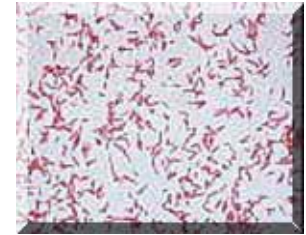


CAMPYLOBACTER

What is Campylobacter?

Campylobacter is the leading cause of bacterial diarrheal illness and is found everywhere! The *Campylobacter* organism is a bacterium that can cause disease in humans and animals with one species – *Campylobacter jejuni* (abbreviated *C. jejuni*) – being responsible for most of the human illness cases. For general information on bacteria, please see the “Bacteria” fact sheet.



Source: <http://www.about-campylobacter.com>

What is Campylobacteriosis?

Campylobacteriosis is an infectious disease caused by *C. jejuni*. It is also referred to as *Campylobacter* enteritis or gastroenteritis. Most cases of *C. jejuni* are sporadic (appearing singly or at widely scattered places) or involve small family groups, although some common-source outbreaks involving many people have been recorded. It is believed that consuming less than 500 cells can cause illness.

What are the symptoms and the incubation time?

Although they may appear anytime from two to ten days after exposure, *C. jejuni* symptoms usually begin to show within an average of two to five days. Most people who become ill with campylobacteriosis will show symptoms including fever, headache and muscle pain, followed by diarrhea, abdominal pain and cramping, nausea and vomiting. Enteritis (inflammation of the intestinal tract, especially the small intestine) is also seen with *Campylobacter* infections. In some cases, the abdominal cramping may be more severe than the diarrhea and is therefore often mistaken for appendicitis.

How long do the symptoms last?

Most *Campylobacter* infections are self-limiting and are not treated with antibiotics, although they may shorten the illness. In some cases, full recovery may take two to five days, while other cases need seven to ten days to resolve. Severe cases may persist for up to three weeks, and some long-term consequences can result. In the case that a long-term complication, such as Guillain-Barré, does develop, the onset of symptoms is usually a couple of weeks after the onset of diarrheal illness and the disease itself lasts for weeks to months with intensive care treatment being required.

How is it diagnosed?

Many different pathogens can cause diarrhea and the other symptoms associated with campylobacteriosis; therefore diagnosis based on symptoms alone is not sufficient to identify the specific infection. Doctors can look for bacterial causes of diarrhea by asking a laboratory to test a sample of feces from someone they expect is infected with *Campylobacter*.

Who is at risk?

Anyone is at risk and may become ill from *Campylobacter*; however, those who are immunocompromised such as cancer and AIDS patients are believed to be more predisposed to health complications. Children under the age of five and young adults aged 15-29 are the age groups most frequently infected, although the elderly could also be more susceptible because of weakened immune systems. Anyone in regular contact with animals may also be at increased risk since animals are known to be reservoirs (asymptomatic carriers) for the bacteria.



What is the fatality rate?

Complications from campylobacteriosis are relatively rare, as the disease is self-limiting and usually resolves without the help of antibiotics. However, long-term consequences are a possibility. In addition, though rarely, infections have been also associated with reactive arthritis called Reiter's Syndrome, and Guillain-Barré Syndrome – an inflammatory disorder in which the body's immune system attacks part of the peripheral nervous system. Fatalities are rare in healthy individuals and usually occur in cancer patients or those that are immunocompromised. The estimated case/fatality ratio for all *C. jejuni* infections is 1/1000 cases.

How does Campylobacter spread?

Campylobacteriosis is a disease of animals that can be transmitted to humans with the bacteria rarely causing disease in animals. This is called a zoonosis. The bacteria may also spread through contaminated food including meats and unpasteurized milk, or water from contaminated sources, including streams and rivers near where animals graze. In fact, most cases of campylobacteriosis are associated with handling raw poultry or eating raw/undercooked poultry meat. *Campylobacter* can also be spread by the fecal-oral route of transmission.



How can I prevent getting campylobacteriosis?

Infection control measures at all stages of food processing may help to decrease the incidence of *Campylobacter* infections. There are simple food-handling practices, as well as other simple precautionary actions that are effective for preventing *Campylobacter* infections. Some of these practices include: thoroughly cooking all poultry, meat and eggs, washing and peeling all fruits and vegetables that will be eaten raw, avoiding unpasteurized milk and milk products, thoroughly washing your hands on a regular basis and only drinking water from sanitary supplies.

How do I prevent spreading it to others?

Campylobacter is best prevented by proper food handling and cooking, maintaining sanitary water supplies and practicing good hygiene (i.e. consistently and properly washing your hands). If you are suffering from diarrhea, nausea or cramps, preparing food for others should be avoided. Bathrooms and toilets should be cleaned often to avoid the spread of bacteria, especially if someone has recently been ill with *Campylobacter*. The best prevention method is to practice hygienic food handling methods at all steps in the food processing and preparation procedure.

What is the treatment for campylobacter?

Most *Campylobacter* infections are self-limiting and are not treated with antibiotics or any other specific treatment. Those infected, especially children, should drink lots of water or electrolyte solutions while diarrheal symptoms persist to avoid dehydration. In some cases, campylobacteriosis is treated with antibiotics to reduce the length of time that infected individuals are sick and shed the bacteria in their feces. Anti-diarrheal medications may be effective in reducing the intensity of some symptoms.

How prevalent is Campylobacter in surface/well water?

One of the most common sources of *Campylobacter* is contaminated water. Through contamination with feces, wild and domestic animals shed *Campylobacter* into lakes, rivers, streams and reservoirs, and so all water for human consumption must be properly treated. In general, surface waters such as streams and lakes are more likely to contain disease-causing organisms than groundwater. Deep wells are safer than shallow wells. In fact, shallow dug wells are often as contaminated

as lakes or streams. The SDWF carried out a study on both the South Saskatchewan River as well as rural reservoirs and *Campylobacter* was found in all water sources investigated. While coliforms were also present after treatment in the communities there were no coliforms, but *Campylobacter* was present in some treated rural water supplies.



How can I protect my water supply and make sure it is safe to drink?

To protect your water supply, water should be stored in a way that will keep it free from contamination. Drinking water should be stored above ground if possible, and all wells should be properly sealed and sufficiently deep to avoid contamination from polluted surface water. Water sources should be maintained and cleaned regularly to avoid build up of debris and sludge that can cause problems at a later date.

What are some ways I can treat my water to ensure its safety?

There are several methods you may use to disinfect water and make it safe to drink. The method you use will depend on the water you are trying to disinfect and what you have available for water treatment. Some options include boiling your water and using a disinfectant such as chlorine. Once treated, water should be stored in an indoor cool, dark room.