

# Foodborne illness - healthcare

Risktopic 7-4.001

A foodborne illness is any acute disorder (usually gastrointestinal) that is the direct result of eating food that has been improperly handled or contaminated. Naturally occurring bacteria and their toxic products, as well as various parasites, chemical residues, and viruses, are responsible for many such illnesses.

## Introduction

Environmental conditions like moist surfaces and improper temperatures encourage bacteria and parasite growth and increase the likelihood of food contamination. Many times it is virtually impossible to detect whether food has been contaminated or not. This is because some bacteria do not alter the smell or appearance of the food that has been tainted. Proper food handling and preparation techniques can effectively control bacteria growth, lessen the likelihood, and/or eliminate damage of food poisoning. However, if appropriate food handling practices are ignored, the contaminated food could cause severe illness, irreversible organ damage, or even death.

## Discussion

**Common foodborne illnesses** – The range of foodborne infections is constantly changing. As we make improvements in food safety to control exposures, outbreaks from other bacteria, viruses and parasites seem to take their place.

Commonly recognized foodborne infections are caused by the bacteria *Campylobacter*, *Salmonella* and *E. Coli O157:H7* and a group of viruses call calicivirus (also known as *Norwalk*).

*Campylobacter* infections are caused by eating undercooked chicken and other food that has been contaminated with juices dripping from infected raw chicken. It is the most common bacteria causing diarrheal illness in the world.

*Salmonella* infections are spread by eating undercooked birds, reptiles and some mammals. In persons with poor underlying health or weakened immune systems, *Salmonella* can invade the bloodstream and can become potentially life threatening.

*E. Coli O157:H7* infections are obtained by eating food or drinking water contaminated by microscopic amounts of cow feces.

Calicivirus, or Norwalk-like virus, infection is very common but rarely diagnosed because the lab test is not widely available. It is believed that this virus spreads person to person. Infected food service workers can contaminate food during preparation if they have the virus on their hands.

In addition to these most common foodborne illnesses, some common diseases are occasionally foodborne, even though they are usually transmitted by other routes. These include infections caused by *Shigella*, Hepatitis A and the parasites *Giardia lamblia* and *Cryptosporidia*.

Some foodborne diseases are caused by the presence of a toxin in the food that was produced by a microbe in the food, such as *Staphylococcus aureus* and *Clostridium botulinum* (botulism).

## Guidance

**Food handler hygiene** - Food handler employee hygiene is often the most overlooked element of a foodborne illness prevention program, yet in many instances, it is the most important. There are only a few basic rules for food handler hygiene, but they must become habit. Rules include the following:

- Wearing disposable gloves, whenever possible, and changing them between tasks
- Food service employees that have infected cuts, a cough, or any communicable illness should refrain from contacting food copy
- Employees should always change into a clean uniform and apron upon arriving at work
- The food service workers should wear some sort of hat or hair net. Hair should be kept neat and clean
- All jewelry should be removed before washing hands
- Hands should be washed after the employee uses the restroom, eats, smokes, handles garbage, coughs, or sneezes. The food handler should also wash up after touching the hair or skin.

The correct procedure for effective hand washing is to scrub the hands for 40 seconds and rinse for 20 seconds. When washing the hand, the employee should pay special attention to the backs of the hands and fingernails which should be trimmed and kept clean. Soap and hot water should be available in restrooms. It is important to make sure that hands are not re-contaminated during drying.

**Food preparation** - Proper food preparation is essential to control the spread of foodborne illness. Microbes are killed by heat. Bringing food to an internal temperature above 160°F for even a few seconds is sufficient to kill most of the parasites, viruses and bacteria, with the exception of Clostridium bacteria, which are killed only by temperatures above boiling.

**Kitchen sanitation** - A dirty kitchen can become a fertile spawning ground for bacteria in just a few minutes. It is the duty of the diligent kitchen supervisor to ensure that elementary principles of kitchen sanitation are observed at all times:

- Cleaning up in the kitchen area, including ovens, mixers, and other equipment.
- Sanitizing all milk dispensers and food contact surfaces.
- Covering food when mopping or sweeping the floors, as well as when washing the walls.
- Closing and removing garbage and refuse receptacles frequently.

During clean-up and sanitation, all chemical label instructions should be strictly followed. When not in use, cleansing agents must be stored below and away from food. Above all, a regular cleaning schedule should be devised, posted, and followed. Specific cleaning duties should be assigned and shared among food service personnel with check-off sheets and routine inspections by supervisors to ensure the routine cleaning's effectiveness.

When washing dishes by hand, a triple rinse sink that has adequate room to house the wash area, the rinse area, and the sanitizing bath must be used so all dishes can be easily scraped and rinsed before sanitizing. Only approved cleaning solutions should be used, and employees should regularly check the chemical solution of the sanitizing bath and its temperature which should be 170°F. Dishes, utensils, and pots and pans must be allowed to air dry. When storing, glasses need to be placed facing down. Close adherence to the essential elements of manual dishwashing can result in a safe and healthy food service environment, but an automatic dishwashing system is preferred and recommended. Check with your state's public health requirements for acceptable hot water temperatures.

When controlling pests in the kitchen, the best defense is a series of regular visits from a reputable pest control service. However, some preventive measures can make a difference. Close off all possible points of pest entry. Keep screens in place on doors and windows. Keep storage areas clean and use pesticides carefully and away from food. Also, hide rodent traps and monitor them frequently. A significant potential for food contamination exists when over-the-counter pesticides are used by untrained employees.

Many factors contribute to the cause of foodborne illnesses. Among them is the use of contaminated raw food or products acquired from unsafe sources. The same can also be said for the use of "yesterday's food" and the use of food that has been exposed to inadequate heating or cooling temperatures. Equally as important is the need for proper equipment and area cleanliness as well as good personal hygiene practices by food handlers themselves.

### Storage temperature requirements

- Storage areas intended for room temperature should not be subject to extreme temperature, either hot or cold.
- Refrigeration storage and coolers should be kept at or below 40°F.
- Freezer storage temperatures should be kept at or below 0°F.
- A record of temperature for all storage areas should be documented regularly.
- Provide temperature alarms on coolers and freezers.
- Are you keeping your facilities at the proper temperature range? Insects thrive in high temperatures, and their activity will increase as the temperature rises.

### Conclusion

Management controls should ensure proper food handling and storage practices critical to safe operation of a restaurant. Sanitation procedures should be strictly enforced using only approved products and appropriate cooking temperatures. Careful attention to detail should control bacteria and other microbe contaminants that may be harmful to your staff, visitors and residents/staff.

### References

1. "Food Poisoning". U.S. Department of Health & Human Services. Web. Web site accessed 9 August 2012.  
<<<http://www.foodsafety.gov/poisoning/index.html>>>
2. "Foodborne Illness". Centers for Disease Control and Prevention. Web. Web site accessed on 9 August 2012.  
<<[www.cdc.gov](http://www.cdc.gov)>>

**Zurich Services Corporation**

Risk Engineering  
1400 American Lane, Schaumburg, Illinois 60196-1056  
800 982 5964 [www.zurichna.com](http://www.zurichna.com)

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