

What is listeriosis?

Listeriosis, a serious infection caused by eating food contaminated with the bacterium *Listeria monocytogenes*, is an important public health problem in the United States. The disease primarily affects older adults, pregnant women, newborns, and adults with weakened immune systems. However, rarely, persons without these risk factors can also be affected. The risk may be reduced by following a few simple recommendations.

What are the symptoms of listeriosis?

A person with listeriosis usually has fever and muscle aches, often preceded by diarrhea or other gastrointestinal symptoms. Almost everyone who is diagnosed with listeriosis has "invasive" infection, in which the bacteria spread beyond the gastrointestinal tract. The symptoms vary with the infected person:

- Pregnant women: Pregnant women typically experience only a mild, flu-like illness. However, infections during pregnancy can lead to miscarriage, stillbirth, premature delivery, or life-threatening infection of the newborn.
- Persons other than pregnant women: Symptoms, in addition to fever and muscle aches, can include headache, stiff neck, confusion, loss of balance, and convulsions.

How great is the risk for listeriosis?

In the United States, an estimated 1,600 persons become seriously ill with listeriosis each year. Of these, approximately 20% die. Individuals at increased risk are:

- Pregnant women, who are about 10 times more likely than other healthy adults to get listeriosis. About one-third of listeriosis cases happen during pregnancy.
 - Newborns, rather than pregnant women themselves, suffer the serious effects of infection in pregnancy.
- Persons with weakened immune systems.
- Persons with cancer, diabetes, or kidney disease.
- Persons with AIDS, who are almost 300 times more likely to get listeriosis than persons with intact immune systems.
- Persons who take glucocorticosteroid medications.
- Older adults.

Healthy adults and children occasionally become infected with *Listeria*, but they rarely become seriously ill.

How does *Listeria* get into food?

L. monocytogenes is found in soil and water. Vegetables may become contaminated from the soil or from manure used as fertilizer. Animals may carry the bacterium without appearing ill and can contaminate foods of animal origin such as meats and dairy products. The bacterium has been found in a variety of raw foods, such as uncooked meats and vegetables, as well as processed foods that become contaminated during processing, such as soft cheeses and cold cuts at the deli counter. Unpasteurized (raw) milk or foods made from unpasteurized milk can contain the bacterium. *Listeria* is killed by pasteurization, and heating procedures used to prepare ready-to-eat processed meats should be sufficient to kill the bacterium; however, unless good manufacturing practices are followed, contamination can occur after processing.

How do you get listeriosis?

You get listeriosis by eating food contaminated with *Listeria*. Babies can be born with listeriosis if their mothers eat contaminated food during pregnancy. Although healthy persons may consume contaminated foods without becoming ill, those at increased risk for infection can probably get listeriosis after eating food contaminated with even a few bacteria. Persons at risk can prevent *Listeria* infection by avoiding certain high-risk foods and by handling food properly.

How do you know if you have listeriosis?

If you think you have symptoms of listeriosis, consult your doctor. A blood or spinal fluid test (to cultivate the bacteria) will show if you have listeriosis. During pregnancy, a blood test is the most reliable test.

How can you reduce your risk for listeriosis?

General recommendations:

- 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 raw (unpasteurized) milk or foods made from raw milk.
- Wash knives, hands, and cutting boards after handling uncooked foods.

Recommendations for persons at high risk, such as pregnant women and persons with weakened immune systems, in addition to the recommendations listed above:

- Avoid soft cheeses such as feta, Brie, Camembert, blue-veined, and Mexican-style cheese. (Hard cheeses, processed cheeses, cream cheese, cottage cheese, or yogurt need not be avoided.)
- Cook until steaming hot left-over foods or ready-to-eat foods, such as hot dogs, before eating.
- Although the risk of listeriosis associated with foods from deli counters is relatively low, pregnant women and immunosuppressed persons may choose to avoid these foods or thoroughly reheat cold cuts before eating.
- Consume perishable and ready-to-eat foods as soon as possible.
- Do not eat refrigerated pâtés or meat spreads. Canned or shelf-stable pâtés and meat spreads may be eaten.
- Avoid getting fluid from hot dog packages on other foods, utensils, and food preparation surfaces.
- Wash hands after handling hot dogs, luncheon meat, and deli meats.
- Do not eat smoked seafood unless it is contained in a cooked dish, such as a casserole. Refrigerated smoked seafood, such as salmon, trout, whitefish, cod, tuna, or mackerel, is most often labeled as "nova-style," "lox," "kippered," "smoked," or "jerky." The fish is found in the refrigerator section or sold at deli counters of grocery stores and delicatessens. Canned or shelf-stable smoked seafood may be eaten.
- Do not eat raw or lightly cooked sprouts of any kind (including alfalfa, clover, radish, and mung bean sprouts); always cook sprouts thoroughly.
- Eat cut melons right away or refrigerate at 41°F or colder. Discard cut melons after 7 days or if left at room temperature for more than 4 hours.

Can listeriosis be treated?

When infection occurs during pregnancy, antibiotics given promptly to pregnant women can often prevent infection of the fetus or newborn. Babies with listeriosis receive the same antibiotics as adults, although a combination of antibiotics is often used until physicians are certain of the diagnosis. Even with prompt treatment, some infections result in death. This is particularly likely in the elderly and in persons with other serious medical problems.

For more information, please visit these websites:

- CDC Listeriosis: www.cdc.gov/listeria