

# Listeria: Keeping your Food Safe



By Mary B Grosvenor, MS, RD and Lori A Smolin, PhD

It is not unusual to hear reports of summertime food-borne illness, or what we commonly call food poisoning. This summer an outbreak of *Listeria* has left several people dead and dozens hospitalized.[1] While we typically think of undercooked chicken or contaminated fast food as the cause of food-borne illness, *Listeria* is found in foods we don't typically associate with food-borne illness, such as soft cheeses, deli meats, and even fresh fruits and vegetables.[2] What can you do to avoid contracting *Listeria* or other food-borne pathogens?

*Listeria monocytogenes* is a species of pathogenic bacteria that causes the food-borne illness listeriosis. Listeriosis afflicts an estimated 1,600 people each year, and more than 15% of them die.[3] Most people who contract listeriosis develop mild gastrointestinal symptoms such as diarrhea and vomiting. Symptoms usually begin within 24 hours of eating food contaminated with *Listeria*, last 1–3 days, and resolve without medical attention. However, the infection can become invasive, spreading to the bloodstream and nervous system. Invasive listeriosis can develop up to two weeks after exposure and cause fever, muscle aches, fatigue, headache, stiff neck, loss of balance, confusion, and convulsions. This more serious illness is more common in adults aged 65 or older and people with weakened immune systems such as those taking immunosuppressive medications and pregnant women. [2,3] *Listeria* infection is more common in pregnant women because hormonal changes increase their susceptibility to intracellular microorganisms including *Listeria*. The potential consequences are more severe. Infection can lead to miscarriage, stillbirth, or premature delivery, and can be transmitted to the fetus, causing life threatening meningitis and blood infections. [4]

When one person becomes ill after eating a contaminated food, it may go unnoticed but two or more persons experiencing a similar illness after ingestion of a common food is defined as a food-borne outbreak. We often hear of outbreaks associated with *E.coli* or *Salmonella* in mishandled fast food. But *Listeria* is also among the most common

pathogens associated with food-borne outbreaks.[5] Public health officials monitor reports of food-borne illness and investigate outbreaks to find the source and learn how to prevent similar outbreaks from happening in the future. Once the source is identified, contaminated products are removed from the market so more people do not become sick; this year millions of pounds of deli meat have been recalled after it was linked to the *Listeria* outbreak. The source of this summer's *Listeria* outbreak was a single processing plant. Contaminated meats from this plant were shipped to locations across the country; some of these meats then contaminated slicing machines at delis, spreading the bacteria to other sliced products. [6]

The risk of contracting a food-borne illness can be limited by carefully choosing the food you eat. Pay attention to news regarding food-borne outbreaks and food recalls; you can find a list of recalled products at the FDA website

<https://www.fda.gov/safety/recalls-market-withdrawals-safety-alerts>. The more a food is handled, the greater the risk of it coming in contact with pathogens. Washing your hands and cooking surfaces frequently will prevent cross-contamination – that is, spreading contamination from one food to other foods. Because fresh fruits and vegetables can be contaminated by the soil where they are grown it is important to wash them before serving. Washing a melon before cutting, will keep pathogens from moving from the skin into the edible fruit.[2] Keeping cold foods cold and hot foods hot will limit the growth of microbes, most grow most rapidly between 40 and 140°F. The steps you can

take to prevent most food-borne illness in your home - Clean, Separate, Cook, and Chill - are described in the table. [7]

What you can do to prevent food-borne illness	
Clean	Wash your hands before, during and after food preparation.
	Wear gloves if you have a cut on your hand.
	Clean utensils, cutting boards, and countertops after each use.
Separate	Cross-contamination can transfer harmful bacteria between foods, hands, countertops, cutting boards, and utensils. <ul style="list-style-type: none"> <li>• Transport and store raw meat, poultry, and seafood in sealed containers so juices don't leak onto other foods.</li> <li>• Use separate cutting boards for foods you will cook and those that you will not be cooking.</li> </ul>
	Use a meat thermometer to be sure you reach these temperatures <ul style="list-style-type: none"> <li>• Whole beef, veal, lamb, pork, fish: 145°F</li> <li>• Ground meats: 160°F</li> <li>• Poultry: 165°F</li> <li>• Leftovers and casseroles: 165°F</li> </ul>
Cook	Follow recommended microwave cooking and standing times. Letting food sit for a few minutes after microwaving allows cold spots to absorb heat from hotter areas and cook more completely.
	Use a meat thermometer to be sure you reach these temperatures <ul style="list-style-type: none"> <li>• Whole beef, veal, lamb, pork, fish: 145°F</li> <li>• Ground meats: 160°F</li> <li>• Poultry: 165°F</li> <li>• Leftovers and casseroles: 165°F</li> </ul>
Chill	Keep your refrigerator temperature at 40°F or below and your freezer at 0°F or below.
	Never leave perishable food out unrefrigerated for more than 2 hours (or 1 hour at temperatures above 90°F). That includes take-out!
	Refrigerate leftovers in shallow containers for faster chilling.
	Thaw food in the microwave, the refrigerator, or cold water, not on the counter.

Though these steps will help prevent spreading *Listeria*, this pathogen represents a particular risk because refrigeration does not kill it and although it is killed by heating, it is commonly found in foods that we don't cook such as deli meats and fresh fruits. [1,8]

Check your refrigerator for any recalled products and throw them away or return them to the store. Clean any surfaces and containers that have come in contact with recalled

products. High-risk individuals, including those age 65 or older, those with weakened immune systems and pregnant women should avoid unpasteurized milk and yogurt; raw sprouts; soft cheeses such as feta, brie, queso fresco; and ready-to-eat meats such as deli meat and hot dogs.

Reports of food-borne illness can make it scary to eat! We may be wary of undercooked burgers and salads left on the picnic table too long in the sun, but who knew a heavily processed hot dog, brie slathered on a cracker, or a cool slice of watermelon could be a risk? Watching for recalls, knowing how to select, prepare, and store foods safely will help protect you from food-borne illness at picnics and barbeques this summer and throughout the year.

### **References**

[1] Lenthang M. 3rd person dies in listeria outbreak linked to deli meat, more than 40 hospitalized across U.S. NBC News. Published August 8, 2024. Accessed August 10, 2024. <https://www.nbcnews.com/news/us-news/3rd-person-dies-listeria-outbreak-linked-deli-meat-40-hospitalized-us-rcna165824>

[2] Mayo Clinic. Listeria infection (listeriosis) - Symptoms and causes. Mayo Clinic. Published February 11, 2022. <https://www.mayoclinic.org/diseases-conditions/listeria-infection/symptoms-causes/syc-20355269>

[3] Centers for Disease Control and Prevention. Listeria (listeriosis) . Centers for Disease Control and Prevention. Published February 6, 2024. <https://www.cdc.gov/listeria/index.html>

[4] Mateus T, Silva J, Maia RL, Teixeira P. Listeriosis during Pregnancy: A Public Health Concern. *ISRN Obstetrics and Gynecology*. 2013;2013:1-6. doi:<https://doi.org/10.1155/2013/851712>

[5] *Food Safety and Inspection Service FSIS Foodborne Illness Outbreak Investigations, Fiscal Year 2023.*

[https://www.fsis.usda.gov/sites/default/files/media\\_file/documents/fy23-fsis-outbreak-investigations-annual-report.pdf](https://www.fsis.usda.gov/sites/default/files/media_file/documents/fy23-fsis-outbreak-investigations-annual-report.pdf)

[6] CDC. Listeria Outbreak Linked to Meats Sliced at Delis. Centers for Disease Control and Prevention. Published July 19, 2024.

<https://www.cdc.gov/listeria/outbreaks/delimeats-7-24/index.html>

[7] CDC. About Four Steps to Food Safety. Food Safety. Published April 29, 2024.

<https://www.cdc.gov/food-safety/prevention/index.html>

[8] CDC. CDC: Listeria Outbreak Linked to Meats Sliced at Delis. Centers for Disease Control and Prevention. Published July 19, 2024.

<https://www.cdc.gov/listeria/outbreaks/delimeats-7-24/index.html>