FACT SHEET
Protect Yourself and Others from Foodborne Illness

Foodborne illness doesn’t discriminate. Even healthy adults can get sick after consuming foods or beverages that contain certain types of bacteria, viruses or parasites.

It’s important to take precautions in the workplace, at home, when eating out or traveling to prevent spreading or contracting a foodborne illness with potentially serious health consequences.

Exposure Risk

About 48 million cases of foodborne illness occur annually in the U.S.—the equivalent of 1 in 6 Americans—resulting in an estimated 128,000 hospitalizations and 3,000 deaths a year. In a 2009-10 study, 48 percent of illness outbreaks were traced to food consumed in a restaurant, fast-food establishment or delicatessen, according to the Centers for Disease Control and Prevention (CDC). (www.cdc.gov/foodsafty/facts.html)

Food can become contaminated during human handling, by water or chemicals, and during storage. Babies and young children, pregnant women, the elderly and people with weak immune systems are particularly susceptible to foodborne organisms.

Bacteria may be present in foods such as fruit, raw meat, fish, shellfish, eggs, unpasteurized milk and other dairy products. Bacteria can grow in the intestines and create an infection. Salmonella, Campylobacter, hemorrhagic E. coli and Listeria are among types of bacteria that cause illness. Some bacteria produce toxins that may not alter the appearance, odor or flavor of food. Common kinds of bacteria that produce toxins include Staphylococcus aureus and Clostridium botulinum.

Viruses present in stool or vomit may cause illness. Viral threats include hepatitis A virus, which affects the liver; norovirus, the most common cause of acute gastroenteritis in the U.S.; and rotavirus, which is easily spread among children via fecal-oral contamination.

Parasites that can be transmitted by food include protozoa such as Cryptosporidium spp. and Giardia intestinalis, roundworms and tapeworms. Occasionally in the U.S., and more often in developing countries, roundworms, tapeworms and flukes may be contained in foods such as undercooked fish, crabs and mollusks; undercooked meat; raw aquatic plants such as watercress; and raw vegetables that have been contaminated by human or animal feces. Parasites can also be transmitted by water, soil or person-to-person contact.

According to the CDC, 31 pathogens are known to cause foodborne illness. Table 1 lists the top five pathogens contributing to domestically acquired foodborne illnesses.
Table 1: Top five pathogens contributing to domestically acquired foodborne illnesses (CDC, 2011)

<table>
<thead>
<tr>
<th>Pathogen</th>
<th>Estimated number of illnesses/year</th>
<th>% total cases</th>
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</thead>
<tbody>
<tr>
<td>Norovirus*</td>
<td>5,461,731</td>
<td>58</td>
</tr>
<tr>
<td>Salmonella** nontyphoidal</td>
<td>1,027,561</td>
<td>11</td>
</tr>
<tr>
<td>Clostridium perfringens</td>
<td>965,958</td>
<td>10</td>
</tr>
<tr>
<td>Campylobacter spp.</td>
<td>845,024</td>
<td>9</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>241,148</td>
<td>3</td>
</tr>
</tbody>
</table>

*Infected food workers cause about 70 percent of reported norovirus outbreaks from contaminated food. Norovirus has gained notoriety for afflicting cruise ship passengers but those cases account for only about 1 percent of all reported norovirus outbreaks.

**Salmonella is linked to the highest number of hospitalizations and deaths from foodborne illness.

Symptoms and Treatment

Most foodborne illnesses, while unpleasant, resolve by themselves. However, some pathogens can have serious, long-term health effects.

Symptoms may not appear for hours to days after consuming contaminated food. Common signs and symptoms of foodborne illness include vomiting, diarrhea, abdominal pain, dehydration, fever and chills. When a chemical is consumed, symptoms may include headache, tingling or numbness, blurred vision, weakness, dizziness, and in serious cases, paralysis. In rare cases, hemolytic uremic syndrome may occur when E. coli bacteria become lodged in the digestive tract and make toxins that enter the bloodstream.

An infection may be diagnosed using laboratory tests such as stool cultures, but the cause of foodborne illnesses often avoids detection.

Diarrhea or vomiting can cause dehydration if an individual loses more body fluids and salts (electrolytes) than he or she can retain. In such cases, patients are encouraged to replace lost fluids and electrolytes with an oral rehydration solution. Sports drinks are not considered adequate for the treatment of diarrheal illness. Preparations of bismuth subsalicylate can be taken to help reduce the duration and severity of simple diarrhea.

If diarrhea and cramps occur, an antidiarrheal medication may provide symptomatic relief. However, health officials say these medications should be avoided if there is high fever or blood in the stool because they may make the illness worse.

A health care professional should be consulted for illness accompanied by:

- high fever (temperature over 101.5°F, measured orally)
- blood in stool
- prolonged vomiting
• signs of dehydration including a decrease in urination, dry mouth and throat, feeling dizzy
• diarrheal illness that lasts more than three days

Prevention

Protecting the public from foodborne illness requires robust compliance and food safety training programs at the retail level, according to industry experts. In the food service industry, a critical first step is certifying kitchen managers and training workers in food safety practices.

Employers and workers in the food service industry—as well as amateur chefs—can help prevent the spread of foodborne illness by:

• washing hands before and after handling food and during restroom breaks
• keeping raw and uncooked foods separate from each other during storage and handling
• frequently washing utensils, other equipment and countertops, especially when changing from one type of food to another
• washing raw fruits and vegetables under running water to remove any potential contaminants
• not touching ready-to-eat foods with bare hands before serving
• staying home when sick (employers who provide paid time off help support compliance)
• cooking food to proper temperatures—this kills most bacteria including Salmonella, Listeria and the kinds of E. coli that cause illness and parasites
• refrigerating food at 40°F as soon as possible after it’s cooked

Finally, a good rule of thumb is: “If in doubt, throw it out.”

About WorkCare

WorkCare specializes in medical clearance, TravelCare®, workplace injury assistance (24/7 telephonic triage and early intervention), onsite clinic services and tele-health, and absence and disability management programs across all industry sectors in the U.S. and abroad.

Please contact our subject matter experts to learn more about foodborne illness and other preventable conditions. We welcome your questions and comments.