



Food Safety in Older Adults: Disease Prevention Strategies and Educational Resources

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USDA - FSIS**

Outline

- Foodborne illness in the United States
- Why older adults at higher risk
- Common foodborne pathogens
- 4 steps of food safety (Clean, Separate, Cook & Chill)
- USDA consumer food safety resources
 - Publications
 - Mobile apps
 - Presentations



United States Department of Agriculture

One Team, One Purpose



Food Safety and Inspection Service

Protecting Public Health and Preventing Foodborne Illness



Food Safety and Inspection Service: The Threat of Foodborne Illness in U.S.

Each year, foodborne illness. . .

Sickens

1 in 6

Americans

Results in

128k

Hospitalizations

Causes

3,000

deaths

Costs U.S. economy

\$15.6

billion

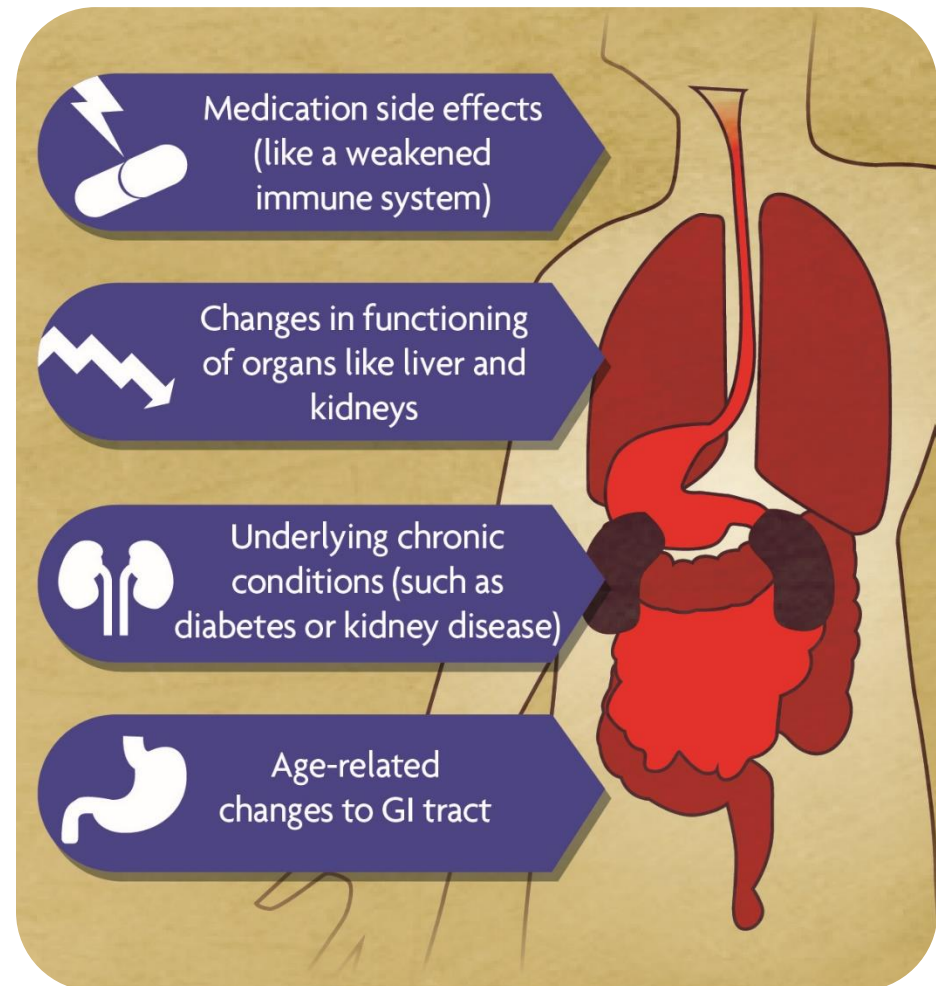
4 pathogens
most frequently affect
our regulated products.

E. coli
Listeria
Salmonella
Campylobacter

Food Safety and Older Adults

Adults 65+ are at an **increased risk of hospitalization and death** from foodborne illness.

Why?



Why Older Adults At-Risk

Changes in the Gastrointestinal Tract

- GI tract holds on to food for longer periods of time (more time for bacterial growth)
- Liver and kidneys may not properly rid our bodies of foreign bacteria and toxins
- Stomach may produce less acid. Less acid can result in more bacterial growth

Why Older Adults At-Risk



Medication Side Effects

- Weakened immune system
- Changes in sense of taste or smell

Why Older Adults At-Risk

Underlying Chronic Conditions

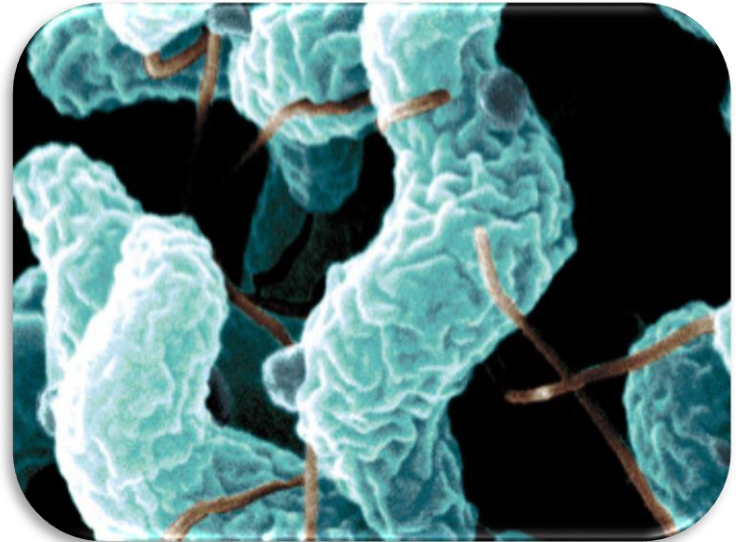
- Diabetes
- Cancer
- Transplant Recipient
- Autoimmune Disease (MS, IBD, SLE)

About Foodborne Illness:

Campylobacter

Foodborne Illness in Older Adults

- *Campylobacter*
- *E. coli*
- *Salmonella*
- *Listeria monocytogenes*



Incubation Period: 2-4 days

Symptoms: cramping abdominal pain, fever, nausea and vomiting, watery diarrhea.
Most people recover in 5 to 8 days.

Complications: 1 in 1,000 develop Guillain-Barre syndrome and infection may spread to heart or brain

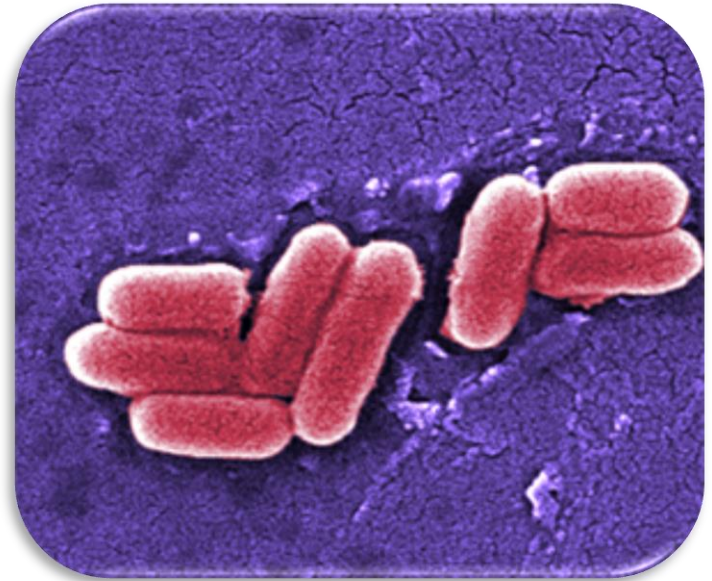
Sources: contaminated poultry, water, unpasteurized milk & cheese, or fresh produce

About Foodborne Illness:

E. Coli

Foodborne Illness in Older Adults

- *Campylobacter*
- *E. coli*
- *Salmonella*
- *Listeria monocytogenes*



Incubation Period: 1-10 days

Symptoms: severe diarrhea that is often bloody, severe abdominal pain and vomiting.
Symptoms last 5-10 days.

Complications: In some cases, patients can develop Hemolytic Uremic Syndrome (HUS) which can result in kidney failure or even death in extreme cases.

Sources: contaminated beef, contaminated water, unpasteurized milk & cheese, or fresh produce.

About Foodborne Illness:

Salmonella

Foodborne Illness in Older Adults

- *Campylobacter*
- *E. coli*
- ***Salmonella***
- *Listeria monocytogenes*



Incubation Period: 12 to 72 hours

Symptoms: nausea, vomiting, abdominal cramps, diarrhea, fever, chills, headache.

Symptoms last 4 to 7 days.

Complications: An estimated 400 people die annually from acute infection and young children are more likely to develop severe cases.

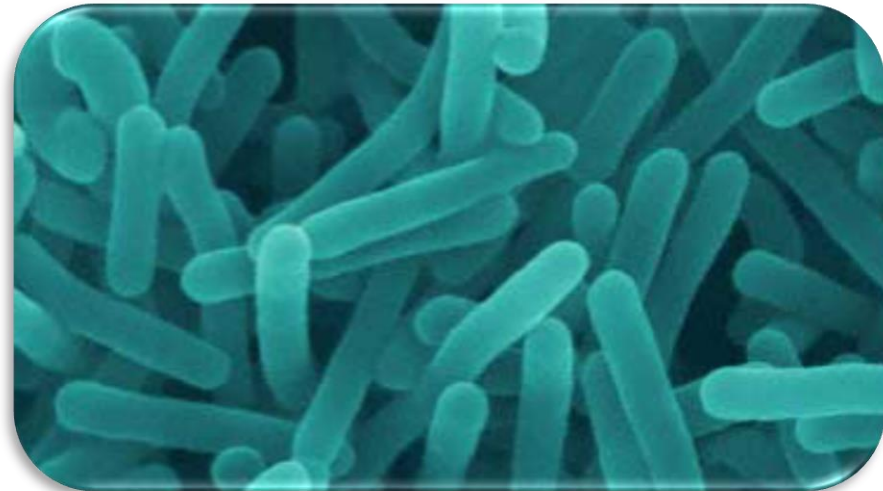
Sources: Eating food contaminated with animal feces. These are often beef, poultry, milk or eggs but may include vegetables .

About Foodborne Illness:

Listeria monocytogenes

Foodborne Illness in Older Adults

- *Campylobacter*
- *E. coli*
- *Salmonella*
- *Listeria monocytogenes*



Incubation Period: 3 to 70 days

Symptoms: fever, muscle aches, sometimes preceded by diarrhea

Complications: those with a weakened immune system, such as older adults, can develop more serious illness

Sources: deli meats, smoked seafood, unpasteurized milk, store made salads such as tuna, chicken or seafood salad, soft cheeses such as feta or queso blanco, and raw sprouts.

Foods to Avoid



Raw or undercooked meat, poultry, eggs and seafood



Hot dogs, deli meat and lunch meats (unless reheated to steaming hot)



Unpasteurized refrigerated pâtés or meat spreads (Canned or shelf-stable pates/meat spreads may be eaten)



Soft cheeses (unless labeled “made with pasteurized milk”)



Unwashed fresh fruits and vegetables



Raw or unpasteurized milk



Raw sprouts (alfalfa, clover and radish)

The Four Steps of Food Safety

- **Clean**
- **Separate**
- **Cook**
- **Chill**



The Four Steps: CLEAN



- Wash hands for 20 seconds with soap and warm water
- Sanitize surfaces that contact raw meat or poultry with a solution of 1 tablespoon bleach per 1 gallon of water

The Four Steps: CLEAN

Do NOT Wash Raw Meat or Poultry!



Courtesy of New Mexico State University

The Four Steps: SEPARATE



- Prevent cross-contamination of foods, hands or equipment
- Keep raw meat away from ready-to-eat food
- Use separate cutting boards and utensils for raw meat or poultry

The Four Steps:

COOK



- Always use a food thermometer when cooking meats
- All poultry: 165°F
- Ground meats: 160°F
- Whole cuts of red meat: 145°F

The Four Steps: CHILL

Take your time around the dinner table, but refrigerate leftovers within 2 hours!

Safe in fridge
3-4 days

Safe frozen,
but use within
2-6 months for
best quality.

Leftover turkey should be cut into smaller pieces, and store items separately in smaller containers.

Be sure to pack leftovers in a cooler if traveling.

Reheat thoroughly to a temperature of 165 °F.

Remember, bacteria that cause foodborne illnesses can't be smelled or tasted!

Calendar:

Sun	Mon	Tue	Wed	Thur	Fri	Sat
✓	✓	✗	✗	✗	✓	✓

Last day Thanksgiving leftovers are safe from the fridge.

- Food at room temperature for more than 2 hours should be discarded
- Use all refrigerated leftovers within 3 to 4 days
- Reheat **leftovers to 165°F**
 - Rotate for even heating in microwave

The Four Steps:

CHILL

- Leftovers should be cut into smaller pieces
- Store in small shallow containers
- No need to wait for leftovers to cool to room temperature before refrigerating



Food Storage Times

Cold Food Storage

These storage guidelines for home-refrigerated foods will keep them from spoiling or becoming dangerous to eat. The guidelines for freezer storage are for quality only. Frozen foods remain safe indefinitely.

Product	Refrigerator (40°F)	Freezer (0°F)
Eggs		
Fresh, in shell	3 to 5 weeks	Don't freeze
Hard cooked	1 week	Don't freeze well
Liquid Pasteurized Eggs, Egg Substitute		
Opened	3 days	Don't freeze well
Unopened	10 days	1 year
Deli and Vacuum-Packed Products		
Egg, chicken, ham, tuna & macaroni salads	3 to 5 days	Don't freeze well
Hot Dogs		
Opened package	1 week	1 to 2 months
Unopened package	2 weeks	1 to 2 months
Luncheon Meat		
Opened package or deli sliced	3 to 5 days	1 to 2 months
Unopened package	2 weeks	1 to 2 months
Bacon & Sausage		
Bacon	7 days	1 month
Sausage, raw — from pork chicken, turkey & beef	1 to 2 days	1 to 2 months
Hamburger & Other Ground Meats		
Hamburger, ground beef, turkey, veal, pork, lamb & mixtures of them	1 to 2 days	3 to 4 months
Fresh Beef, Veal, Lamb & Pork		
Steaks	3 to 5 days	6 to 12 months
Chops	3 to 5 days	4 to 6 months
Roasts	3 to 5 days	4 to 12 months
Fresh Poultry		
Chicken or turkey, whole	1 to 2 days	1 year
Chicken or turkey, pieces	1 to 2 days	9 months
Seafood		
Lean fish (flounder, haddock, halibut, etc.)	1 to 2 days	6 to 8 months
Fatty fish (salmon, tuna, etc.)	1 to 2 days	2 to 3 months
Soups & Stews		
Vegetable or meat added	3 to 4 days	2 to 3 months
Leftovers		
Cooked meat or poultry	3 to 4 days	2 to 6 months
Chicken nuggets or patties	3 to 4 days	1 to 3 months
Pizza	3 to 4 days	1 to 2 months

Freezer Storage at 0 °F or Below

Cooked meat or poultry 2 to 6 months

Pizza 1 to 2 months

Luncheon meats 1 to 2 months

Refrigerator Storage at 40 °F or Below

Cooked meat or poultry 3 to 4 days

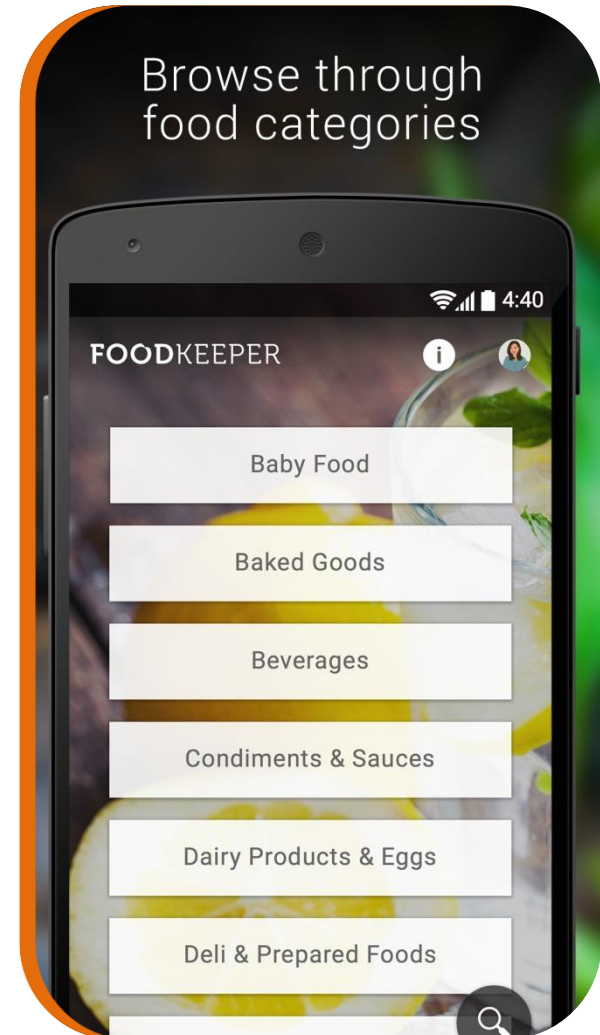
Pizza 3 to 4 days

Luncheon meats 3 to 5 days

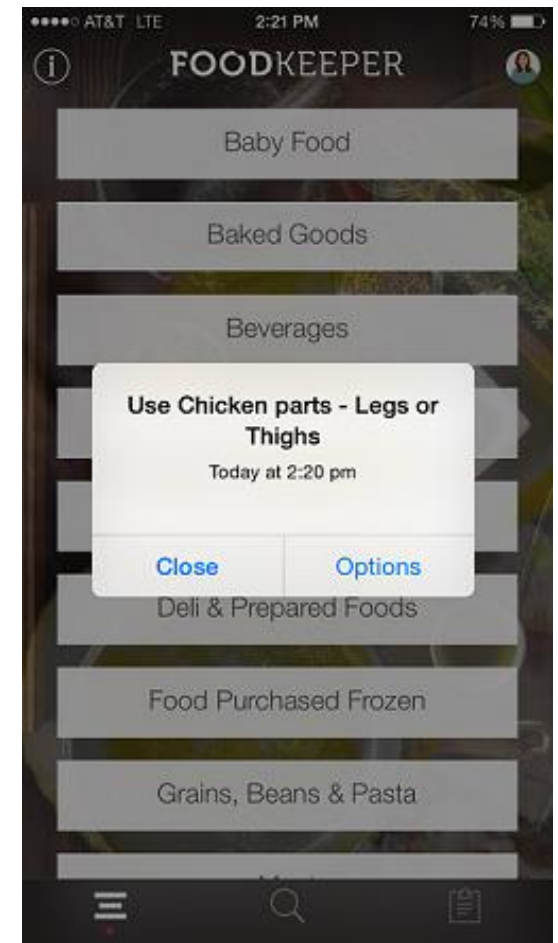
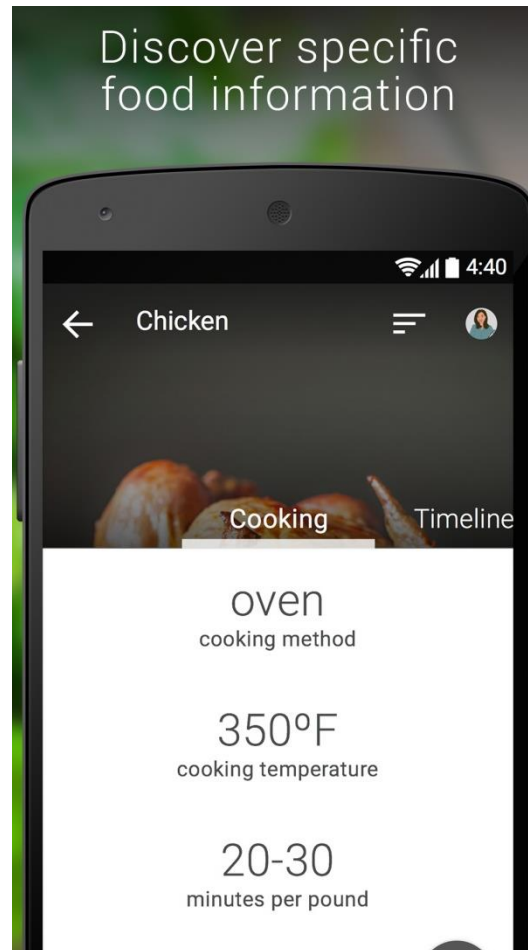
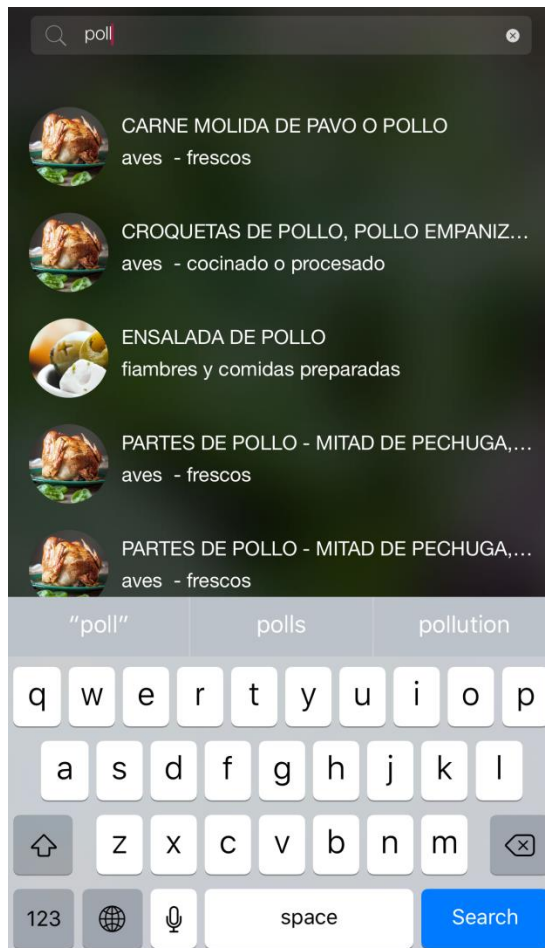
Egg, tuna, and macaroni salads 3 to 5 days

FoodKeeper app

- **Prevent food waste**
- Storage advice for **500+ food and beverage items**
- Receive automatic **recall notifications**
- Syncs to your **calendar**
- Access to **AskKaren**



FoodKeeper app



Free Resources for Consumers

- **Publications**
- **FoodKeeper app**
- **Meat & Poultry Hotline**
- **Social Media**
- **Presentations and Toolkits**



Free Resources for Consumers

Food Safety Publications:

- **General Adult**
- **At-Risk (Older Adults, Cancer, Diabetes, etc.)**
- **Youth**
- **Spanish**
- **Infographic Posters**
- **Foodservice**



Free Resources for Consumers

FOOD SAFETY BEFORE, DURING AND AFTER A POWER OUTAGE

Know how to keep food safe before during and after emergencies. Hurricanes, tornadoes, winter weather and other events may cause power outages. Follow these tips to help minimize food loss and reduce your risk of foodborne illness.

BEFORE PLAN AHEAD (IF YOU CAN) ...

- Put appliance thermometers in your refrigerator and freezer.
- Keep freezer 0°F or below.
- Refrigerator 40°F or below.
- Group foods together in the freezer to help food stay colder longer.
- Freeze refrigerated items such as leftovers, milk, and fresh meat and poultry that you do not need immediately.
- If you think power will be out for an extended period of time, buy dry or block ice to keep the fridge or freezer cold.
- Store nonperishable foods on higher shelves to avoid flood water.
- Freeze containers of water and gel packs to help keep food cold if the power goes out.

DURING WHILE THE POWER IS OUT ...

Keep the refrigerator and freezer doors closed to maintain cold temperature.

IF DOORS STAY CLOSED ...

- ... a full freezer will hold its temperature for **48 HOURS** if half-full **24 HOURS**.
- ... a fridge will keep food safe for **4 HOURS**.

AFTER ONCE THE POWER IS BACK ON ...

WHEN IN DOUBT, THROW IT OUT!

Check the temperature inside of your refrigerator and freezer. If they're still at safe temperatures, your food should be fine.

WHAT CAN I KEEP?

The following foods are safe if held above 40°F for more than 2 hours:

- Hard cheeses (Cheddar, Colby, Swiss, Parmesan, Provolone, Romano)
- Grated Parmesan, Romano or combination (in can or jar)
- Butter or margarine
- Opened fruit juices
- Opened canned fruits
- Opened veggie-based dressings
- Bread, rolls, cakes, muffins, quick breads, tortillas
- Breakfast foods (pancakes, waffles, bagels)
- Fruit pies
- Fresh mushrooms, herbs, and spices
- Uncut raw vegetables and fruit

WHAT SHOULD I THROW OUT?

- Meat, poultry or seafood products
- Soft cheeses and sliced cheeses
- Milk, creams and powdered milk
- Opened baby formula
- Eggs and egg products
- Dough, cooked pasta
- Cooked or cold produce

Never taste food to determine its safety!

REFREEZE FOOD THAT STILL CONTAINS ICE CRYSTALS OR IS AT 40°F OR BELOW.

AFTER A FLOOD

FOLLOW THESE STEPS AFTER A FLOOD:

- DO NOT EAT any food that may have touched flood water.
- DISCARD FOOD not in waterproof containers; screw-caps, snap lids, pull tops, and crimped tops are not waterproof.
- DISCARD cardboard juice/milk/baby formula boxes and home canned foods.
- DISCARD any damaged cans that have swelling, leakage, punctures, holes, fractures, extensive deep rusting, or crushing/distorting severe enough to prevent normal stacking or opening.
- Sanitize: 1 tsp. bleach + 1 gallon water
- Wash: pots, pans, dishes and utensils
- Discard: undamaged all-metal cans after removing labels

For more food safety tips go to FoodSafety.gov

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Baby Boomers AND FOOD SAFETY

About 1 in 6 Americans will get food poisoning each year. Older adults are at an increased risk of serious complications from foodborne illness. A few simple steps can help keep the golden years pleasant for you or older adults you help care for.

What May Make You Sick?

Here's a look at some of the most common food pathogens that affect older adults and where they're found:

E. COLI O157:H7

- Undercooked ground beef, unpasteurized milk and juices, contaminated raw fruits and vegetables.
- Person-to-person contact

CAMPYLOBACTER

- Unpasteurized (raw) milk
- Raw or undercooked meat, poultry or shellfish
- Untreated or contaminated water

SALMONELLA

- Raw or undercooked eggs, poultry or meat
- Unpasteurized (raw) milk or juice
- Cheese and seafood
- Fresh fruits and vegetables

Why Are You at Risk?

Older adults are at elevated risk for hospitalization and death from foodborne infections. Why?

- Medication side effects (like a weakened immune system)
- Changes in functioning of organs like liver and kidneys
- Underlying chronic conditions (such as diabetes or kidney disease)
- Age-related changes to GI tract

Product Dating

Dates printed on food labels indicate when items will no longer be at peak quality. Dates are not for safety. Here's what each one means:

- "SELL BY" DATE:** Buy the product before this date. It is safe to eat after this date.
- "BEST IF USED BY/USE BY":** This is the last date recommended for best flavor or quality.

To learn more visit www.fsis.usda.gov and search "product dating."

Foods to Avoid

- RAW OR UNDERCOOKED MEAT, POULTRY, EGGS OR SEAFOOD
- UNWASHED FRESH VEGETABLES
- UNPASTEURIZED (RAW) MILK
- HOT DOGS, DELI MEATS AND LUNCHEON MEATS that have not been heated to steaming hot
- RAW SPROUTS
- PATES – unpasteurized/refrigerated pates

Safety Tips

The pathogens that cause foodborne illness can't be smelled or tasted. Proper food handling of the food you bring home is your best defense against food poisoning. With all foods, follow these tips:

- CLEAN:** Clean surfaces, utensils and hands with soap and warm water.
- SEPARATE:** Separate raw meat, poultry and seafood from ready-to-eat foods in your grocery-shopping cart, refrigerator, and during meal prep.
- COOK:** Cooked food is safe only after it's been heated to a high enough temperature to kill harmful bacteria. Use a food thermometer.
- CHILL:** Chill raw and prepared foods promptly if not consuming after cooking.

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For more food safety tips go to FoodSafety.gov

ADDITIONAL SOURCE
<http://www.cdc.gov/features/foodpoisoning/>

Free Resources for Consumers

SEGURIDAD ALIMENTARIA PARA PERSONAS CON CÁNCER

1 de **6** estadounidenses contraerá alguna enfermedad transmitida por alimentos cada año

¿Por qué?

La seguridad alimentaria es importante para las personas con cáncer porque el tratamiento podría debilitar el sistema inmunológico.

La quimioterapia y la radioterapia podrían causar **neutropenia**—una disminución en células blancas de la sangre que combaten infecciones.

Pregunte a su Médico:

- ☒ ¿Estoy en alto riesgo de padecer enfermedades transmitidas por alimentos?
- ☒ ¿Por cuánto tiempo durará este riesgo?
- ☒ ¿Qué pasos debo seguir para prevenir enfermedades transmitidas por alimentos?
- ☒ ¿Qué alimentos requieren una preparación especial para prevenir enfermedades transmitidas por alimentos?
- ☒ ¿A quién debo contactar si pienso que tengo una enfermedad transmitida por alimentos?
- ☒ ¿Qué me recomienda usted para tratar una enfermedad transmitida por alimentos?
- ☒ ¿Cómo puedo prevenir una deshidratación?
- ☒ ¿Hay algo más que le debería preguntar?

¿Cuáles son los **SÍNTOMAS** de las enfermedades transmitidas por alimentos?



TEMPERATURAS INTERNAS MÍNIMAS RECOMENDADAS

145°F Carnes de res, cerdo, cordero y terneros (más 3 mil de espesor)	160°F Carne Molida	165°F Todas las Aves
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Alimentos que debe EVITAR



Alimentos que puede CONSUMIR



Para más información sobre Seguridad Alimentaria, visite
FoodSafety.gov

Cancer.Net
Dietician-Approved Patient Information from ASCO®

Cocinando para Grupos

Recalentando Alimentos

Recaliente comida previamente cocida hasta por lo menos los **165°F**

En el microondas

En la hornilla

En el horno

Mantenga Frio los Alimentos Fríos

Los alimentos en su refrigerador deben estar guardados a **40°F** o menos

Coloque alimentos sobre hielo en contenedores para mantenerlos por debajo de los **40°F**

Al Servir Alimentos

Use ollas de cocción lenta, platos o bandejas calientes para mantener los alimentos calientes

Los alimentos cocidos deben mantenerse a **140°F** o más

Al recalentar alimentos nunca use ollas de cocción lenta ni platos o bandejas calientes. ¡Hacer esto causa que sus alimentos pasen mucho tiempo en la Zona de Peligro!

Mantenga Caliente los Alimentos Calientes

Utilice platos y cubiertos limpios a la hora de servir sus alimentos

La Regla de las Dos Horas

Si sus alimentos perecederos deben permanecer a temperatura ambiente nunca permita que estos estén fuera por más de **2 horas**

¿QUE ES LA ZONA DE PELIGRO?

Temperaturas (que se extienden desde los 40°F hasta los 140°F) donde las bacterias se multiplican de forma acelerada.

USDA ES UN EMPLEADOR CON IGUALDAD DE OPORTUNIDADES DE EMPLEO

FUENTE ADICIONAL DE INFORMACIÓN: CDC

Para más consejos sobre la salubridad de alimentos, visite **FoodSafety.gov**

Free Resources for Consumers



“Is it *done* yet?”

You can't tell by looking. Use a food thermometer to be sure.

USDA Recommended Safe Minimum Internal Temperatures

145°F

with a 3-minute rest time



Beef, Pork, Veal & Lamb
Steaks, Roasts & Chops

145°F



Fish

160°F



Beef, Pork, Veal & Lamb
Ground

160°F



Egg Dishes

165°F



Turkey, Chicken & Duck
Whole, Pieces & Ground

www.FoodSafety.gov

USDA Meat & Poultry Hotline
1-888-MPHotline (1-888-674-6854)

Food Safety and Inspection Service



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Free Resources for Consumers

How to Order Publications:

- **Fill out a publication request form and email to FSIS.Outreach@fsis.usda.gov. (This email box can be used to attain request forms)**
- **Call the USDA Meat and Poultry Hotline (1-888-674-6854)**

USDA Meat and Poultry Hotline



Open Monday - Friday

10 a.m. to 6 p.m. ET

On Thanksgiving Day

8 a.m. to 2 p.m. ET

1-888-MPHotline

(1-888-674-6854)

Live Chat/Email:

AskKaren.gov

More Resources



1-888-MPHotline



@USDAFoodSafety



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www.FoodSafety.gov



FoodSafety.gov

Food Safety 101 Presentations

Empowering Older Adults

- Summer and Thanksgiving
- USDA-FSIS presenters available
- Facilitator guide available for non-FSIS presenters
- Held at senior centers and similar locations



Food Safety 101 Presentations

For more information contact:

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Questions?

