

Clostridium perfringens



What is *Clostridium perfringens*?

Clostridium perfringens (*C. perfringens*) is a bacterium that forms spores found in the environment such as soil and sediment and in human and animal intestines. *C. perfringens* is sometimes called the “cafeteria germ” because it can be found in foods served in large amounts and kept at room temperature on poorly maintained steam tables or food warmers. *C. perfringens* bacteria form from the spores in the “danger zone” (41°F-135°F). If food is not cooked or reheated to proper cooking temperatures to kill it, live bacteria may be eaten. Once consumed, a toxin is produced in the intestines that causes food poisoning.

How common is *C. perfringens* food poisoning?

According to the Centers for Disease Control and Prevention (CDC), *C. perfringens* is one of the top 5 common bacteria that leads to food poisoning in the United States. They estimate it causes nearly one million cases of foodborne illness annually. Most *C. perfringens* outbreaks occur in institutions like hospitals, school cafeterias, prisons, and nursing homes, or at events with catered food.

How do people get infected with this bacteria?

A person can get sick by eating food contaminated with *C. perfringens* bacteria. If a person consumes food with large numbers of the bacteria, a toxin is produced in the intestines and causes food poisoning. *C. perfringens* is commonly found in beef and poultry that have not been cooked thoroughly.

The bacteria can also be found in gravies and dried or precooked foods that have not been reheated to recommended cooking temperatures. Anyone can get food poisoning from *C. perfringens*. Infants, young children and older adults are at higher risk of *C. perfringens* infection and can experience more severe symptoms. The illness is not passed from one person to another.

What are the symptoms of *C. perfringens* infection?

An infected individual will develop sudden diarrhea and abdominal (stomach) cramps within 6-24 hours of eating food contaminated with *C. perfringens*. Symptoms do not include fever or vomiting. Typically, the illness is over within 24 hours.

In severe cases, an individual may continue to experience symptoms that last for 1-2 weeks and may suffer from dehydration.

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A few deaths have been reported from dehydration which usually occur among infants, young children, older adults, and individuals with other illnesses or health complications.

How is *C. perfringens* infection diagnosed?

Laboratory tests can diagnose *C. perfringens* food poisoning by looking for a type of bacterial toxin in feces (poop) or by tests to determine the number of bacteria in the feces. In order to diagnose the infection, a count of at least 10 million *C. perfringens* spores per gram of feces within 48 hours of when illness began is required.

How can *C. perfringens* food poisoning be treated?

C. perfringens infections usually end within 24 hours and often do not require treatment other than drinking lots of fluids and getting rest. In cases where a person is experiencing dehydration, intravenous fluids and electrolyte replacement can be used as a prevention or treatment. Antibiotics are not needed or recommended.

What can be done to prevent *C. perfringens* food poisoning?

To prevent the possibility of *C. perfringens* spores growing in food after cooking, foods such as beef, poultry, gravies, and other foods commonly associated with *C. perfringens* infections should be cooked thoroughly to recommended cooking temperatures. These temperatures prevent the growth of *C. perfringens* bacteria that might have survived the initial cooking process.

Since *C. perfringens* is usually found in beef and poultry, meat dishes should be served hot immediately after cooking.

Leftover foods should be refrigerated at 41°F or below as soon as possible and within two hours of preparation. Hot foods can be put directly into the refrigerator. Large pots of food like soup or stew or large cuts of meats like roasts or whole poultry should be divided into small portions for refrigeration. Once cooled to 41°F, foods should be covered to retain moisture and prevent them from contamination or picking up smells from other foods. Leftovers should be reheated to at least 165°F before serving.

Foods that contain *C. perfringens* may not taste, smell, or look different. Any food that has been left out for a long time may be dangerous to eat, even if it looks okay. Remember, when in doubt, throw it out!

For more information, please contact:

County of San Bernardino
Department of Public Health
Communicable Disease Section
www.sbcounty.gov/dph/publichealth
(800) 722-4794

To report a possible foodborne illness, contact:

County of San Bernardino
Department of Public Health
Division of Environmental Health Services
(800) 442-2283

Source: this information was taken from the Centers for Disease Control and Prevention's website www.cdc.gov.