

What is *Clostridium perfringens*?

Clostridium perfringens is an anaerobic, spore forming bacteria that is widely distributed in the environment and frequently occurs in the intestines of humans and many domestic and wild animals. Spores of this organism are found in soil, sediments, and areas subject to human or animal fecal pollution.

What are the symptoms of *C. perfringens* food poisoning?

The common form of *C. perfringens* food poisoning is characterized by intense abdominal cramping and diarrhea which begins 8 to 22 hours after consumption of foods containing large numbers of *C. perfringens* which are capable of producing the food poisoning toxin. The illness usually lasts about 24 hours, but less severe symptoms may persist in some individuals for 1 to 2 weeks. A few deaths have been reported as a result of dehydration and other complications.

How does *C. perfringens* cause food poisoning?

When *C. perfringens* bacteria are ingested in large numbers, toxin is released into the digestive tract when the bacteria begin to form spores. This toxin produced by *C. perfringens* then triggers the onset of diarrhea.

How is *C. perfringens* associated disease diagnosed?

This disease is diagnosed symptoms and onset of illness. Diagnosis is confirmed by detecting the toxin in the feces of patients. Bacteriological confirmation can also be done by identifying large numbers of *C. perfringens* in implicated foods or the feces of patients.

Where are *C. perfringens* outbreaks usually found?

C. perfringens outbreaks are most commonly associated with meals in which large quantities of food are prepared several hours before serving and are a frequent contaminant of meat and poultry. The young and elderly are the most frequent victims of *C. perfringens* food poisoning.

Will cooking at high temperatures destroy this *C. perfringens*?

C. perfringens have the ability to produce spores that are very heat resistant and enables the organism to survive high temperatures during the initial cooking, and then germinate during the cooling of the food. The spores multiply if the food is subsequently held at temperatures of 60° F to 125° F (16° C to 52° C). If the foods are not adequately reheated, live forms of *C. perfringens* may be ingested.

How can *C. perfringens* food poisoning outbreaks be prevented?

Control measures emphasize proper food preparation, storage and temperature controls. Those measures control:

- Rapid, uniform cooling of cooked foods
- Hot holding of cooked foods
- Reheating cooled or chilled foods to a minimum internal temperature of 167° F (75° C)