

10. Listeriosis

(Notifiable)

Description: *Listeria monocytogenes* is a bacterial infection that causes gastroenteritis. Severe cases can develop septicaemia or meningitis. Although a rare infection, its public health importance lies in its having a high case fatality rate with a wide range of groups at increased risk of infection and harm.

Annual Numbers: Between 10 and 20 cases per year.

Seasonal Distribution: There is no seasonal pattern of incidence.

Causative Agent: *Listeria monocytogenes* is the species responsible for causing human disease. The serovars responsible for more than 90% of clinical cases are 4b, 1/2a and 1/2b. *Listeria* can grow at temperatures down to 0°C. Although *Listeria* is permitted at low levels in ready to eat (RTE) food, the Food Safety Authority of Ireland has indicated that the presence of *L. monocytogenes* in RTE foods of more than 100 colony forming units per gram of food is unacceptable.

Reservoir: Environment: soil, surface water, drains, sewage and food.

Transmission:

Primary: Usually foodborne, frequently associated with raw (unpasteurised) milk or foods made from raw milk, soft or mould-ripened cheeses (e.g. feta, Brie, Camembert, blue-veined cheeses), cooked meats, pâtés or smoked fish. Contact with infected animals. Foodborne transmission is probably for in excess of 95% of cases.

Secondary: person to person transmission takes place more readily between mother and baby. Transplacental transmission also occurs. Person to person transmission has occasionally been documented in crèches.

Outbreak Potential: *Listeria* has low to moderate outbreak potential if transmitted through food.

Incubation period: The incubation period for listeriosis varies widely and ranges from 3 to 70 days, with the typical incubation period being about three weeks.

Period of communicability: Communicability lasts as long as *Listeria* is shed in faeces.

Epidemiology: *Listeria* is very hardy and can remain viable in silage and soil for more than two years. Five percent of the population carry *Listeria* in the gastrointestinal tract. The disease affects primarily pregnant women (and their unborn children), newborns, the immunosuppressed and the elderly.

Exposure-prone groups: residents in institutions, those eating high risk foods (pâtés, cheeses, smoked fish), food handlers.

Clinical Features: generally a flu-like illness with fever and myalgia; diarrhoea is only occasionally seen. The disease may present with features of a foodborne infection with diarrhoea. Those who are immunosuppressed (and small babies) often present with features of bloodstream infection or meningitis. Infection in pregnant women is quite common (pregnancy is a hypimmune state) and may result in spontaneous abortion or neonatal infection. Case fatality rates are particularly high in neonates and those over 65. Overall the mortality rate is between 10 and 20%.

Clinical Management of Cases

Enteric precautions.

Admit to hospital if necessary.

The case should be notified to the local Department of Public Health. It is important to determine if the case is aware of similar cases suggesting the possibility of an outbreak. Determine if case is in a risk category.

Public Health Management of Cases: Obtain food history for one month prior to symptoms. Determine if linked cases.

Food Hygiene Implications: Food hygiene re-education is necessary for food handlers.

Public Health Management of Contacts

Clinical surveillance.

Exclusion: Until 48hr after first normal stool (if diarrhoeal presentation).

Microbiological Clearance:
None

Notifiable: to the local [Medical Officer of Health](#).

Listeriosis has a high mortality rate – about 25% in severe cases of illness