



CLOSTRIDIUM DIFFICILE

What is *Clostridium difficile*?

Clostridium difficile [klo-STRID-ee-um dif-uh-SEEL] is a spore forming bacteria. *Clostridium difficile*, often referred to as “*C.diff* or *C. difficile*”, are very hardy bacteria and live everywhere — in soil, air, water, human and animal feces, and on most surfaces. The bacteria don't create problems until they grow in abnormally large numbers in the intestinal tract of people.

Our intestinal tract contains hundreds of kinds of bacteria (intestinal flora). Many are essential, helping to synthesize certain vitamins and stimulating the immune system. And some play a key role in preventing the growth of harmful organisms.

Although many people, including children, develop *C. difficile* infections, several factors may put them at increased risk. Prolonged use or overuse of antibiotics may destroy enough healthy bacteria in the intestines and allow *C. difficile* to thrive. Subsequently, the bacteria produce toxins that destroy the lining of the intestines and symptoms develop. Persons with chronic illnesses, weakened immune systems and those who have had recent abdominal surgery or procedures are particularly vulnerable. Also, individuals who have had a long stay in the hospital or other healthcare setting and/or had recent treatment with antibiotic medication are at increased risk if a clostridium difficile-associated illness. Current information also suggests that taking prescription or over-the-counter antacids may reduce stomach acid and allow *C. difficile* to pass more easily into the intestine. *C. diff* infection usually does not occur in persons who are not taking antibiotics

What are the symptoms?

Some people who are infected with *C. difficile* never become sick, yet they can still spread the infection. Symptoms of illness may range from mild to quite severe. Mild cases of *C. difficile* disease are characterized by frequent, foul smelling, watery stools. More serious symptoms, indicative of colitis (severe inflammations of the intestines), include diarrhea that contains blood and mucous, and abdominal cramps. Fever, loss of appetite and nausea may occur. Severe and life-threatening dehydration and electrolyte imbalance can follow prolonged bouts of diarrhea.

How is *C. difficile* transmitted?

Most people pick up *C. difficile* from the environment. Individuals with *C. difficile*-associated disease shed spores in the stool (feces) that can be spread from person to person. Although an infection may result from community exposure to the bacteria, most cases occur in healthcare settings, such as hospitals and extended care facilities.

Any surface, device, or material (e.g., commodes, bedpans, bathing tubs, telephones, remote controls, floors) that becomes contaminated with feces may serve as a reservoir for the *C. difficile* spores. *C. difficile* spores are transferred to patients mainly by hands of healthcare workers or visitors who have touched a contaminated surface or item.

How is *Clostridium difficile* disease treated?

Mild illness caused by *C. difficile* may get better if you stop taking antibiotics. Severe symptoms require treatment with a different antibiotic. These antibiotics keep *C. difficile* from growing, which allows normal bacteria to flourish again in the intestine. After treatment with antibiotics, repeat *C. difficile* stool testing is generally not recommended if the patients' symptoms have stopped.

Unfortunately, about one-fourth of people with *C. difficile* get sick again, either because the initial infection never went away or because they're reinfected with a different strain of the bacteria. For recurring infection, alternative modes of treatment may be required. In severe cases, surgery to remove the infected part of the intestines may be needed. This happens in only 1 or 2 out of every 100 persons with *C. diff.*

How can *Clostridium difficile* be prevented?

PREVENTION TIPS

There are a few things you should do to lower the chances of developing *C. diff* infection again or to reduce chances of spreading it to others.

- If you do need an antibiotic, ask your doctor to prescribe one that has a narrow range and that you take for the shortest time possible.
- If you are given a prescription to treat *C. diff*, take the medicine exactly as prescribed by your doctor and pharmacist. Do not take half-doses or stop before you run out.
- Discuss with your doctor the benefit of eating yogurt before, during and after antibiotic treatment. This may help replace the “good” bacteria that antibiotics destroy.
- Practice good handwashing. Alcohol-based hand gels may reduce germs but may not effectively destroy *C. difficile* spores. There is nothing on the market that is better than the soap and water!
- Clean surfaces in bathrooms, kitchens and other areas on a regular basis with household detergent/disinfectants.
- It is generally recommended that individuals with a *C. difficile* infection have a private room or share a room with someone who has the same illness. If you have a friend or family member in a hospital or nursing home:
 - Don't be afraid to remind caregivers to follow infection control precautions.
 - Always wash your hands with soap and warm water before entering and after leaving the room of a patient.
 - Offer to help the patient wash his or her hands with a soapy washcloth and water.
- Handwashing is key to good health and the prevention and control of germs!

FOR MORE INFORMATION:

SCPH Communicable Disease Unit - 330-375-2662
Centers for Disease Control and Prevention (www.cdc.gov)
Mayo Clinic (www.mayoclinic.com)
Minnesota Department of Health (www.health.state.mn.us)