

# Campylobacter

## What is Campylobacter?

Campylobacteriosis is an infectious disease caused by bacteria of the genus *Campylobacter*. Most people who become ill with campylobacteriosis get diarrhea, cramping, abdominal pain, and fever within two to five days after exposure to the organism. The diarrhea may be bloody and can be accompanied by nausea and vomiting. The illness typically lasts one week. Some infected persons do not have any symptoms. In persons with compromised immune systems, *Campylobacter* occasionally spreads to the bloodstream and causes a serious life-threatening infection.

*Campylobacter* is one of the most common causes of diarrheal illness in the United States. The vast majority of cases occur as isolated, sporadic events, not as part of recognized outbreaks. Active surveillance through FoodNet indicates that about 13 cases are diagnosed each year for each 100,000 persons in the population. Many more cases go undiagnosed or unreported, and campylobacteriosis is estimated to affect over 2.4 million persons every year, or 0.8% of the population. Campylobacteriosis occurs much more frequently in the summer months than in the winter. The organism is isolated from infants and young adults more frequently than from persons in other age groups and from males more frequently than females. Although *Campylobacter* does not commonly cause death, it has been estimated that approximately 124 persons with *Campylobacter* infections die each year.

## Where is Campylobacter found?

*Campylobacter* is most commonly found in raw and undercooked poultry, unpasteurized milk, and contaminated water. *Campylobacter* is found most often in food, particularly in chicken. Food is contaminated when it comes into contact with animal feces. Any raw poultry may contain *Campylobacter*, including organic and “free range” products. In fact, studies have found *Campylobacter* contamination on up to 88 percent of chicken carcasses. Despite the commonness of *Campylobacter*, however, infections are usually isolated events, and widespread outbreaks are rare.

## How do animals get infected with Campylobacter?

Animals can be exposed to the bacteria by direct contact with sick animals, by ingestion (oral) of fecally contaminated feed or water or by licking or chewing on objects (fomites) contaminated with feces from infected animals. Raw or undercooked meat fed to pets can also contain the bacteria.

## How do people get infected with Campylobacter?

Campylobacteriosis usually occurs in single, sporadic cases, but it can also occur in outbreaks, when a number of people become ill at one time. Most cases of campylobacteriosis are associated with eating raw or undercooked poultry meat or from cross-contamination of other foods by these items. Infants may get the infection by contact with poultry packages in shopping carts. Outbreaks of *Campylobacter* are usually associated with unpasteurized milk or contaminated water. Animals can also be infected, and some people have acquired their infection from contact with the stool of an ill dog or cat. The organism is not usually spread from one person to another, but this can happen if the infected person is producing a large volume of diarrhea.

A very small number of *Campylobacter* organisms (fewer than 500) can cause illness in humans. Even one drop of juice from raw chicken meat can infect a person. One way to become infected is to cut poultry meat on a cutting board, and then use the unwashed cutting board or utensil to prepare

vegetables or other raw or lightly cooked foods. The *Campylobacter* organisms from the raw meat can thus spread to the other foods.

### **What are the signs and symptoms of *Campylobacter*?**

People with *Campylobacter* infection usually have diarrhea (often bloody), fever, and abdominal cramps. The diarrhea may be accompanied by nausea and vomiting. These symptoms usually start within 2 to 5 days after exposure and last about a week. Some infected people do not have any symptoms. In people with weakened immune systems, such as people with the blood disorders thalassemia and hypogammaglobulinemia, AIDS, or people receiving chemotherapy, *Campylobacter* occasionally spreads to the bloodstream and causes a life-threatening infection.

### **How do you prevent transmission of *Campylobacter*?**

Some simple food handling practices can help prevent *Campylobacter* infections.

- Cook all poultry products thoroughly. Make sure that the meat is cooked throughout (no longer pink) and any juices run clear. All poultry should be cooked to reach a minimum internal temperature of 165 °F.
- If you are served undercooked poultry in a restaurant, send it back for further cooking.
- Wash hands with soap before preparing food
- Wash hands with soap after handling raw foods of animal origin and before touching anything else.
- Prevent cross-contamination in the kitchen by using separate cutting boards for foods of animal origin and other foods and by carefully cleaning all cutting boards, countertops, and utensils with soap and hot water after preparing raw food of animal origin.
- Avoid consuming unpasteurized milk and untreated surface water.
- Make sure that persons with diarrhea, especially children, wash their hands carefully and frequently with soap to reduce the risk of spreading the infection.
- Wash hands with soap after contact with pet feces.

Physicians who diagnose campylobacteriosis and clinical laboratories that identify this organism should report their findings to the local health department. If many cases occur at the same time, it may mean that many people were exposed to a common contaminated food item or water source which might still be available to infect more people. When outbreaks occur, community education efforts can be directed toward proper food handling techniques, and toward avoiding consumption of raw (not pasteurized) milk.