# Eat, Drink and Stay Healthy

**By:** Lori Diamond
**Edited by:** Andrew Duong

**Date :** November 24, 2015


**Eat, Drink and Stay Healthy**

It's that time of year when the calendar fills up with banquets, potluck dinners, parties and big family celebrations. Food is such an important part of the holiday season, and thus, it is even more important that food is handled properly to avoid the risk of foodborne illnesses.

Foodborne illness (or food “poisoning”) is caused by eating food that contains or has been contaminated with viruses, bacteria or parasites. Following are some of the more common organisms that may cause foodborne illness:

**Campylobacter**

*Campylobacter* is one of the leading causes of diarrhea in developed countries. It doesn’t take many *Campylobacter* organisms to make someone sick.  Campylobacteriosis is usually attributed to eating raw or undercooked meats, unpasteurized dairy products or foods that have been cross-contaminated by these foods. The infected person usually becomes sick within a few hours of eating the contaminated food, but typically recovers within 2 to 5 days. Rarely, the illness will be severe, lasting 10 days or more and could lead to Guillain-Barre syndrome, which causes paralysis lasting several weeks.

**Salmonella**

*Salmonella* are a group of bacteria, most commonly found in the intestines of birds and animals. The bacteria is typically transmitted to people when they eat foods that have been contaminated with animal feces. Beef, poultry and other animal products like eggs and milk are often the sources of *Salmonella*, but all foods, including fruits and vegetables, can become contaminated. Salmonella can also come from handling pets (especially reptiles and amphibians) and from both raw and processed pet food. Salmonellosis symptoms (diarrhea, cramping, nausea, fever) can occur within 6 to 72 hours after eating the bacteria in food and will last 4 to 7 days.

**Listeria**

*Listeria* bacteria are most commonly found in raw animal products, like meats and cheeses, but can also be found in vegetables that have been contaminated by soil and water that carry the bacteria. Listeriosis is a serious infection that causes fever, muscle aches and (sometimes) diarrhea. In serious cases, the infection can spread to the central nervous system and cause convulsions, headaches and stiff necks, sometimes causing meningitis (a brain infection). Listeriosis is particularly harmful to those with weakened immune systems and pregnant women. Listeriosis symptoms

typically appear about 3 weeks after eating the contaminated food, but may appear anytime within 3 to 70 days.

**E. coli**

Escherichia coli (E.coli) is a large group of bacteria that are commonly found in the intestines of both humans and animals. Most strains of E. coli are harmless, but some strains, like E.coli O157:H7 can make people sick. E. coli most commonly comes from raw or undercooked beef, unpasteurized dairy products and uncooked fruits and vegetables that have been contaminated through soil (e.g. alfalfa sprouts and bean sprouts). Those infected with E. coli bacteria will have severe stomach cramps, diarrhea and vomiting. In most cases, someone infected with E. coli bacteria will recover within 5 to 10 days. In more severe cases, it can cause permanent kidney damage or hemolytic uremic syndrome, which can be fatal.

## Keeping Foodborne Illness off your Holiday Table

There are steps you can take to avoid foodborne illness this holiday season. The World Health Organization offers these 5 Keys to Safer Food:

**1. Keep Clean**

It is important that you both clean (wash off the dirt) and sanitize (kill the germs) when preparing food. Warm, soapy water will clean hands, surfaces, utensils and equipment. A sanitizing solution can be made by adding 5 ml of bleach (1 tsp) to 750 ml (3 cups) of water. Keep microorganisms from spreading throughout the work area and to other foods by:

» Washing your hands before, during and after food preparation

» Cleaning and sanitizing prep surfaces, cooking utensils, cutting boards, cleaning cloths and equipment used for food preparation

» Protecting the food prep area from insects, rodents and pets

» Washing all fruits and vegetables (before peeling), whether you are cooking them or eating them raw

**2. Separate Raw and Cooked Foods**

Raw meat, poultry and seafood can contain the dangerous bacteria that cause food poisoning, so it is important to protect other food from coming in contact with them, both during cooking and storage.  Keep raw and cooked foods separate by:

» Keeping raw meat, poultry and seafood separate in the grocery cart, shopping bags and refrigerator

» Storing raw meats on the bottom shelf of the refrigerator in a plastic bag or glass container to contain the juices

» Using separate cutting boards and utensils to prep raw foods

» Immediately washing any equipment, utensils or cutting boards that were used to prepare raw meat, poultry or seafood; and cleaning and sanitizing the prep surfaces

**3. Cook Thoroughly**

Properly cooking food can kill almost all dangerous microorganisms. All meats should be cooked to a safe internal temperature, ideally at least of 70?C (160?F). Following is a chart of safe internal temperatures for common sources of foodborne illness (use a thermometer to ensure you are reaching the desired internal temperature):

| Food | Temperature |
|---|---|
| **Beef, veal and lamb** (pieces and whole cuts) - medium-rare | 63°C (145°F) |
| **Beef, veal and lamb** (pieces and whole cuts) - medium | 71°C (160°F) |
| **Beef, veal and lamb** (pieces and whole cuts) - well done | 77°C (170°F) |
| **Pork** (pieces and whole cuts) | 71°C (160°F) |
| **Poultry** (pieces) - chicken, turkey, duck | 74°C (165°F) |
| **Poultry** (whole) - chicken, turkey, duck | 85°C (185°F) |
| **Ground meat and meat mixtures** (burgers, sausages, meatballs, meatloaf, casseroles) - beef, veal, lamb and pork | 71°C (160°F) |
| **Ground meat and meat mixtures** - poultry | 74°C (165°F) |
| **Egg dishes** | 74°C (165°F) |
| **Others** (hot dogs, stuffing and leftovers) | 74°C (165°F) |

*Source:* Public Health Agency of Canada

**4. Keep Food at Safe Temperatures**

Bacteria can multiply very quickly when stored at room temperature. Temperatures between 5*C and 60?C (40?F and 140?F) – referred to as The Danger Zone - are the perfect temperature for harmful bacteria to grow and multiply on warm, moist food. To keep your food out of The Danger Zone, ensure that:

» Frozen foods are thawed in the refrigerator (not left out on the kitchen counter)

» Cooked foods are not left out at room temperature for more than two hours

» Cold foods are kept cold (< 5?C/40?F) and hot foods are kept hot (> 60?C/140?F) prior to serving

» Refrigerate or freeze leftover and perishable foods within 2 hours of cooking. Refrigerated leftovers should be eaten within 4 days of cooking and should be reheated completely before serving.

**5. Use Safe Water and Raw Materials**

It is important that the food you are preparing is fresh, safe and has not been exposed to potential contaminants. In areas with unsafe water, the water must be treated before using it to wash fruits and vegetables, clean utensils or wash your hands. Using safe raw materials also means selecting products that have been processed for safety, such as pasteurized dairy products. Soft cheeses, deli meats, hot dogs, etc. should not be eaten by pregnant women and those with a weakened immune system, due to their elevated risk of Listeria bacteria.

Most foodborne illness is unpleasant, but will clear up on its own without medication. Dehydration is a concern and can be treated with frequent administration of fluids, including those with electrolytes. Severe cases may require an antibiotic or other therapies. If you suspect you have a foodborne illness, it is important that you seek medical attention and inform your local Public Health Department. As with all bacterial infections, the best treatment is to prevent the illness in the first place.

## As With All Bacterial Infections, The Best Treatment Is To Prevent The Illness In The First Place.

**References:**


The Danger Zone [Article on EatRight.org] Retrieved from http://www.eatright.org/resource/homefoodsafety/safety-tips/food-poisoning/the-danger-zone

Infections from some foodborne germs increased, while others remained unchanged in 2012 (2012, April 13). [Press Release, CDC] Retrieved from http://www.cdc.gov/media/releases/2013/p0418-foodborne-germs.html

Mayo Clinic (214, April 1). Listeria infection http://www.mayoclinic.org/diseases-conditions/listeria-infection/basics/definition/con-20031039

Mayo Clinic (2014, April 5). Salmonella Infection. Retrieved from http://www.mayoclinic.org/diseases-conditions/salmonella/basics/definition/con-20029017

Public Health Agency of Canada (2015, October 20). E. Coli. Retrieved from http://www.phac-aspc.gc.ca/fs-sa/fs-fi/ecoli-eng.php

Scott, E. (2003). Food safety and foodborne disease in 21st century homes. *The Canadian Journal of Infectious Diseases*, *14*(5), 277–280. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2094945/

World Health Organization (2006). Five Keys to Safer Food Manual. Retrieved from http://apps.who.int/iris/bitstream/10665/43546/1/9789241594639_eng.pdf?ua=1