

HEALTH



[Illustration by Jennifer Wenger / amednews.com]

Cut your risk of foodborne illness

With increasing concerns about food safety, simple steps can help ensure that what you eat is not hazardous to your health.

By **ALICIA GALLEGOS**, amednews staff. *Posted Dec. 24, 2012.*

The babies' conditions were grave when their parents brought them to see gastroenterologist David Greenwald, MD. The twins had bloody diarrhea, a symptom that led to laboratory testing and an alarming diagnosis — *Escherichia coli*.

The children likely contracted the bacteria from food or ground water, said Dr. Greenwald, fellowship program director in gastroenterology at Montefiore Medical Center and Albert Einstein College of Medicine in New York.

"By the time they came in, they were already quite sick and developed renal failure," he said.

Treatment was started, but one of the twins died. Losing a patient to foodborne illness has reinforced Dr. Greenwald's vigilance in counseling patients and families about food safety.

"It heightens everybody's sensitivity," he said. "If it happens, it makes you want to try to prevent" such illnesses.

Some physicians and public health advocates believe foodborne illnesses are on the rise. The Centers for Disease Control and Prevention estimates that about one in six Americans becomes ill each year because of foodborne diseases. About 128,000 are hospitalized and 3,000 die. The agency has not yet calculated 2012 data on foodborne illnesses.

A report released in October by U.S. Public Interest Research Group found that by September, foodborne illnesses linked directly to recalls were on track to double the number of 2011.

The consumer advocacy organization analyzed nationwide recall information from the Food and Drug Administration and the Food Safety Inspection Service from January 2011 to September 2012. During that period, researchers identified 1,753 foodborne illnesses linked to food recalls, 1,035 of which occurred in 2012. In 2011, 718 illnesses were linked to food recalls, the report said.

"Obviously, the CDC sets goals on the health of the nation, and clearly they aren't meeting those food safety goals," said Nasima Hossain, U.S. PIRG public health advocate.

Among the outbreaks in 2012: an August recall by the FDA of cantaloupes from Chamberlain Farms Produce Inc. The cantaloupes infected 261 people in 24 states with *Salmonella*. Ninety-four people were hospitalized, and three deaths were reported, the CDC said.

At least 42 people in 20 states were sickened by *Salmonella* in a September outbreak linked to peanut butter made by Sunland Inc. Eleven people were hospitalized.

In November, 28 people were infected by a strain of *E. coli* in five states after purchasing organic spinach salad mix sold at Wegmans stores. Eleven were hospitalized.

An analysis of CDC data for the last five years shows a decline in foodborne contaminants such as *E. coli* and *Shigella*. However, bacteria like *Salmonella* have remained relatively stagnant.

In 2011, 17 people fell ill with *Salmonella* for every 100,000 Americans, compared with 18 people for every 100,000 in 2010. *Campylobacter* infected about 14 people for every 100,000 in 2011 and in 2010.

“Reasons for the overall lack of recent change are not easy to pinpoint,” said Olga L. Henao, PhD, team lead of the CDC’s Foodborne Diseases Active Surveillance Network. “We do know that to see reductions, enhanced measures are needed to reduce or prevent contamination during growing, harvesting and processing. [We need] to control or eliminate pathogens in domestic and imported food, and educate food handlers about risks and prevention measures.”

The reduction in some foodborne illnesses is encouraging, said Clara Filice, MD, MPH, a pediatrician and pediatric environmental health and food policy fellow for the American Academy of Pediatrics.

“But the bottom line, unfortunately, is that although there has been some improvements, foodborne illness is still a very serious problem,” she said.

Toxic food imports

A national trend toward imported foods is aiding the prevalence of foodborne pathogens, said Michael P. Doyle, director of the University of Georgia’s Center for Food Safety. U.S. food imports grew from \$41 billion in 1998 to \$78 billion in 2007, according to the Dept. of Agriculture’s Economic Research Service. Today, 50% of fresh fruits, 20% of vegetables and 80% of seafood consumed in the U.S. come from abroad, the FDA said.

Processing food outside the U.S. is less expensive, but contamination risks are higher, Doyle said. CDC data released in March show that foodborne disease outbreaks caused by imported food appeared to rise in 2009 and 2010.

Between 2005 and 2010, 39 outbreaks and 2,348 illnesses were linked to imported food from 15 countries, the study found. Nearly half of the studied outbreaks occurred in 2009 and 2010.

Fish and spices were the most common sources of imported foodborne disease outbreaks. Nearly 45% of all imported food linked to contamination came from Asia.

“Not all countries have the same level of sanitary practices that we do in the U.S.,” Doyle said. Stronger inspections “are not the entire answer. You have to have a food safety culture within [processing plants] focused on producing safe food.”

The FDA said government-regulated products from overseas are subject to the same FDA requirements for safety, wholesomeness and correct labeling as food produced domestically.

“The agency is working to increase transparency and accountability in the supply chain, developing better enforcement and regulatory tools, encouraging greater responsibility by industry and enhancing collaboration with international regulatory counterparts,” FDA spokeswoman Pat El-Hinnawy said in an email.

The ever-changing nature of bacteria such as *Salmonella* is another barrier to foodborne illness prevention. The toxin, along with norovirus and *Toxoplasma*, cause the most annual hospitalizations and deaths.

“*Salmonella* is ubiquitous and more difficult to control than some of the other pathogens,” said Mindy Brashears, PhD, a food microbiology and food safety professor and director of the International Center for Food Industry Excellence at Texas Tech University in Lubbock. “Additionally, we have identified new routes of entry of *Salmonella* into the food supply via lymph nodes, and therefore, this pathogen is very adaptable and survives well in many environments.”

Identifying such new sources of pathogens can be beneficial, Brashears said.

“Some of the outbreaks we have experienced in recent years in products such as spinach, pet foods and peanut butter actually shed light into controlling and preventing future outbreaks,” she said.

Long-awaited law stalled

In recent years, the government has increased its surveillance of outbreaks and provided quicker warnings to consumers and health professionals about contaminated food. Perhaps the most significant effort to enhance food safety is the Food Safety Modernization Act, which President Obama signed into law Jan. 4, 2011. The measure establishes higher safety standards for food handlers, both in the U.S. and abroad, and incorporates more prevention-based strategies at businesses.

For example, the law requires food processors to evaluate the hazards in their operations, implement and monitor effective measures to prevent contamination and have a plan to take any corrective actions. The law gives the FDA more enforcement tools for ensuring that those plans are adequate, including mandatory recall authority when needed to remove contaminated food from the market swiftly.

“We definitely need” this new law, Doyle said. Previous food safety “laws are decades old and out of date. [The FSMA] is going to greatly upgrade and update the laws as well as enhance the safety of foods.”

However, nearly two years after its passage, key provisions of the FSMA remain in limbo. The FDA has waited more than a year for the Office of Management and Budget’s Office of Information and Regulatory Affairs to approve its draft of FSMA regulations.

Publishing the rules is a major priority for the FDA, and the agency continues to work toward the law’s full implementation, El-Hinnawy said.

How doctors can prevent outbreaks

After Thanksgiving, Norristown, Pa., internist Charles Cutler, MD, noticed an alarming rise in patients with foodborne illness-like symptoms. Many complained of stomach cramps and diarrhea.

During family gatherings, people often “bring food, they drive, food is sitting out for a long time,” he said. This could “increase the chance that bacteria grows on food.”

The holidays present a prime opportunity for physicians to discuss with patients the importance of safe food handling, regular hand washing and proper food storage, Dr. Cutler said. Doctors also should stay current on illness updates and outbreak warnings, food safety experts say.

Physicians typically find out about outbreaks through the media, Dr. Greenwald said. The CDC communicates warnings mostly through web postings, email alerts, teleconferences and press releases. In addition, the FDA’s Office of Special Health Issues provides timely outbreak information directly to members of the clinical community, including physicians.

“Information is powerful, so the quicker health providers get information and the more educated they are about foodborne illnesses, the better,” Dr. Greenwald said.

Doctors also should watch for symptoms that don’t mirror traditional gastrointestinal ailments, Dr. Filice said.

“It’s our role to think outside the box and always consider a person’s history and how they present,” she said. “Once a case of foodborne illness is identified or suspected, the role of the physician is really to report it to the health department.”

Dr. Filice agrees that the holidays offer a timely chance to chat with patients about food safety, but she stresses that such discussions should not end there.

Food safety is “an important part of counseling with a family,” she said. “But we really need to be thinking about it all year long.”

ADDITIONAL INFORMATION:

Which foods attract the most toxins?

Some food products are more susceptible to bacteria-causing illnesses than others. A 2009 report by the Center for Science in the Public Interest identified the 10 riskiest foods that accounted for nearly 40% of all foodborne outbreaks linked to FDA-regulated foods from 1990 to 2006.

Leafy greens. Nutritious greens can be highly contaminated with pathogens. From 1990 to 2006, the foods led to 363 outbreaks involving 13,568 reported cases of illness.

Eggs. The overwhelming majority of illnesses from eggs are associated with *Salmonella*, which sickened 11,163 people during the study period.

Tuna. The fish was linked to 268 outbreaks that affected 2,341 people. Scombroid, the illness caused by scombrototoxin, was the most common cause of illness related to tuna dishes.

Oysters. Tainted oysters were responsible for nearly 2,000 illnesses. The majority of outbreaks from oysters occurred in restaurants.

Potatoes. The popular staple was linked to 108 outbreaks that caused illness in 3,659 people. *Salmonella* bacteria caused the most frequently contracted illness associated with potatoes, followed by *Escherichia coli*.

Cheese. Cheese products caused 83 outbreaks and 2,761 cases of illness.

Ice cream. It was associated with about 75 outbreaks and 2,594 illnesses. *Salmonella* and *Staphylococcus* were the most common ice cream culprits.

Tomatoes. They caused 31 outbreaks and 3,292 illnesses. Tomatoes have been linked to several multistate outbreaks of illnesses linked to *Salmonella*.

Sprouts. Raw and lightly cooked sprouts have been associated with 31 outbreaks and 2,022 cases. Since 1999, the Centers for Disease Control and Prevention has recommended people with compromised immune systems not eat raw sprouts.

Berries. These were linked to 25 outbreaks and 3,397 illnesses. Many of the sicknesses were caused by *Cyclospora*.

Source: “The Ten Riskiest Foods Regulated by the U.S. Food and Drug Administration,” Center for Science in the Public Interest, Oct. 6, 2009 (cspinet.org/new/pdf/cspi_top_10_fda.pdf)

4 ways to talk to patients about food safety

The Centers for Disease Control and Prevention estimates that one in six people becomes ill each year from food poisoning. Food safety experts recommend that physicians talk to patients and families about how to protect themselves from foodborne illnesses. An easy way to discuss safety tips is to remember the four categories of food protection:

Clean

- Wash hands regularly. Each wash should last at least 20 seconds and include soap and running water.
- Wash surfaces and utensils after each use. Bacteria can spread throughout the kitchen and onto cutting boards, utensils and countertops without proper washing.
- Rinse fruits and vegetables. Even if peeling them to eat the inside, it's important to wash them first because bacteria can spread from the outside to the inside.

Separate

- Use separate cutting boards and plates for produce, meat, poultry, seafood and eggs. Using the same surface can promote cross contamination.
- When shopping, keep meat, poultry, seafood and eggs separate from all other foods in the grocery cart.
- Refrigerate meat, poultry, seafood and eggs in separate containers from other foods in the refrigerator.

Cook to the right temperature

- Use a food thermometer. Cooked food is safe only after it's been heated to a high enough temperature to kill harmful bacteria.
- Keep food hot after cooking to 140 degrees or above. The possibility of bacterial growth increases as food cools after cooking.
- Microwave food thoroughly. To make sure harmful bacteria have been killed in your foods, microwave to 165 degrees or higher.

Chill

- Refrigerate perishable foods within two hours. Cold temperatures slow the growth of illness-causing bacteria.
- Never thaw or marinate foods on the counter. Because bacteria can multiply rapidly at room temperature, thawing or marinating foods on the counter can contribute to contamination.
- Know when to throw food out. Merely looking or smelling food cannot determine whether harmful bacteria has started growing in leftovers or refrigerated foods.

Source: "Check Your Steps: Four Simple Steps to Food Safety," Dept. of Health and Human Services ([foodsafety.gov/](http://www.foodsafety.gov/))

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"The Ten Riskiest Foods Regulated by the U.S Food and Drug Administration," Center for Science in the Public Interest, Oct. 6, 2009 (cspinet.org/new/pdf/cspi_top_10_fda.pdf)

"Check Your Steps: Four Simple Steps to Food Safety," Dept. of Health and Human Services (www.foodsafety.gov/)

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