public health investigation of a confirmed case.