



What is a Food-borne Illness?



Food-borne illness or disease is the condition resulting from eating contaminated food. Hazards in food that may cause illness or injury are placed in one of three categories: biological, chemical, or physical hazards. Biological hazards include disease causing microbiological organisms or “pathogens” such as fungi, bacteria, parasites or viruses. Pathogens can produce toxins in food prior to its consumption. *Staphylococcus aureus* food-borne disease is an example of an illness that results from the consumption of toxin in food (food-borne intoxication). Other food-borne illnesses are food-borne infections. These result from eating a pathogen which then produces a toxin in the gut or invades and damages healthy tissue. Food-borne illness from *Salmonella*, commonly associated with chicken or eggs, is an example of a food-borne infection. Other potential hazards that may occur in foods are chemical and physical hazards. Chemical hazards include naturally occurring toxins such as solanine found in the green skin of potatoes or synthetic chemicals such as man-made pesticides and food additives. The presence of synthetic chemicals in foods does not present a high risk for consumers as the majority of chemical hazards in foods are naturally occurring. Physical hazards include pieces of foreign materials such as metal or glass sometimes found in food.

Officials define a food-borne disease outbreak as the occurrence of two or more cases of a similar illness resulting from eating a common food. It is estimated that between 6.5 to 33 million cases of food-borne illness occur each year in the U.S. The economic cost of these illnesses is estimated at tens of billions of dollars. Most food-borne illnesses are mild and probably go unreported. However, for high risk populations (young children, the elderly, pregnant women, individuals with compromised immune systems and persons with chronic disease) food-borne illness can be life threatening. The time it takes to develop a food-borne illness after eating contaminated food, the type of symptoms, and their duration can vary depending on the type of organism or toxin consumed. Typical symptoms may include nausea, vomiting, diarrhea, headache, muscle aches, dizziness, tiredness, weakness, and/or fever. Seeking medical treatment for cases of self limiting (less than 24 hours) vomiting or diarrhea is not practical in terms of both time and money. However, medical treatment is critical in cases

of prolonged vomiting and/or diarrhea which results in dehydration, presence of bloody diarrhea, and general symptoms which last for 3 days or more.

The majority of food-borne illnesses result from microbial hazards. From 1988 to 1992 microbes were responsible for approximately 85% of reported food-borne disease outbreaks. The new food safety campaign Fight Bac™ sponsored by the Partnership for Food Safety, tells consumers how they can do their part to reduce the risk of food-borne illness from microbial hazards by focusing on four critical procedures:

- (1) Clean: Wash hands and food contact surfaces
- (2) Separate: Don't cross contaminate
- (3) Cook: Cook to proper temperatures
- (4) Chill: Refrigerate promptly

References

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This information has been reviewed by university faculty.

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