#### **Food Poisoning**

Food poisoning, also called foodborne illness, is illness caused by eating contaminated food. Infectious organisms — including bacteria, viruses and parasites — or their toxins are the most common causes of food poisoning.

Infectious organisms or their toxins can contaminate food at any point of processing or production. Contamination can also occur at home if food is incorrectly handled or cooked.

Food poisoning symptoms, which can start within hours of eating contaminated food, often include nausea, vomiting or diarrhea. Most often, food poisoning is mild and resolves without treatment. But some people need to go to the hospital.

## Symptoms

Food poisoning symptoms vary with the source of contamination. Most types of food poisoning cause one or more of the following signs and symptoms:

- Nausea
- Vomiting
- Watery or bloody diarrhea
- Abdominal pain and cramps
- Fever

Signs and symptoms may start within hours after eating the contaminated food, or they may begin days or even weeks later. Sickness caused by food poisoning generally lasts from a few hours to several days.

If you experience any of the following signs or symptoms, seek medical attention.

- Frequent episodes of vomiting and inability to keep liquids down
- Bloody vomit or stools
- Diarrhea for more than three days

- Extreme pain or severe abdominal cramping
- An oral temperature higher than 100.4 F (38 C)
- Signs or symptoms of dehydration excessive thirst, dry mouth, little or no urination, severe weakness, dizziness, or lightheadedness
- Neurological symptoms such as blurry vision, muscle weakness and tingling in the arms

### Causes

Contamination of food can happen at any point of production: growing, harvesting, processing, storing, shipping or preparing. Cross-contamination — the transfer of harmful organisms from one surface to another — is often the cause. This is especially troublesome for raw, ready-to-eat foods, such as salads or other produce. Because these foods aren't cooked, harmful organisms aren't destroyed before eating and can cause food poisoning.

Many bacterial, viral or parasitic agents cause food poisoning. The following table shows some of the possible contaminants, when you might start to feel symptoms and common ways the organism is spread.

Contaminant	Onset of symptoms	Foods affected and means of transmission
Campylobacter	2 to 5 days	Meat and poultry. Contamination occurs during processing if animal feces contact meat surfaces. Other sources include unpasteurized milk and contaminated water.
Clostridium botulinum	12 to 72 hours	Home-canned foods with low acidity, improperly canned commercial foods, smoked or salted fish, potatoes baked in aluminum foil, and other foods kept at warm temperatures for too long.

Contaminant	Onset of symptoms	Foods affected and means of transmission
Clostridium perfringens	8 to 16 hours	Meats, stews and gravies. Commonly spread when serving dishes don't keep food hot enough or food is chilled too slowly.
Escherichia coli (E. coli) O157:H7	1 to 8 days	Beef contaminated with feces during slaughter. Spread mainly by undercooked ground beef. Other sources include unpasteurized milk and apple cider, alfalfa sprouts, and contaminated water.
Giardia lamblia	1 to 2 weeks	Raw, ready-to-eat produce and contaminated water. Can be spread by an infected food handler.
Hepatitis A	28 days	Raw, ready-to-eat produce and shellfish from contaminated water. Can be spread by an infected food handler.
Listeria	9 to 48 hours	Hot dogs, luncheon meats, unpasteurized milk and cheeses, and unwashed raw produce. Can be spread through contaminated soil and water.
Noroviruses (Norwalk-like viruses)	12 to 48 hours	Raw, ready-to-eat produce and shellfish from contaminated water. Can be spread by an infected food handler.
Rotavirus	1 to 3 days	Raw, ready-to-eat produce. Can be spread by an infected food handler.

Contaminant	Onset of symptoms	Foods affected and means of transmission
Salmonella	1 to 3 days	Raw or contaminated meat, poultry, milk, or egg yolks. Survives inadequate cooking. Can be spread by knives, cutting surfaces or an infected food handler.
Shigella	24 to 48 hours	Seafood and raw, ready-to-eat produce. Can be spread by an infected food handler.
Staphylococcus aureus	1 to 6 hours	Meats and prepared salads, cream sauces, and cream-filled pastries. Can be spread by hand contact, coughing and sneezing.
Vibrio vulnificus	1 to 7 days	Raw oysters and raw or undercooked mussels, clams, and whole scallops. Can be spread through contaminated seawater.

### **Risk factors**

Whether you become ill after eating contaminated food depends on the organism, the amount of exposure, your age and your health. High-risk groups include:

- **Older adults.** As you get older, your immune system may not respond as quickly and as effectively to infectious organisms as when you were younger.
- **Pregnant women.** During pregnancy, changes in metabolism and circulation may increase the risk of food poisoning. Your reaction may be more severe during pregnancy. Rarely, your baby may get sick, too.
- Infants and young children. Their immune systems haven't fully developed.

• **People with chronic disease.** Having a chronic condition — such as diabetes, liver disease or AIDS — or receiving chemotherapy or radiation therapy for cancer reduces your immune response.

### Complications

The most common serious complication of food poisoning is dehydration — a severe loss of water and essential salts and minerals. If you're a healthy adult and drink enough to replace fluids you lose from vomiting and diarrhea, dehydration shouldn't be a problem.

Infants, older adults and people with suppressed immune systems or chronic illnesses may become severely dehydrated when they lose more fluids than they can replace. In that case, they may need to be hospitalized and receive intravenous fluids. In extreme cases, dehydration can be fatal.

Some types of food poisoning have potentially serious complications for certain people. These include:

- Listeria monocytogenes. Complications of a listeria food poisoning may be most severe for an unborn baby. Early in pregnancy, a listeria infection may lead to miscarriage. Later in pregnancy, a listeria infection may lead to stillbirth, premature birth or a potentially fatal infection in the baby after birth — even if the mother was only mildly ill. Infants who survive a listeria infection may experience long-term neurological damage and delayed development.
- Escherichia coli (E. coli). Certain E. coli strains can cause a serious complication called hemolytic uremic syndrome. This syndrome damages the lining of the tiny blood vessels in the kidneys, sometimes leading to kidney failure. Older adults, children younger than 5 and people with weakened immune systems have a higher risk of developing this complication. If you're in one of these risk categories, see your doctor at the first sign of profuse or bloody diarrhea.

### Prevention

To prevent food poisoning at home:

- Wash your hands, utensils and food surfaces often. Wash your hands well with warm, soapy water before and after handling or preparing food. Use hot, soapy water to wash utensils, cutting boards and other surfaces you use.
- Keep raw foods separate from ready-to-eat foods. When shopping, preparing food or storing food, keep raw meat, poultry, fish and shellfish away from other foods. This prevents cross-contamination.
- **Cook foods to a safe temperature.** The best way to tell if foods are cooked to a safe temperature is to use a food thermometer. You can kill harmful organisms in most foods by cooking them to the right temperature.

Cook ground beef to 160 F (71.1 C); steaks, roasts and chops, such as lamb, pork and veal, to at least 145 F (62.8 C). Cook chicken and turkey to 165 F (73.9 C). Make sure fish and shellfish are cooked thoroughly.

- Refrigerate or freeze perishable foods promptly within two hours of purchasing or preparing them. If the room temperature is above 90 F (32.2 C), refrigerate perishable foods within one hour.
- **Defrost food safely.** Don't thaw food at room temperature. The safest way to thaw food is to defrost it in the refrigerator. If you microwave frozen food using the "defrost" or "50 percent power" setting, be sure to cook it immediately.
- Throw it out when in doubt. If you aren't sure if a food has been prepared, served or stored safely, discard it. Food left at room temperature too long may contain bacteria or toxins that can't be destroyed by cooking. Don't taste food that you're unsure about just throw it out. Even if it looks and smells fine, it may not be safe to eat.

Food poisoning is especially serious and potentially life-threatening for young children, pregnant women and their fetuses, older adults, and people with weakened immune systems. These individuals should take extra precautions by avoiding the following foods:

- Raw or rare meat and poultry
- Raw or undercooked fish or shellfish, including oysters, clams, mussels and scallops
- Raw or undercooked eggs or foods that may contain them, such as cookie dough and homemade ice cream
- Raw sprouts, such as alfalfa, bean, clover and radish sprouts

- Unpasteurized juices and ciders
- Unpasteurized milk and milk products
- Soft cheeses, such as feta, Brie and Camembert; blue-veined cheese; and unpasteurized cheese
- Refrigerated pates and meat spreads
- Uncooked hot dogs, luncheon meats and deli meats

- <u>Food poisoning</u> is a common infectious condition that affects millions of people in the United States each year.
- Most commonly, people complain of
  - o <u>vomiting</u>,
  - o diarrhea, and
  - o cramping <u>abdominal pain</u>.
- People should seek medical care if they have an associated <u>fever</u>, blood in their <u>stool</u> (<u>rectal bleeding</u>), signs and <u>symptoms of dehydration</u>, or if their symptoms do not resolve after a couple of days.
- Treatment for food poisoning focuses on keeping the affected person well hydrated.
- Most cases of food poisoning resolve on their own.
- <u>Prevention</u> is key and depends upon keeping food preparation areas clean, proper hand washing, and cooking foods thoroughly.
- 12 Symptoms and Signs of the Stomach Flu

The signs and symptoms of stomach flu may vary depending upon the cause.

The primary symptom of viral gastroenteritis (stomach flu) is non-bloody diarrhea that may be accompanied by symptoms of:

- 1. Nausea
- 2. Vomiting
- 3. Abdominal cramping
- 4. Mild fever (about 100 F or 37.77 C)
- 5. Chills
- 6. Headache
- 7. Muscle aches

Symptoms of the stomach flu usually last about two to five days, and then begin to resolve with viral gastroenteritis. Bacterial gastroenteritis (stomach flu) shares many of the symptoms as viral stomach flu, but in some individuals, bacteria may cause bloody diarrhea (hemorrhagic gastroenteritis).

#### What is food poisoning

Food poisoning is a food borne disease. Ingestion of food that contains a toxin, chemical or infectious agent (like a bacterium, virus, parasite, or prion) may cause adverse symptoms in the body. Those symptoms may be related only to the gastrointestinal tract causing <u>vomiting</u> or <u>diarrhea</u> or they may involve other organs such as the kidney, brain, or muscle.

Typically most foodborne diseases cause vomiting and <u>diarrhea</u> that tend to be short lived and resolve on their own,

but <u>dehydration</u> and <u>electrolyte</u> abnormalities may develop. The Center for Disease Control and Prevention (CDC) estimates approximately 48 million people become ill from food-related diseases each year resulting in 128,000 hospitalizations, and 3,000 deaths.

According to the CDC, in 2018, the most common forborne illnesses in the United States each year are caused by:

#### 1. Norovirus.

- 2. Campylobacter.
- 3. Clostridium perfringens.
- 4. <u>Staphylococcus aureus</u>.
- 5. <u>Salmonella</u>.

## How do you know if you have food poisoning or the stomach flu?

#### Food poisoning

Food poisoning and the <u>stomach flu</u> may or may not be the same thing, depending if the causative agent is transmitted by contaminated food, or if the agent is transmitted by non-food mechanisms such as body secretions. Most health-care professionals equate stomach <u>flu</u> to viral <u>gastroenteritis</u>.

#### Stomach flu

Stomach flu is a non-specific term that describes an illness that usually resolves within 24 hours and is caused commonly by the <u>adenovirus</u>, Norwalk virus or <u>rotavirus</u>, (rotavirus is most commonly found in children).

#### Norovirus

If numerous cases of viral gastroenteritis occur in a situation where many people have been eating, it certainly may be considered food poisoning. Norwalk virus is responsible for many cases of food borne illness outbreaks on cruise ships.

Food poisoning most commonly causes:

- stomach cramps,
- vomiting, and
- diarrhea.

This can cause significant amounts of fluid loss and diarrhea along with <u>nausea</u> and vomiting may make it difficult to replace lost fluid, leading to <u>dehydration</u>. In developing countries where infectious epidemics cause diarrheal illnesses, thousands of people die because of dehydration.

As noted in the section above, other organ systems may be infected and affected by food poisoning. Symptoms will depend upon what organ system is involved (for example, <u>encephalopathy</u> due to brain infection).

## What are the symptoms and incubation time for large and small intestinal food poisoning?

#### Large intestine

Infections of the large intestine or colon can cause bloody, mucousy diarrhea associated with crampy <u>abdominal pain</u>.

- *Campylobacter*, according to CDC data, is the number one cause of foodborne disease in the United States.
- <u>Shigella</u> spp contaminate food and water and cause dysentery (severe diarrhea often containing <u>mucus</u> and blood).
- Salmonella infections often occur because of poorly or undercooked cooked and/or poor handling of the chicken and eggs. In individuals with weakened immune systems, including the elderly, the infection can enter the bloodstream and cause potentially life-threatening infections.

• <u>Vibrio</u> parahaemolyticus can contaminate saltwater shellfish and cause a watery diarrhea.

#### Small intestine infection

Diarrhea due to small bowel infection tends not to be bloody, but infections may affect both the small and large intestine at the same time.

- <u>E. coli</u> (enterotoxigenic) is the most common cause of <u>traveler</u>'s diarrhea. It lacks symptoms such as <u>fever</u> or <u>bloody diarrhea</u>.
- Vibrio cholerae, often from contaminated drinking, water produces a voluminous watery diarrhea resembling rice-water.
- <u>Viruses</u> such as Norwalk, rotavirus and adenovirus tend to have other symptoms associated with an infection including fever, <u>chills</u>, <u>headache</u>, and vomiting.
- <u>Botulism</u> is caused by *Clostridium botulinum* toxin and may present with fever, vomiting, mild diarrhea, numbness, and <u>weakness</u> leading to <u>paralysis</u>.

## What are the symptoms and incubation period for *E. coli* 0157:H7 and Yersinia enterocolitica infections?

Hemorrhagic <u>*E. coli* 0157:H7</u> and Yersinia enterocolitica infection have a long incubation period of 3 to 5 days.

Hemorrhagic *E. coli* (mainly *E. coli* <u>0157:H7</u>) can cause inflammation of the colon leading to bloody stools. In some children, about a week after infection, it can progress to <u>hemolytic uremic syndrome</u> (<u>HUS</u>). Elderly individuals may contract thrombotic thrombocytopenic purpura (TTP).

Toxins from the bacteria enter the blood stream and hemolyze or destroy <u>red blood cells</u>. In addition, the toxins cause <u>kidney</u> <u>failure</u> and <u>uremia</u>, where waste products build up in the body.

• Yersinia enterocolitica may cause inflammation of <u>lymph nodes</u> in the lining of the abdomen and may mimic <u>appendicitis</u>.

Some "food poisonings" may not be due to toxins or chemicals in food but to infectious agents that happen to contaminate the food. E. coli O157:H7 (hemorrhagic E. coli) usually occurs when contaminated food is eaten, but it also can spread from

- contaminated drinking water,
- a contaminated swimming pool, or
- passed from child to child in a daycare center.

## What are the symptoms and incubation period for chemical and bacterial causes of food poisoning?

Chemical and <u>bacterial infections</u> have a short incubation of less than 16 to 24 hours

#### Chemical causes

- Scrombroid poisoning usually is due to poorly cooked or stored fish. The affected person will experience flushing, <u>shortness of breath</u>, and <u>difficulty</u> <u>swallowing</u> within 1 to 2 hours of eating.
- <u>Ciguatera poisoning</u> is another fish toxin that occurs after eating fish such as grouper, snapper, and barracuda. Symptoms include vomiting and

diarrhea, muscle aches, and neurologic complaints including <u>headache</u>, numbness and tingling, <u>hallucinations</u>, and difficulty with balance (<u>ataxia</u>).

Mushroom ingestion can cause initial symptoms like vomiting and diarrhea.
 Eating Amanita mushrooms can cause <u>liver</u> and <u>kidney failure</u> leading to death.

#### Bacterium Causes

- <u>Staphylococcus</u> aureus poisoning is due to a toxin that is pre-formed in food before it is eaten. It causes vomiting within 1 to 6 hours after eating the contaminated food.
- Bacillus cereus is an infection that occurs after eating poorly cooked or raw rice.
- Clostridium perfringens produces a spore that may germinate in cooked meat that has been stored in an environment that was too warm. Within 8 to 12 hours, it may cause profuse diarrhea.

# What are the symptoms and incubation time for viruses, parasites, bacteria, and other pathogenic infections?ctions?

#### Parasites

 <u>Giardiasis</u> may occur after drinking water from lakes or rivers that have been contaminated by beavers, muskrats, or sheep that have been grazing. It also can be passed from person to person, for example in day care settings.

- *Amoebiasis* is encountered in contaminated drinking water, usually in tropical or semitropical climates and can be passed person to person.
- <u>Trichinosis</u> is due to an infection from eating undercooked pork or wild game such as bear meat. Aside from fever and gastrointestinal complaints, symptoms include <u>muscle pain</u>, facial swelling, and bleeding around the eyes and under the fingernails.
- <u>Cysticercosis</u> is often seen in developing countries where water is contaminated with pork tapeworms and the person swallows the ova form the tapeworm. The infection can invade the brain (neurocysticercosis) causing <u>seizures</u>.
- Cyclospora is a one-celled parasite that infects the small intestine causing explosive, watery bowel movements. Cyclospora infection is contracted by eating contaminated food or drinking water. Cyclospora infection usually does not spread from person to person. Symptoms may also include <u>headache</u>, body aches, and malaise and can mimic a viral type infection. Without antibiotic treatment, Cyclospora infection will gradually resolve over the course of many weeks, but may come and go (relapse) over that period.

#### Bacteria

- <u>Listeriosis</u> usually occurs after foods contaminated with <u>Listeria</u> bacteria are ingested. These include unpasteurized, raw milk, soft cheeses, and processed meats and poultry. Vegetables and fruits may also become infected with *Listeria*. The bacteria may lay dormant in or on the surface of the food products for weeks.
- <u>Brucellosis</u> occurs by ingesting raw or unpasteurized milk and cheese, especially goat's milk contaminated with *Brucella spp*

#### Virus

 <u>Hepatitis A</u> is spread by poor food handling, and not due to blood exposure such as in <u>hepatitis B</u> and C.

#### Protozoans

 <u>Toxoplasmosis</u> is usually transmitted to humans from cat feces containing *Toxoplasma* parasites; most infections are asymptomatic, but people who have diminished immune systems can develop systemic disease symptoms.

#### Prion

 Bovine Spongiform encephalopathy (mad cow disease) is acquired by eating foods containing prions (transmissible agents that induce abnormal folding of brain protein) contaminating brain or spinal cord from infected cows.

## What are the symptoms of food poisoning from undercooked and stored foods?

Other illnesses may involve chemical toxins that are produced in certain foods that are poorly cooked or stored. For example, scombroid and shellfish poisoning are due to a large release of histamine chemical from the fish when it is eaten. Scrombroid poisoning causes symptoms of like those of an <u>allergic reaction</u>, and are

- facial swelling,
- itching, and

• difficulty <u>breathing</u> and swallowing.

Scombroid poisoning is sometimes confused with a shellfish <u>allergy</u>.

## Who is at a higher risk of getting food poisoning?

Newborns, the elderly, and others with compromised immune systems are at higher risk of becoming ill with *Listeria* infections. <u>Pregnant</u> women are also at higher risk of contracting *Listeria* infections, and to avoid infections and to prevent giving the infection to the fetus.

Pregnant women are recommended to avoid these foods to reduce the risk of contracting a *Listeria* infections.

- soft cheeses like brie,
- camembert, and
- blue (cream cheese is safe).???????

## How long does food poisoning last?

- Most cases of food poisoning last about 1 to 2 days and symptoms resolve on their own. If symptoms persist longer than that, the person should contact their health-care professional.
- *Cyclospora* infections may be difficult to detect and diarrhea may last for weeks. Health-care professionals may consider this parasite as the potential cause of food poisoning in patients with prolonged symptoms.

## What are the most common infectious types and causes of food poisoning?

the most common causes food poisoning may be due to infections caused by

- bacteria,
- viruses,
- parasites, and
- infrequently, prions.

More than 200 infectious causes exist. Sometimes it is not the bacteria that causes the problem, but rather the toxin that bacteria produce in the food before it is eaten. This is the case with *Staphylococcal* food poisoning and with <u>botulism</u>.

## How is the *E. coli* 0157:H7 gut infection spread?

Some "food poisonings" may not be due to toxins or chemicals in food but to infectious agents that happen to contaminate the food. *E. coli O157:H7* (hemorrhagic E. coli) usually occurs when contaminated food is eaten, but it also can spread from

- contaminated drinking water,
- a contaminated swimming pool, or
- passed from child to child in a daycare center.

## What causes food poisoning?

There many causes of food poisoning. Sometimes they are classified by how quickly the symptoms begin after eating potentially contaminated food. Think of

this as the incubation time from when food enters the body until symptoms begin.

## What tests diagnose food poisoning?

Most times, the diagnosis of food poisoning is made by history and physical examination. Often, the patient volunteers the diagnosis when they come for medical care. For example, "I got sick after eating potato salad at a picnic," or, "I drank a raw egg protein shake."

The health-care professional may ask questions about the symptoms, when they started, and how long they have lasted. A review of systems may help give direction as to what type of infection is present. For example, a patient with numbress of their <u>feet</u> and weakness may be asked about whether they have opened any home canned food recently.

Travel history may be helpful to see if the patient had been camping near a stream or lake and the potential for drinking contaminated water, or if they have traveled out of the country recently and have eaten different foods than they normally do, such as raw eggs or wild game.

Physical examination begins with taking the vital signs of the patient (<u>blood</u> <u>pressure</u>, pulse rate, and temperature). Clinical signs of dehydration include dry, tenting skin, sunken eyes, <u>dry mouth</u>, and lack of sweat in the armpits and groin. In infants, in addition to the above, subtle signs of dehydration may include poor muscle tone, poor suckling, and sunken fontanelle.

Routine blood tests are not usually ordered unless there is concern about something more than the vomiting and diarrhea. In patients with significant dehydration, the health-care professional may want to check electrolyte levels in the blood as well as kidney function. If there is concern about <u>hemolytic uremic</u> <u>syndrome</u>, a <u>complete blood count</u> (hemogram, <u>CBC</u>) to check the red blood cells, white blood cells, and <u>platelet count</u> may be ordered. If there is concern about <u>hepatitis</u>, <u>liver function</u> tests may be ordered.

<u>Stool</u> samples may be useful especially if there is concern about infections caused by *Salmonella, Shigella*, and *Campylobacter*, the common non <u>traveler</u>'s diarrhea. This is especially true when the patient presents with bloody diarrhea, thought to be due to infection. If there is concern about a parasite infection, stool samples can be examined also for the presence of parasites. Some parasites may be very difficult to see under the microscope, including *Cyclospora*, because it is so tiny.

Depending on the suspected cause of the food poisoning, there are some immunological tests (for example, detection of Shiga toxins) that the CDC recommends. *Cyclospora* DNA may be detected in the stool using molecular testing called polymerase chain reaction (PCR). Other methods may be used (for example, detection of prions in tissue samples).

### What is the treatment for food poisoning?

- Maintaining good hydration is the first priority when treating food poisoning. Hospitalization may be appropriate if the patient is dehydrated or if they have other underlying medical conditions that become unstable because of the fluid or electrolyte imbalance in their body.
- Medications may be prescribed to help control <u>nausea</u> and vomiting.

- Medications to decrease the frequency of diarrhea may be indicated, but if food poisoning is suspected, it is best to consult a health-care professional before taking OTC (<u>over-the-counter</u>) medications such as <u>loperamide</u> (<u>Imodium</u>), because it may cause increased problems for the patient.
- Except for specific infections, antibiotics are not prescribed in the treatment
  of most food poisoning. Often, the health-care professional will decide
  upon their use based on multiple factors such as the intensity of the
  disease symptoms, the additional health factors of the patient, a serious
  response to infection (sepsis), and organ system compromise. For
  example, a pregnant woman suspected of having listeriosis will likely be
  treated with IV antibiotics because of the effect of the infection on the
  fetus.
- Complications of certain types of food poisoning are best treated in consultation with infectious disease specialists (for example, <u>HUS</u>, TTP, bovine spongiform encephalopathy).

## What natural and home remedies treat food poisoning?

The key to home care is being able to keep the person hydrated. Drinking a lot of water or a balanced electrolyte solution such as Gatorade or <u>Pedialyte</u> usually is adequate to replenish the body with fluids. A person can lose a significant amount of fluid with an episode of diarrhea and/or vomiting, and these fluids need to be replaced. People who show any signs of dehydration such as decreased urination, <u>dizziness</u>, or dry mucous membranes, especially in the young or elderly, should see a health-care professional.

## What are the complications of food poisoning?

The first and most important complication of food poisoning is dehydration. Food poisoning can cause significant loss of body water and changes in the electrolyte levels in the blood.

If the affected individual has underlying medical conditions requiring medication, persistent vomiting may make it difficult to swallow and digest those medications.

Other complications of food poisoning are specific to the type of infection. Some are listed in the causes of food poisoning such as HUS, TTP, or encephalopathy.

## Can you die from food poisoning?

*Listeria* is a type of bacteria that has caused the two most deadly outbreaks of food poisoning in United States history. In 1985, an outbreak in California was traced to eating a type of fresh cheese, and in 2011, *Listeria* food poisoning was traced to a cantaloupe farm and processing operation in Colorado.

Listeria most often is associated with

- eating soft cheeses,
- raw milk,
- contaminated fruits,
- contaminated vegetables,
- contaminated poultry, and
- contaminated meats.

## When should you call the doctor for food poisoning?

With a clear fluid <u>diet</u> and rest, most infections resolve on their own within 24 hours. A health-care professional should be contacted if the vomiting and diarrhea are associated with one or more of the following symptoms:

- fever,
- blood in the stools,
- signs of dehydration including <u>lightheadedness</u> when standing, weakness, decreased urination,
- diarrhea that lasts longer than 72 hours, and/or
- repeated vomiting that prevents drinking and rehydrating (replacing the fluids lost due to fever, diarrhea, and vomiting).

## What is the prognosis food poisoning?

Fortunately, most cases of food poisoning are self-limiting and resolve within a few hours to a few days and the affected individual returns to normal function.

Depending upon the cause of the infection, and the patient's underlying medical condition, the infection may cause significant organ damage and even death.

## Tips to prevent food poisoning

#### 7 Food safety tips

Prevention of food borne illness begins at home with proper food preparation technique.

- Foods should be cooked thoroughly. This especially applies to raw meat, eggs, and poultry. A meat thermometer can be used to measure the internal temperature of a meat dish.
- Leftovers should be refrigerated immediately so bacteria and viruses do not have time to start growing.
- Wash fruits and vegetables well before eating. This removes dirt, pesticides, chemicals, or other infectious agents used on, or exposed to, the foods in the fields or storage facilities.
- 4. Wash hands routinely before and after handling food to help prevent the spread of infection.
- 5. Thoroughly clean counters and other areas that are used to clean, prepare, and assemble foods. Cross contamination of food is common and can cause food poisonings. For example, a cutting board and knife used to cut raw chicken should be washed thoroughly before cutting up fruit and vegetables to prevent the spread of *Salmonella*.
- In <u>restaurants</u>, meals are prepared by others. Health inspectors check restaurants routinely and their reports on sanitary practices are usually available online. Make certain the food ordered is thoroughly cooked, especially meats such hamburger.
- 7. Pregnant women and people who have compromised immune systems, such as those undergoing <u>chemotherapy</u> or who are taking medication such as <u>prednisone</u>, should avoid eating soft cheeses like camembert, brie, blue, and feta because of the risk of contracting *Listeria*. Be very sure all fruits and vegetables are cleaned thoroughly prior to eating, no matter the source.