

Listeria monocytogenes

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What is Listeriosis?

Listeriosis is a rare illness caused by eating food contaminated with bacteria called *Listeria monocytogenes*. The listeria bacteria are common in soil and some raw foods. Eating foods that contain *Listeria* does not cause illness in most people.

Who is most at risk?

Pregnant women, newborns, the elderly and people with weakened immune systems.

How common is it?

There are typically 20 to 30 cases of listeriosis reported each year in NSW. Although listeriosis is rare, it has a high death rate.

What are the symptoms?

The incubation period (between infection and symptoms) can vary from three to 70 days but on average is about three weeks. Infections may cause septicaemia (blood poisoning), meningitis (inflammation of the brain) and miscarriage in pregnant women.

Symptoms include: fever, muscle aches and sometimes gastrointestinal symptoms such as nausea and diarrhoea.

In the more severe form, symptoms also include collapse and shock. If infection spreads to the central nervous system, symptoms such as headache, stiff neck, confusion, loss of balance, convulsions and coma can occur. About a third of these patients may die.

Infection during pregnancy can lead to premature delivery (abortion), infection of the newborn, and stillbirth.

What are the causes?

Most cases have been traced to ready-to-eat (RTE) foods, including pre-cooked chicken, sliced deli meats, pâté and processed meat paste, smoked salmon, shellfish products, soft and surface ripened cheeses and prepacked raw vegetables and fruit.

Because it can grow in refrigerators (as low as 1°C), controlling *L. monocytogenes* can be more difficult than other food-borne pathogens. It can also grow in wet areas of food processing environments, such as floors and drains. It can also spread by aerosols, factory personnel and transport vehicles, and is difficult to eradicate.

L. monocytogenes is killed by normal cooking temperatures and during pasteurisation of milk. But it

can survive freezing and is resistant to high levels of salt. It can also grow in vacuum-packed products.

How can the risk of infection be minimised?

- thoroughly cook raw food from animal sources, such as beef, lamb, pork, or poultry
- wash raw vegetables and fruit thoroughly before eating
- keep raw meat separate from vegetables, cooked foods, and ready-to-eat foods (that is, do not allow the blood from raw meat to come into contact with other food)
- use separate cutting boards for raw meat and foods that are ready to eat (for example, cooked foods and salads)
- wash your hands before and after preparing food
- wash knives and cutting boards after handling uncooked foods
- wash your hands after handling animals

Prevention is the most important control measure for foods where growth can be sustained.

Pregnant women and other susceptible groups should avoid consuming "high risk" foods that can support the growth of *L. monocytogenes*.

Most chilled, ready to eat foods should be avoided altogether. This includes:

- soft cheese such as brie, blue, fetta, camembert and ricotta - safe if cooked hot,
- takeaway cooked and chilled diced chicken - as used in chicken sandwiches,
- cold meats, pate and meat spreads,
- pre-prepared or packaged salads greens and salads,
- raw seafood such as oysters, sashimi, smoked salmon or oysters (canned oysters are safe),,
- unpasteurised dairy products such as raw goat's milk and Roquefort cheese
- sushi and sandwiches that contain any of the foods listed above

Within the factory environment, it is essential to control the movement of produce and personnel to avoid cross-contamination between raw produce and finished produce. Floors, walls and drains need to be kept clean and a disinfectant regularly applied to avoid build-up. Air movement and aerosols must also be controlled. Critical control points such as cooking/heating temperatures, equipment cleaning and sanitation, specific product washing techniques must be monitored effectively.

More information can be found on the NSW Food Authority's *SAFE FOOD FOR VULNERABLE GROUPS* and *PREGNANCY and FOOD* fact sheets, which are available on the Authority's web site. Also visit the NSW Health website at www.health.nsw.gov.au