

Biological Hazard Guide Example: Listeria

Disease, Symptoms and Onset	<ul style="list-style-type: none">• Listeriosis, clinically characterized as meningitis, meningoencephalitis, septicemia, abortion, perinatal infection, and gastroenteritis• Presents as lateral deviation of head and neck, fever, vomiting, loss of balance, nausea, confusion, convulsions, diarrhea, gastrointestinal septicemia, and abortions• Incubation period is 1 to 2 days
Source	Poor quality silage, plant matter
Transmission	Transmission to animals occurs through feed.
Characteristics	<ul style="list-style-type: none">• Non-sporforming, Gram-positive rods• Grows under aerobic conditions. Grows in a temperature range of 4 to 37°C• Low pH prevents growth; optimum pH for growth is 6.5 to 7.5• Survives well in frozen or dry state• Only <i>Listeria monocytogenes</i> causes disease• Not highly contagious; large numbers of Listeria are required for disease
Control	<ul style="list-style-type: none">• Prevention of Listeria growth by keeping feed at low pH (less than 4.5)• Pellet form keeps moisture levels low enough to prevent Listeria growth• Heat treatment will also kill enough Listeria to keep the numbers at levels below disease threshold