



Food Safety

NEWS

Food Safety CURRENT NEWS

On the Web

Food Preservation

www.oznet.ksu.edu/extrapidresponse/Food%20Preservation.htm

Egg Safety

www.aeb.org/

www.fsis.usda.gov/OA/topics/eggsafe.htm

Disaster Food Safety

www.fsis.usda.gov/OA/pubs/consumerpubs.htm

www.foodsafety.gov/~fsg/fsgdisas.html

www.redcross.org/services/disaster/afterdis/

www.nal.usda.gov/fnic/emerg.html

Correction

The February 2002 *Food Safety News* article "What is Norwalk Virus?" stated that "*Salmonella* makes up 9.7% of all foodborne illnesses but has a much higher death rate of 30.6%." The end of that statement should have read "*Salmonella* were responsible for 30.6% of deaths from foodborne illness." We apologize for the misinterpretation.

Protecting elderly from foodborne illness

By the year 2040, the population of people age 65 and over is expected to increase to more than 20% from 12.8% in 1995. Of that population, those age 85 and over are expected to triple in numbers. With that expected increase, many of these people will need to live in nursing homes or other health care facilities. This increases the chances of infections and the possibility of foodborne illness.

When addressing foodborne illness, the elderly are part of the immunocompromised population. Many have chronic diseases, are on medications, or are physically impaired. These complications weaken immune systems and increase the chance of illness.

The elderly are more likely to have gastrointestinal infections. This occurs in about 50 percent of those age 50 and over. These individuals have decreased stomach acid or even complete loss of stomach acid. Without stomach acid, the stomach cannot eliminate bacteria from food or water, passing them to the small

intestine. The elderly also may have reduced food intake and poor nutrition. This strains the immune system to fight pathogens. Many elderly have limited incomes and cannot pay for proper health care and nutritious food. The nursing home environment can also increase the spread of infection. The morbid conditions, high use of antibiotics, and poor personal hygiene of some residents contribute to this problem.

"The nursing home environment can also increase the spread of infection."

Foodborne illness outbreaks have occurred in nursing homes. Residents have weakened immune systems, chronic illness, decreased physiological functions, and take many medications. They share institutionally prepared foods. It is important to adhere to strict food preparation practices to prevent foodborne illness. In a study of 115 foodborne illness outbreaks in nursing homes from 1975 to 1987, causative pathogens were identified in 52 of these outbreaks. The pathogens were

Bacillus cereus, *Campylobacter jejuni*, *Clostridium perfringens*, *E. coli* O157:H7, *Salmonella* species, *Staphylococcus aureus*, and *Giardia lamblia*. Three of these pathogens caused 40.8 percent of the total cases. They were *C. perfringens*, *Salmonella* species, and *S. aureus*. There were 51 deaths that occurred in these outbreaks. When comparing the nursing home population to the general population, nursing home residents are more likely to die from foodborne illness.

What can be done to reduce foodborne illness among the elderly? Geriatric care professionals need programs to provide the best care possible, while keeping costs low. Maintaining a lifestyle with moderate regular exercise and good nutrition can increase the immune system's ability to fight infection. Good personal hygiene and proper food safety practices will also reduce the chances of foodborne illness.

Source: Foodborne Illness in the Elderly, J. of Food Protection, Vol. 61, No. 9, pp. 1229-1239.

FAQs

Question:

I found an egg with a blood spot. Is it fertilized?

Answer:

Blood spots are occasionally found on egg yolks. Blood spots are revealed when eggs are candled using the human eye and electronic eye, but it is impossible to catch all of them.

Blood spots do not indicate the egg is fertilized. The spots are caused by a ruptured blood vessel on the yolk surface when the egg is being formed, or by a similar accident in the wall of the oviduct. Blood spots occur in less than 1 percent of all eggs. As the egg ages, water from the albumin is absorbed by the yolk and dilutes the blood spot. If you find a blood spot, the egg is fresh. These eggs are safe to eat. Simply remove the spot with the tip of a knife.

Question:

When canning salsa, can lemon juice be substituted for vinegar?

Answer:

For any canning that includes vinegar, always use vinegar with 5% acetic acid content. Never use homemade vinegar because the acid content varies. If the recipe includes lemon or lime juice, you can't substitute vinegar for the lemon or lime juice. This is because vinegar has a lower acid content than lemon juice. But, in recipes using vinegar, lemon or lime juice can be substituted because of the higher acid content. Use the same amount of lemon or lime juice in place of the vinegar. Always use bottled lemon or lime juice.

Source: *Canning Salsa Safely*, University of Wisconsin Extension B-3570

Is Your Food Safe After a Fire?

Each year, millions of homes are destroyed by fire. Homeowners are left to salvage what they can from belongings. This includes trying to save food. In general, saving food that has been in a fire is not a good idea. Food can be exposed to extreme heat, smoke fumes, and fire fighting chemicals.

Food in cans or jars may look fine on the outside. However, the extreme heat of a fire can activate food spoilage bacteria. Cans or jars of food can split or explode making the food inedible.

Smoke fumes may contain toxic substances, which can kill humans or pets and also contaminate food. Food

wrapped in permeable packaging such as cardboard, plastic wrap, freezer paper, etc. should be thrown away. Any raw foods stored at room temperature in cabinets should also be thrown away. This includes foods such as potatoes and fresh fruit.

Fumes can also contaminate freezers and refrigerators. This is because the seals are not airtight. If any food in the freezer or refrigerator has an off flavor or odor when it's prepared, throw it away.

Chemicals used to fight fires are also toxic. These chemicals cannot be washed off food. Any food exposed to chemicals should be thrown away. This includes food stored at room temperature and foods

packaged in permeable containers. Screw-topped jars and bottles should also be thrown away. Canned goods and cookware can be decontaminated. Wash with a strong detergent. Sanitize in a bleach solution (1 teaspoon bleach per quart of water) for 15 minutes.

Fire inspectors and insurance adjusters will also help provide guidance and information to salvage valuables. Fires are very destructive. As always, a good rule of thumb is "when in doubt, throw it out!"

Source: *After a Fire, Is the Food Safe?*, USDA Food Safety and Inspection Service

Useful Tips on Home Pressure Canning Equipment

Spring is here, and it's time to plant a bountiful garden. Pressure canning is required to preserve red meats, seafood, fresh water fish, wild game, poultry, and all fresh vegetables, except for most tomatoes. These foods are considered low acid because they have an acid level, or pH level of 4.6 or higher. Spore-forming *Clostridium botulinum* will not be killed in these low acid products using a boiling water bath canning process. These bacteria are killed at a temperature of 240° F for a specific amount of time. This temperature can only be reached under pressure.

It's also time to check out your pressure canner to insure safe canned foods. If you have a canner made before 1970, be aware that it is increasingly difficult if not impossible to find replacement parts. Some canners have heavy-walled kettles with lids that clamp on

or turn on. They also have dial gauges to measure pressure. The lid should also have a vent port and a safety fuse. Newer canners are lightweight with thin walls. The lids turn, they have a weighted gauge, an automatic vent lock, a vent port to be closed by a counterweight or weighted gauge, and a safety fuse.

Some pressure canners can also be used as pressure cookers to prepare meals. Some pressure cookers or saucepans are specifically designed for preparing meals. These should not be used for pressure canning. Consult the instruction manual for proper use of these cookers.

Dial gauges need to be tested for accuracy every year. Most county extension offices can test dial gauges. Replacement gauges and parts can be purchased from stores that sell canning equipment or from the manufacturer. It is helpful to

know the model number of your canner.

Gaskets need to be handled carefully and cleaned according to the manufacturer's directions. Gaskets that are dry or nicked can cause steam leaks and should be replaced. A lid that is hard to remove after the canning and cooling process may indicate a gummy or dry gasket that should be replaced.

If you purchase a used canner, make sure all parts are included and in good condition. Also, make sure it has an instruction manual. Many older canner brands and models are no longer manufactured. The most common brands made today are National Presto Industries, Mirro, All-American and Wisconsin Aluminum Foundry.

For more information see www.oznet.ksu.edu/extrapidresponse/Food%20Preservation.htm.

Food Safety Tips for Power Outages

Kansas residents suffered many power outages due to this winter's ice and snow storms. Spring is upon us and so is severe weather season. The continued possibility of power outages can put the safety of refrigerated and frozen food in jeopardy. After you "weather" the storm, here are some tips to determine the safety of your food after a power outage.

If water supplies have become compromised, drink only approved or chlorinated water. All other water supplies should be tested prior to consumption. Discard any foods that contain broken glass or slivers of other debris. Discard any canned food with broken seams or show signs of leaking. Keep an appliance thermometer in your refrigerator

and freezer. These will tell you if your food is at a safe temperature.

Discard

Discard the following foods if kept above 40°F for more than 2 hours:

- Meat, poultry, fish, eggs and egg substitutes – raw or cooked
- Milk, cream, yogurt and soft cheese
- Casseroles, stews or soups
- Lunch meats and hot dogs
- Creamy-based salad dressings
- Custard, chiffon or cheese pies
- Cream-filled pastries
- Refrigerator and cookie doughs

Save

Save the following foods at room temperature for a few days:

- Butter or margarine
- Hard and processed cheese
- Fresh fruit and vegetables
- Opened jars of vinegar-based salad dressings, jelly, relish, taco sauce, barbecue sauce, mustard, ketchup, olives, and peanut butter
- Fruit juices
- Fresh herbs and spices
- Fruit pies, bread, rolls, and muffins
- Cakes except cream-cheese frosted or cream-filled

Discard anything that turns moldy or has off odors. Thawed foods that still contain ice crystals or feel cold can be refrozen.

Source: *Tornado Food Safety, USDA Food Safety and Inspection Service*

FAQs (cont.)

Question:

Where can I find foodborne illness statistics for Kansas?

Answer:

The Kansas Department of Health and Environment (KDHE) is the best source for this information. The 2000 *Reportable Infectious Diseases In Kansas* is the most recent. It can be found at www.kdhe.state.ks.us/epi/download/dissum00.pdf.

Another resource is Kansas Information for Communities, a division of KDHE. This online searchable database is located at kic.kdhe.state.ks.us/kic/disease_table2.html.

What You Can Do to Help Prevent Bioterrorism

The food industry is dealing with the threat of bioterrorism. Organisms such as anthrax could be used to wreak havoc, but other simpler means of terrorizing sectors of the food industry and the public could be employed. Someone just claiming to have contaminated various food-stuffs could generate a large response with food recalls, economic loss, loss of trust in the food supply, and general fear among the population.

Terrorist acts range from false accusations to acts that destroy property, communications systems, crops, livestock and people. Other means include product tampering with real or hoax contaminants and vandalism of products.

Today, many components of the food industry are taking steps to prevent agriculture

and food terrorism. Each company, educational institution or organization should evaluate its unique situation and assess its ability to manage risk, focusing on prevention.

One approach is to follow a HACCP-like procedure for developing a security plan:

1. Evaluate significant food security hazards and the chances of their occurrence.
2. Develop and implement risk control measures.
3. Determine control points in the operation that are critical for managing risks.
4. Developing monitoring procedures for those control points.
5. Develop corrective action procedures to fix security problems.
6. Verify or test your procedures periodically.

Actions may be taken by segments of the industry. Food processors can request letters of guarantee from suppliers and require transport conditions for ingredients. Incoming shipment inspection may need enhancement. Recall programs should be reviewed and updated, for example. Water supply safety should be checked and monitored.

Employee and contractor screening and background checks are increasingly important. Access to facilities should be limited and controlled. Outside visitors should be restricted to only certain areas. Asking for identification and credentials of "inspectors" and others who are not regular visitors is essential. Restricting parking, enclosing parking areas, requiring IDs for

admittance, and similar actions may be necessary. Asking employees to be vigilant and to report unusual actions and unfamiliar people in the facility or on the grounds are other important means to prevent terrorist actions in the facility.

Many ideas suggested for food production plants are also useful for other food operations. Above all, each organization and facility should address this issue. It is not going to go away.

Planning, training and having established procedures are important safeguards.

Source: *Food Technology, Vol 56, pp 43-47.*

COOPERATIVE EXTENSION SERVICE
U.S. DEPARTMENT OF AGRICULTURE
KANSAS STATE UNIVERSITY
MANHATTAN, KANSAS 66506—3403



April 2002

Volume 5, Number 2

Published Bimonthly by
K-State Research and Extension
Food Science Institute
Animal Sciences and Industry

Karen P. Penner
Extension Specialist
Food Science Institute
Animal Sciences and Industry
kpenner@oznet.ksu.edu
(785) 532-1672

Contributors

Karen P. Penner, Editor
Professor, Food Science
Animal Sciences and Industry

Karen Blakeslee
Rapid Response Coordinator
Animal Sciences and Industry

Cooperative Extension Service
K-State Research and Extension
Animal Sciences and Industry
216 Call Hall
Manhattan, Kansas 66506

K-State, County Extension Councils, Extension Districts,
and U.S. Department of Agriculture Cooperating

All educational programs and materials are available
without discrimination on the basis of race, color,
religion, national origin, sex, age, or disability.

April 15 & 22

Fort Scott

Serving Safe Food
FSCC- Greyhound Room
Contact: Ann Ludlum
620-223-3720

April 16 & 17

Pratt

Serving Safe Food
Pratt Community College
Contact: Jean Clarkson-Frisbee
620-672-6121

May 21 & 23

Junction City

Serving Safe Food
First United Methodist Church
Contact: Donna Martinson
785-238-4161

Upcoming Events

May 29 & 30

Garden City

Serving Safe Food
Southwest Research Extension Center
Contact: Linda Walter
620-272-3670

June 4 & 5

Topeka

Serving Safe Food
Shawnee Co. Extension Office
Contact: Cindy Evans
785-232-0062

June 4 & 5

Wichita

Serving Safe Food
Sedgewick Co. Extension
Education Center
Contact: Teresa Lang
316-722-7721

June 5 & 6

Manhattan

Serving Safe Food
Pottorf Hall, Cico Park
Contact: Sharolyn Flaming-Jackson
785-537-6350

June 11 & 12

Leavenworth

Serving Safe Food
Leavenworth Co. Extension Office
Contact: Denise Sullivan
913-250-2300

July 16 & 17

Salina

Serving Safe Food
Saline Co. Extension Office
Contact: Sherrie Mahoney
785-309-5850