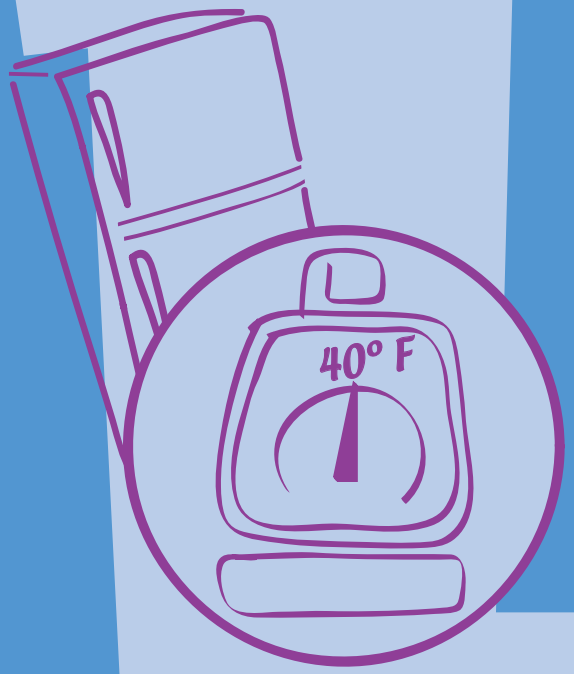
Special Handling for Ready-to-Eat, Refrigerated Foods

Reducing the Risks of Foodborne *Listeria* – Easy as . . .

Chill



Use Food
As Soon As Possible

Clean

Department of Health & Human Services
Food and Drug Administration
Centers for Disease Control and Prevention

United States Department of Agriculture
Food Safety and Inspection Service

Preventing Listeriosis

What You Need to Know

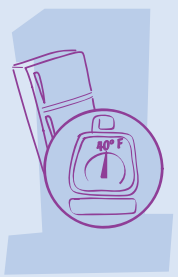
You've probably heard or read about *Listeria* in the news. This foodborne bacteria can grow at refrigerator temperatures, and it causes listeriosis, an illness that can be particularly harmful to *at-risk* groups. These groups include pregnant women and their unborn babies, newborns, older adults, and other people with weakened immune systems (such as those with HIV/AIDS, cancer, diabetes, kidney disease, and transplant patients).

But, here's the good news – there are some simple ways all consumers can reduce their risk for listeriosis. It's all in this helpful booklet, *Special Handling for Ready-to-Eat, Refrigerated Foods*. And, it's easy!

3 Easy Steps

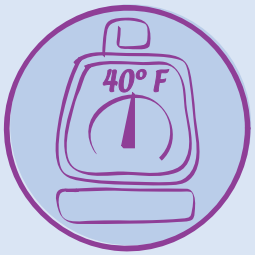
The U.S. Food and Drug Administration (FDA), the Centers for Disease Control and Prevention (CDC), and the U.S. Department of Agriculture (USDA) recommend that consumers follow these three easy steps to help prevent listeriosis:

1. Keep the refrigerator at 40° F (4° C) or below.
2. Use ready-to-eat, refrigerated foods as soon as possible.
3. Clean the refrigerator regularly.



It's All About the Fridge

Keeping the refrigerator at 40° F or below is important because – unlike most foodborne bacteria – *Listeria* will grow in the refrigerator, and it will grow *faster* at refrigerator temperatures *above* 40° F. And, the longer ready-to-eat, refrigerated foods are stored in the refrigerator, the more time *Listeria* has to grow. Finally, *Listeria* can spread from one food to another through spills in the refrigerator. That's why keeping the refrigerator clean is also important!



Who's At Risk

People with weakened immune systems are not able to effectively fight illness, so listeriosis can be particularly serious for *at-risk* people. If you're *at risk* or if you're preparing food for someone who's at risk, read on for the specific things you should know . . .

What's Inside . . .

Reducing Your Risk for Listeriosis: 3 Easy Steps **4**

Refrigerator Thermometers: A Must-Have for Food Safety! **5**

Frequently Asked Questions **6-7**

At-Risk Groups: Why Some People Face Special Risks **8**

To Eat or Not to Eat? **9**

4-Step Food Safety: A Reminder to Keep Food Safe! **10-11**

Resources **12**

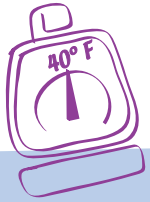
Reducing Your Risk for Listeriosis

3 Easy Steps

Here are three very specific things you can do to help prevent listeriosis.

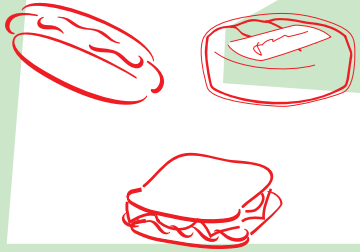
1 Chill... at the Right Temperature

- Your refrigerator should register at 40º F (4º C) or below and the freezer at 0º F (-18º C).
- Place a refrigerator thermometer in the refrigerator, and check the temperature periodically. Adjust the refrigerator temperature control, if necessary. Place a second thermometer in the freezer.



2 Use... Ready-to-Eat Foods ASAP!

- Use ready-to-eat, refrigerated foods *as soon as possible*. The longer they're stored in the refrigerator, the more chance *Listeria* has to grow.



3 Clean... the Refrigerator

- Clean your refrigerator regularly.
- Wipe up spills immediately. This is particularly important, so *Listeria* doesn't have a place to grow and then spread to other foods.
- Clean the inside walls and shelves with hot water and a mild liquid dishwashing detergent; then rinse. Then dry with a clean cloth or paper towel.

!

What's New!

New studies show that *Listeria* can grow over time at refrigerator temperatures *above* 40° F (4º C). And, the longer ready-to-eat, refrigerated foods are stored in the refrigerator, the more chance *Listeria* has to grow.

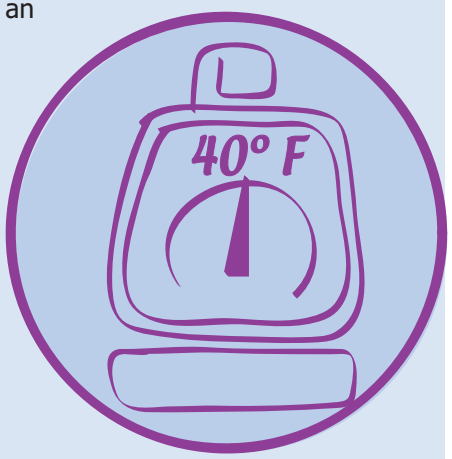
Through food handling and spills, *Listeria* in refrigerated food can spread to other non-contaminated foods. The good news is – cleaning the refrigerator will often prevent the spread of *Listeria*.

Refrigerator Thermometers

A Must-Have for Food Safety!

To reduce your risk for listeriosis, it's important to use an appliance thermometer made specifically for use in a refrigerator or freezer.

For safety, it is important to verify the temperature of refrigerators and freezers. Refrigerators should maintain a temperature no higher than 40º F (4º C). Frozen food will hold its top quality for the longest possible time when the freezer maintains 0º F (-18º C). An appliance thermometer can be kept in the refrigerator and freezer to monitor the temperature.



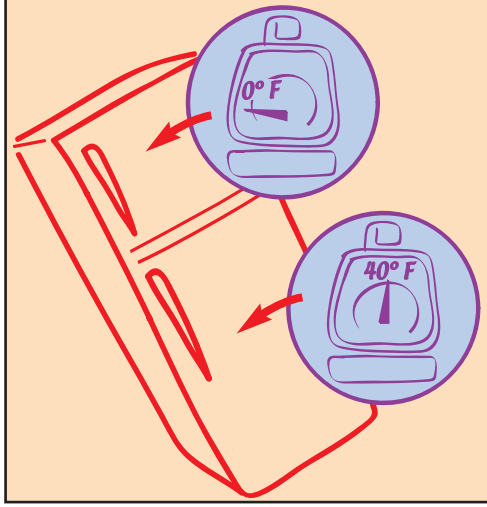
Temperature Check!

- **To measure the temperature in the refrigerator:** Put the thermometer in the middle of the refrigerator. Wait 5 to 8 hours. If the temperature is greater than 38º to 40º F (3º to 4º C), adjust the refrigerator temperature control to a lower setting. Check again after 5 to 8 hours.

- **To measure the temperature in the freezer:** Place the thermometer between frozen food packages. Wait 5 to 8 hours. If the temperature is greater than 0 to 2° F (-18º to -17º C), adjust the freezer temperature control to a lower temperature setting. Check again after 5 to 8 hours.

! Two's Better than One!

If possible, buy two appliance thermometers – one for your refrigerator and one for your freezer. The refrigerator should register at 40º F (4º C) or below. The freezer should register at 0º F (-18º C).



Frequently Asked Questions

"What is *Listeria monocytogenes*?"

It's a harmful bacterium that causes a foodborne illness called listeriosis. It's found in the environment – soil, water, decaying vegetation, and the intestinal tract of animals. *Listeria* can grow at refrigerator temperatures, whereas most other foodborne bacteria do not. If food is processed, packaged, or handled in unsanitary conditions, it can become contaminated with *Listeria*. This is of particular concern because most ready-to-eat, refrigerated foods are not reheated before eating – a step that would kill *Listeria*, if it were in the food.

Good manufacturing and handling practices must be followed during food processing and at retail in order to prevent contamination. That's why government agencies monitor food and inspect processing plants, grocery stores, and restaurants regularly to ensure that the food supply is safe.

!

Rebellious Bug

Listeria can grow at refrigerator temperatures, whereas most other foodborne bacteria do not. So the temperature you store your food at is important – check your refrigerator to make sure it is at 40° F or below.

"What are the symptoms of listeriosis?"

The symptoms can take a few days or even weeks to appear and may include fever, chills, muscle aches, nausea, and diarrhea or upset stomach. If infection spreads to the nervous system, then headache, stiff neck, confusion, loss of balance, or convulsions can occur.

Healthy adults and children occasionally get infected with *Listeria*, but they rarely become seriously ill. However, for people in at-risk groups: pregnant women and their unborn babies, newborns, older adults, and others with weakened immune systems, listeriosis can be particularly harmful. These people face the risk of serious health problems – even death.

In pregnancy, an infected mother may experience only a mild, flu-like illness, or may not feel sick at all, yet the infection can still severely affect her unborn baby. That's why preventing listeriosis is extremely important. Listeriosis can lead to miscarriage, premature labor, the delivery of a low-birth-weight infant, and a wide range of health problems for a newborn or even infant death (see pages 8 and 9).

But, there are some easy ways you can reduce your risk for listeriosis (see pages 4 and 5).

"What should I do if I experience symptoms?"

See your health-care provider immediately. And, if you become ill after eating food outside of your home, such as at a restaurant or deli, also call your local health department so the department can investigate to see if there's a serious foodborne illness in the area.

"What's the general treatment for listeriosis?"

A health-care provider may perform a blood test to check for listeriosis. Antibiotics may be prescribed by a health-care provider to get rid of infection.

During pregnancy, a health-care provider may prescribe antibiotics that are safe for the unborn baby to get rid of the mother's infection. In most cases, antibiotics also prevent infection of the unborn baby or newborn. Antibiotics may also be given to babies who are born with listeriosis.

"What should I do if I have or have eaten a food that's been recalled because of *Listeria*?"

Don't eat any food that's recalled and removed from grocery store shelves. Always return recalled food to the place where you bought it. For the latest product recalls, visit: **www.recalls.gov**.

The risk of a person developing a *Listeria* infection after consuming a contaminated product is very small. If you've eaten a contaminated product and you are pregnant, then contact your health-care provider. Otherwise, if you've eaten a contaminated product and do not have any symptoms, it's not recommended that you have any tests or treatment, even if you are in a high-risk group. However, if you are in a high-risk group, have eaten the contaminated product, and within two months become ill with fever or signs of serious illness, you should see your health-care provider immediately.

Fact

Pregnant women are about 20 times more likely to get listeriosis than other healthy adults. An estimated 1/3 of all *Listeria* cases occur in pregnant women. Older adults have the highest risk for death, along with unborn babies.

At-Risk Groups

Why Some People Face Special Risks

Some people are more likely than others to get sick from harmful foodborne bacteria. And once they're sick, they face the risk of serious health problems – even death. This is particularly likely to happen with older adults and people with major medical problems.

In essence, people with weakened immune systems are not able to effectively fight illness. That's why preventing listeriosis is so important!

Here's a chart of who's at risk and why:

Who's At Risk?	Why?
Pregnant women	• During pregnancy, the immune system is weakened, which makes it hard for the mother's body to fight off harmful foodborne bacteria. Hormonal changes during pregnancy have an effect on the mother's immune system that lead to an increased susceptibility to listeriosis in the mother. See *Listeriosis & Pregnant Hispanic Women* on page 9.
Unborn babies and newborns	• Harmful foodborne bacteria can cross the placenta and infect the developing fetus. • The unborn baby and newborn don't have a fully-developed immune system to fight off harmful foodborne bacteria.
Older adults	• Immune systems weaken as people age, which makes it harder for the body to fight off disease. Older adults often suffer from chronic health conditions, which make them more susceptible to foodborne illness. In addition, poor nutrition and poor blood circulation may result in a weakened immune system. • Stomach acid also decreases as people get older, and stomach acid plays an important role in reducing the number of bacteria in our intestinal tracts – and the risk of illness.
Other people with weakened immune systems (transplant patients and those with HIV/AIDS, cancer, diabetes, kidney disease, etc.)	• The immune systems of transplant patients and people with certain illnesses, such as HIV/AIDS, cancer, diabetes, and kidney disease are often weakened. Thus, their bodies are unable to effectively fight the harmful bacteria.

To Eat or Not to Eat?

Careful food preparation and selection practices will help reduce the risk for developing listeriosis. Here are additional tips for preparing or serving food for at-risk consumers.

Do not eat:	It's okay to eat:
• Hot dogs and luncheon meats – *unless they're reheated until steaming hot*.	• Steaming hot, thoroughly reheated hot dogs and luncheon meats.
• Soft cheeses, such as Feta, Brie, and Camembert, "blue-veined cheeses," or "queso blanco," "queso fresco," or Panela – *unless they're made with pasteurized milk*.	• Soft cheeses labeled as made with pasteurized milk.
• Refrigerated pâtés or meat spreads.	• Canned or shelf-stable pâtés or meat spreads.
• Refrigerated smoked seafood – *unless it's 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." These types of fish are found in the refrigerator section or sold at deli counters or grocery stores and delicatessens.)	• Canned or shelf-stable smoked seafood.
• Foods that contain unpasteurized milk.	• Foods that contain pasteurized milk.
Do not drink:	**It's okay to drink:**
• Unpasteurized milk	• Pasteurized milk

Listeriosis & Pregnant Hispanic Women

Studies show that pregnant Hispanic women may have a higher incidence of listeriosis than pregnant non-Hispanic women. This is most likely because they might make and eat homemade soft cheese and other traditional foods made from unpasteurized milk. "Queso fresco" – a traditional homemade cheese, prepared from unpasteurized milk and widely consumed by Hispanics – has led to miscarriages, premature delivery, and death of newborns caused by *Listeria*.

To prevent the risk of listeriosis, Hispanic pregnant women should not eat homemade soft cheeses and other traditional foods made from unpasteurized milk. Like all other pregnant women and people in at-risk groups, they should follow the food safety precautions outlined at left. You can purchase commercially-made "queso fresco" and "queso blanco" that are made from pasteurized milk. Check the label to make sure they're made with pasteurized milk.

4-Step Food Safety

A Reminder to Keep Food Safe!

To reduce your risk for listeriosis and other foodborne illnesses, everyone should follow these 4 Simple Steps.
Tips in bold are especially important in preventing listeriosis.

Step 1 – CLEAN

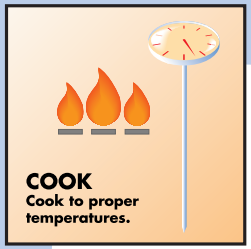
(Wash hands and surfaces often)

- **Wash hands with warm water and soap for 20 seconds *before* and *after* handling food**, and after using the bathroom, changing diapers, or handling pets.
- Wash cutting boards, dishes, utensils and countertops with hot water and soap after they come in contact with raw meat, poultry, seafood, and eggs.
- Rinse raw produce in water. Don't use soap or detergents. If necessary, use a small produce brush to remove surface dirt.
- **Wipe up spills in the refrigerator immediately and clean the refrigerator regularly.**

Step 2 – SEPARATE

(Don't cross-contaminate)

- Raw meat, poultry, and seafood can contain harmful bacteria, so keep these foods separate from other foods in your grocery cart and in your refrigerator.
- If possible, use one cutting board for raw meat, poultry, and seafood and another one for produce.
- Wash cutting boards, dishes, and utensils with hot water and soap after they come in contact with raw meat, poultry, seafood, and eggs.
- Use separate plates for cooked or ready-to-eat foods and other plates for raw foods.



Step 3 – COOK

(Cook foods to a safe internal temperature)

- Heating foods to the right temperature kills harmful bacteria, so cook meat, poultry, and seafood thoroughly. Use a clean food thermometer to check for proper temperatures.
- **People in the at-risk groups should not eat hot dogs and luncheon meats – *unless they're reheated until steaming hot*. They also should not eat refrigerated smoked seafood – *unless it's in a cooked dish*, such as a casserole.**
- Cook eggs until the yolk and white are firm. If you use recipes in which eggs remain raw or only partially cooked, use pasteurized eggs; cook to 160 °F (71º C).
- Fish should be opaque and flake easily with a fork.
- Reheat leftovers to 165º F (74º C). Bring sauces, soups, and gravy to a boil when reheating.

Step 4 – CHILL

(Refrigerate promptly)

- **Your refrigerator should register at 40º F (4º C) or below and the freezer at 0º F (-18º C). Place a refrigerator thermometer in the refrigerator, and check the temperature periodically. A second thermometer should go in the freezer.**
- **Store perishable foods that are precooked or ready-to-eat in your refrigerator at 40º F (4º C) or below, and eat them *as soon as possible*. Don't keep them in the refrigerator too long.**
- Refrigerate or freeze perishables, prepared food, and leftovers within two hours of eating or preparation, or after one hour in temperatures over 90° F.

Resources

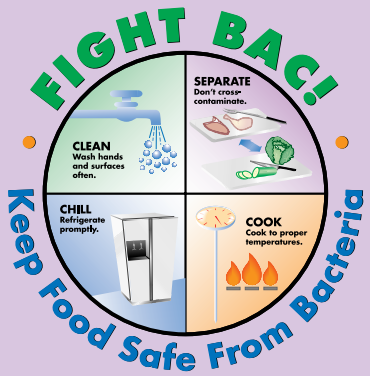
For more information about listeriosis, visit:

- **www.cfsan.fda.gov/~dms/adlister.html**
  An important advisory on how to safely handle refrigerated, ready-to-eat foods and avoid listeriosis.

- **www.cdc.gov/ncidod/dbmd/diseaseinfo/listeriosis_g.htm**
  Frequently asked questions and answers about listeriosis. Available online in English and Spanish.

- **www.cdc.gov/ncidod/dbmd/diseaseinfo/listeriosis_a.htm**
  Helpful links to articles and important information about listeriosis.

- **www.fsis.usda.gov**
  Latest *Listeria* news, fact sheets, consumer information, resources, procedures, and guidance on foodborne illness from FSIS. Includes "Ask Karen," the FSIS virtual representative who answers food safety questions 24/7.



For more information about food safety:

- **The FDA Food Information Line:** 1-888-SAFE FOOD, www.cfsan.fda.gov, or email: OCO@cfsan.fda.gov. (Contact us with questions concerning dairy foods and shell eggs, produce, seafood, and processed foods that are not made with meat and poultry products.)
- **FDA's Food Safety for Moms-to-Be Web site:** www.cfsan.fda.gov/pregnancy.html
- **The U.S. Department of Agriculture Meat and Poultry Hotline:** 1-888-MPHotline. The TTY number for the hearing impaired is: 1-800-256-7072. Or, visit www.fsis.usda.gov. (Contact us with questions concerning meat, poultry, and egg products.)
- **The Centers for Disease Control and Prevention/ Foodborne Illness Line** (24-hour recorded information): **1-888-232-4636** or www.cdc.gov/foodsafety.
- **U.S. Partnership for Food Safety Education:** www.fightbac.org
- **Gateway to Government Food Safety Information:** www.foodsafety.gov

JMH Education Marketing, Inc., New York, NY