Listeria monocytogenes: A Concern for Pregnant Women and Older Adults

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Introduction

Listeria monocytogenes is a bacterium found frequently in the environment. This bacterium can cause the serious foodborne illness listeriosis. Listeria monocytogenes is somewhat unusual in that it will grow at refrigeration temperatures. It is slightly more heat resistant than many other bacteria such as Salmonella and E. coli, and will grow at temperatures as high as 140 to 150 F (60 to 65 C). Listeria will not survive pasteurization or heat treatment. Freezing seems to have little effect on the bacteria.

Where does Listeria monocytogenes come from?

Listeria monocytogenes has been found in soil, leaf litter, sewage, silage, dust and water. The organism often moves through animals and humans without causing illness. It has been found in many domestic and wild animals, including beef and dairy cattle, goats, and birds.

What are the symptoms of listeriosis?

Humans most commonly contract listeriosis by eating food contaminated with the organism. Healthy people do not often develop noticeable symptoms after eating contaminated food. The highest incidence of listeriosis occurs in persons over 60 years old. Infections that occur during pregnancy may lead to miscarriages or serious illness in newborns. Other individuals most at-risk include those with compromised immune systems due to cancer, AIDS or medications that impact the immune system.

Symptoms of listeriosis are fever, fatigue, nausea, vomiting and diarrhea. More serious symptoms can result from meningitis (brain infections) and septicemia (bacteria in the bloodstream). Pregnant women may contract flu-like symptoms of listeriosis; complications can result in miscarriage, stillbirth or meningitis in the newborn.

Public Health Consequences

The Centers for Disease Control estimates that approximately 1,600 illnesses and 260 deaths due to listeriosis occur annually in the United States. The largest listeriosis outbreak in U.S. history occurred in 2011, when 147 illnesses, 33 deaths and one miscarriage occurred among residents of 28 states; the outbreak was associated with consumption of cantaloupe from a single farm.

Who is at risk?

Healthy people rarely contract listeriosis, but the illness can be serious for some people, especially the elderly, newborns, pregnant women and those with weakened immune systems.

What foods are risky for Listeria monocytogenes contamination?

At the market and at home, select foods less likely to be contaminated with Listeria monocytogenes. Ready-to-eat foods such as premade salads, smoked fish and luncheon meats are the most common sources. The bacteria in food cannot be seen, tasted or smelled. Common sense and simple precautions that apply to any foodborne illness should be used. Good sanitation, personal hygiene and safe buying, storing, cooking and serving methods, when applied in home, retail and food service environments, can reduce the risk of infection with Listeria monocytogenes.
**How can you control *Listeria monocytogenes* in your home?**

- Knives, cutting boards and food preparation surfaces should be washed with hot water and soap after contact with raw poultry, meat and seafood.
  
  - Clean sinks and counters with paper towels or clean cloths and hot soapy water before and after cooking food.
  
  - Keep foods that are ready to eat away from raw poultry.
  
  - Wash knives, cutting boards and counters with hot water and soap after working with raw chicken or turkey.
  
  - Scrub your cutting board with dish soap. If your cutting board is not made of wood, you can put it into the dishwasher.
  
  - Wash your hands with soap and warm water after working with raw poultry.
  
  - Put thawing chicken or turkey in a dish in the refrigerator to keep juices from leaking onto the food below.
  
  - Use a thermometer to make sure that meat, poultry (including ground types) and foods containing eggs are cooked to safe temperatures, at least 160 F (71 C).
  
  - The only way to be sure meat and chicken are done is to check with a food thermometer.
  
  - Follow the safe cooking advice on packages.
  
  - The thermometer should go into the thickest part of the chicken or turkey.

- Cook poultry until the food thermometer says at least 160 F (71 C)

- Cook eggs until both the yolk and white are firm.

- Any foods that have eggs should be checked with a food thermometer to be sure they are done and ready to eat.

- Wash hands with warm soapy water before and after handling raw foods.

  - First, wet your hands.
  
  - Add soap to your hands.
  
  - Rub both sides for at least 20 seconds.
  
  - Rinse thoroughly.
  
  - Air dry, or dry your hands with a clean towel or paper towel.
  
  - Always wash your hands after using the toilet, after changing a baby’s diaper, after touching pets or other animals and after sneezing or coughing.

- Make sure your refrigerator temperature registers 40 F (4 C). Even though *Listeria* bacteria can grow at this temperature, they grow more slowly.

  - Keep a thermometer in your refrigerator to regularly monitor the temperature.
  
  - Clean your refrigerator on a regular basis.
  
  - Check expiration dates weekly and discard foods if the date has passed.

- Refrigerate leftover food promptly (in less than 2 hours).
References


For more information about food safety, visit [foodsafty.osu.edu](http://foodsafty.osu.edu).