# Listeriosis prevention in Alberta Facility Living and Acute Care Sites

Prevention of food borne Listeria infections is an important issue for health care facilities. A multi-provincial outbreak in 2008 associated with deli-style meat products resulted in 56 confirmed cases and 20 deaths. Alberta Health Services-Health Protection has prepared the following guidelines for health care facility (i.e. Facility Living and Acute Care) food service departments in Alberta to reduce the risk to your clients. It is the expectation of AHS-Health Protection that AHS health care facility food service departments implement the guidelines.

## What is Listeria?

*Listeria monocytogenes* (commonly called *Listeria*) is a type of bacterium often found in food and elsewhere in nature. It can cause a rare but serious disease called listeriosis. *Listeria* is widespread in the environment, and is found in soil, vegetation, water, sewage, silage and in the feces of humans and animals. Listeria bacteria sometimes contaminate food, most often deli-style meats, hot dogs and soft/semi soft cheeses.

## Who is at risk?

People who are in good health are rarely infected with Listeria. Based on a review of the medical literature, the sub-populations at highest risk for Listeria in decreasing order of risk are:

- organ-transplantation recipients and other patients receiving immunosuppressive therapy
- patients with HIV/AIDS
- pregnant women, their unborn and newborn children
- patients with cancer. Not all cancers present the same level of risk—a clinician may need to assess if a cancer patient is at elevated risk for listeriosis
- patients with leukemia, diabetes, liver or kidney disease
- older people (generally considered to be persons over 60 years old)

## How can the risk be reduced?

There are two general categories of Listeria risk reduction—food handling/storage practices that are known to reduce Listeria risk, and not serving foods that are often contaminated with Listeria to those at highest risk for listeriosis.

Food handling/storage practices known to reduce Listeria risk:

- Thoroughly cook raw food from animal sources, such as beef, pork, or poultry.
- Wash raw vegetables thoroughly before eating.
- Keep uncooked meats separate from vegetables and from cooked foods and ready-to-eat foods.
- Avoid unpasteurized (raw) milk or foods made from unpasteurized milk.
- Wash hands, knives, and cutting boards after handling uncooked foods.
- Store perishable foods below 4°C/40°F.
- Consume perishable and ready-to-eat foods as soon as possible.

Facilities should not serve the higher-risk foods listed in Table 1 below to at-risk groups. Serving safer alternatives or using safer preparation methods reduces the risk of listeriosis.

**Table 1: Higher risk foods for Listeria contamination and safer alternatives/preparation methods**

| Higher risk foods | Safer Alternatives/Preparation Methods |
|---|---|
| Ready-to-eat packaged cold meats[1] (e.g. deli-style meats, luncheon meat) | Dried and salted meats[2] (e.g. salami, pepperoni) |
| | Product formulated/handled to minimize the risk of Listeria growth[2] |
| | Product heated to 74°C/165°F immediately before service[3] |
| Hot dog wieners (raw or undercooked) | Product heated to 74°C/165°F immediately before service,[3] and, prevention of fluid in package from contaminating other foods/food contact surfaces |
| Soft and surface-ripened cheese (e.g. feta, Brie, and Camembert, blue-veined cheeses), or Mexican-style cheeses such as queso blanco, queso fresco, and panela, unless they have labels that clearly state they are made from pasteurized milk. | Product heated to 74°C/165°F immediately before service[3] |
| | Hard cheese (e.g. cheddar), processed cheese/cheese spread, cream cheese |
| Refrigerated pâtés or meat spreads | Canned or shelf-stable product |
| Refrigerated smoked seafood and fish, cooked ready-to-eat crustaceans | Product heated to 74°C/165°F immediately before service[3] |
| | Shelf-stable or canned product |

Table Footnotes:

1. Some health care facilities in Alberta serve ready-to-eat (RTE) meats that are cooked and chilled onsite, or in a regional AHS-operated facility. If there are good manufacturing practices in place at the facilities producing these RTE meats and the refrigerated shelf life of the product is short (e.g. <4-5 days), the RTE meat may present a lower listeriosis risk than RTE meats produced at other facilities that will be stored at refrigeration temperatures for an extended period.

   Onsite- or AHS-produced RTE meats will still support the growth of Listeria under refrigerated storage conditions, so good manufacturing practices need to be followed at all stages of production, storage, & service and the use-by date must be clearly marked & followed. Routine environmental sampling of AHS food production facilities and product sampling of onsite/AHS RTE meats for the presence of Listeria does not currently take place, and so the listeriosis risk of these products cannot be verified.

2. A refrigerated RTE food not supporting the growth of *L. monocytogenes* includes the following:

   - pH < 5.0 and $a_w$ < 0.94
   - pH < 4.4 regardless of $a_w$
   - $a_w \leq 0.92$ regardless of pH; or
   - frozen foods

   All other RTE products are assumed to support Listeria growth UNLESS the manufacturer/importer is able to present data to the Health Canada-Health Products and Food Branch, Bureau of Microbial Hazards, for evaluation.
   If unsure if a particular product meets these criteria, contact the product manufacturer.

3. Alternatively, after heating to 74°C/165°F, holding product above 60°C/140°F (and protecting product from contamination) until service

## More questions? Contact your local Environmental Public Health department.

## References

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