

FOODBORNE ILLNESS

Despite the increase in information on the causes of foodborne illness, outbreaks, continue to be major public health problem. The good news is that foodborne illness is generally preventable. A foodborne illness is defined as any illness that is caused by eating contaminated food or water.

There are several different types of contaminants that can cause foodborne illness. Contaminants include:

bacteria,

viruses,

parasites, and

chemicals.

Generally, contaminated food may look, smell, and taste delicious even though it may be contaminated and could be capable of causing a foodborne illness. Foodborne illnesses may be classified as either a food intoxication or a food infection.

FOOD INTOXICATION

Food intoxication can occur when bacteria multiply in food and produce a toxin that poisons the person consuming the food. The most common food intoxication is caused by *Staphylococcus aureus* bacteria.

Food intoxication can also be caused by harmful chemical substances contaminating food or by toxic substances that naturally occur in some foods, such as shellfish.

The incubation period of food intoxication, or period of time from consumption of contaminated food until symptoms first appear, is generally 4-24 hours. A shorter incubation period might occur in the case of a chemical substance contaminating food.

FOOD INFECTION

A food infection may occur when contaminated food or beverages are consumed and pathogenic (disease-producing) organisms multiply inside the person consuming the food. Food infections are caused by bacteria, viruses, and parasites. In some cases, the organisms die off after the illness is over, and in others, the infected person may continue to be a carrier for a period of time, passing off live organisms in their feces even though they have no symptoms. Several of the more common types of food infections are caused by *Salmonella*, *Shigella*, *E. coli*, and *Campylobacter* bacteria.

The incubation period of food infection is generally from 12-72 hours, although it may be longer. For example, the incubation period for Hepatitis A is for 15 to 50 days.

FOODBORNE ILLNESS SYMPTOMS

Symptoms of foodborne illness range from slight discomfort to severe reactions and may even result in death. Symptoms may include: nausea, vomiting, headache, abdominal cramps, diarrhea, bloody diarrhea, and fever.

The severity of the illness depends on several factors including: amount of contaminant consumed and susceptible to foodborne illness include: babies and young children, pregnant women, the elderly, person whose immune systems are impaired, and persons taking drugs which may suppress their immune systems.

POTENTIALLY HAZARDOUS FOOD

Foods that are more at risk for causing foodborne illness are called potentially hazardous foods. Potentially hazardous foods are capable of supporting pathogenic bacterial growth.

Examples of potentially hazardous foods include: beef, poultry, pork, lamb, fish and shellfish, milk and dairy products; cut melons; and cooked potatoes, beans, rice and pasta.

THE DANGER ZONE

Bacteria responsible for most foodborne illness outbreaks actively grow within a temperature range, of 45 F to 140 F, called the danger zone. Temperatures within the danger zone provide ideal conditions for the growth of bacteria.

In order to prevent foodborne illness, it is important to keep potentially hazardous foods out of the danger zone to prevent bacteria from actively growing.

Given the right conditions, bacteria will divide in two every 20 to 30 minutes so that one organism can develop into millions within 12 hours.

Time-temperature abuses of foods are leading factors of bacterial foodborne illness outbreaks. Usually food has been mishandled in such a way as to boost the growth of bacteria in it. Some examples of time-temperature abuses are:

improper cooling of food;

keeping cooked foods at room temperature;

failure to reheat cooked foods to temperatures that kill pathogenic bacteria; and

preparing foods a half day or more before serving.

REPORTING FOODBORNE ILLNESS

If you believe that you have foodborne illness, contact your health care provider. Often the only way to confirm a foodborne illness is through a stool sample. You should also report the incident to the health department, so an investigation may be initiated.

When you report a suspected foodborne illness, to the health department, an Environmental Health Specialist will interview you. You will be asked pertinent questions concerning the suspect meal as well as your prior food history and related events. Information obtained through this interview will help during investigation of the incident.