

Clostridium difficile

What is *Clostridium difficile*?

Clostridium difficile or *C. difficile* for short, is a bacterium that causes diarrhea. *C. difficile* is one of the most common diarrheal infections in hospitals and long-term care facilities, where there is high antibiotic use. Antibiotics can upset the bacterial balance of the human digestive system which allows *C. difficile* to flourish. Some strains of *C. difficile* are completely harmless, while others can cause illness in humans and animals. Not everyone exposed to *C. difficile* develops the infection. Some people can carry the bacterium in their digestive tract without becoming ill.

How do people become exposed to *C. difficile*?

The majority of known *C. difficile* infections occur in hospitals among hospital patients. *C. difficile* bacteria are found in feces. People can get infected if they touch surfaces contaminated with the bacterium, and then touch their mouths or eyes. Healthcare workers can also spread the bacteria to their patients.

However, the infection can also occur outside of a hospital even in healthy individuals who haven't been using antibiotics. Presently, it is unclear how they become exposed. Possible sources of infection include other people (those who are infected or only carrying *C. difficile*), the environment, pets, food, and water. It is also unclear how many cases of *C. difficile* infection occur outside of the hospital setting. This is because most people with diarrhea (which can have many other causes, including other microbes) never visit a doctor.

What are the symptoms of *C. difficile*?

The symptoms of *C. difficile* include: watery diarrhea, fever, loss of appetite, nausea, abdominal pain and tenderness. Healthy people don't usually get *C. difficile*. People who are at the greatest risk of infection are those who have other illnesses or conditions requiring the use of antibiotics; those who are undergoing chemotherapy; those staying in the hospital for a long time; and the elderly.

Does food play a role in the transmission of *C. difficile*?

There have been several studies from around the world that showed the presence of *C. difficile* in a small percentage of ground meats, salads, raw vegetables, and tap water. It is unclear whether exposure to *C. difficile* through food and water is responsible for transmission of the bacterium.

Does the environment play a role in the transmission of *C. difficile*?

Researchers have found *C. difficile* in lakes, rivers, and soil. It is quite possible humans are exposed to *C. difficile* on a regular basis. Regular exposure to *C. difficile* through the environment could help us build immunity to this bacterium. However, more research is required to determine what role food and the environment play in the *C. difficile* infections seen outside of hospitals.