

Clostridium difficile Associated Disease (C. difficile)

Frequently Asked Questions

What is *Clostridium difficile* (or *C. difficile*)?

Clostridium difficile Associated Disease is often abbreviated to *C. difficile* or *C. diff* for short. *C. difficile* is a germ (bacteria) that can be found in people's bowels and not cause any problems or symptoms at all. But, in some people who also taking antibiotics, the germ can grow because the antibiotics kill off many of the "good" and harmless germs that normally prevent the *C. difficile* germ from growing to high numbers. *C. difficile* germs make a poison that damages the fragile lining of the bowel causing loose watery bowel movements (diarrhea).

Who is at risk?

Healthy people are not usually susceptible to *C. difficile*. Seniors and people who have other illnesses or conditions being treated with antibiotics and certain other stomach medications, are at greater risk of an infection from *C. difficile*.

What are the symptoms?

If you pick up the *C. difficile* germ you most often do not develop any symptoms of diarrhea at all. But some people, especially those taking antibiotics, may get diarrhea. The diarrhea can be mild or severe with many bowel movements in a day with stomach pains and cramps.

How does someone get *C. difficile*?

The *C. difficile* germ enters your body by placing your contaminated (dirty) hands in your mouth. This is why cleaning your hands is so important to prevent picking up *C. difficile* and other germs. You can pick up the *C. difficile* germ anywhere. But the *C. difficile* germ is especially common in hospitals because hospitals have many sick people in one place and many people are on antibiotics. The chances of the *C. difficile* germ spreading from person to person are much higher in a hospital than it is in someone's own home, for example. *C. difficile* is one of the most common infections found in hospitals and long-term care facilities and has been a known case of health-care associated diarrhea for about 30 years.

What is the treatment for *C. difficile* diarrhea?

If a person has diarrhea due to *C. difficile* the doctor will prescribe a type of antibiotic that kills the *C. difficile* germs. The two most commonly used antibiotics to treat *C. difficile* diarrhea are metronidazole and vancomycin.

How is *C. difficile* diarrhea detected or diagnosed?

If *C. difficile* diarrhea is suspected, a stool (bowel movement) sample is tested in a laboratory for the germ or the poison (toxin) it makes. The test takes several hours to perform and most hospitals do this test in their own laboratory. Those hospitals that do not do this test themselves will send the stool sample to another laboratory to do the test.

Sometimes a doctor will look directly into the bowel with a special scope (called a sigmoidoscope or colonoscope) to detect abnormal changes in the lining of the bowel that mean that *C. difficile* is causing the diarrhea.

Can a person die from *C. difficile* diarrhea?

Yes, in severe cases of *C. difficile* diarrhea death can occur. This is uncommon and tends to occur in those people with other severe health problems. The vast majority of people recover from *C. difficile* diarrhea.

How is *C. difficile* measured?

The *C. difficile* rate is calculated per 1,000 patient days (children under one year are excluded). This is similar to measuring the amount of snowfall in winter. If the weather report says there was 1 centimetre per day of snow Monday and 5 centimetres per day Tuesday we can easily tell that there is much more snow on the ground on Tuesday. In the same way, if there are 5 new cases of *C. difficile* for every (per) 1,000 patient days in a hospital, that is fewer cases than 10 cases for every (per) 1,000 patient days. A “patient day” means 1 patient in the hospital for 1 day so 1,000 patient days means 1 patient is in the hospital for 1,000 days or 1,000 patients were in the hospital for 1 day, or anything in between. The number of patients in the hospital for a month is multiplied by the number of days each patient spent in the hospital for that month. Some people are in and out of the hospital in 1 day, others stay 7 days, and some stay even longer. So if 100 people each spend 10 days in the hospital, that equals 100 people x 10 days = 1,000 patient-days. This is the required way to report *C. difficile* infection data so that hospitals, both large and small, can compare their rates of *C. difficile* over time.

What does the rate of *C. difficile* mean?

Over the last few years *C. difficile* has become more common in many hospitals. This can be because hospitals are using more modern ways to detect *C. difficile* cases and so they find more cases. *C. difficile* is being found in hospitals around the world. The rates vary a lot between hospitals over time. If the rate of *C. difficile* in a hospital goes up within a short period of time, this could mean that there is an outbreak that the hospital must look into and take action to prevent any further spread. Hospitals that provide care to the patients with the most complex health problems such as large referral and teaching hospitals tend to have higher rates of *C. difficile* diarrhea than smaller hospitals. However, *C. difficile* is of concern in all hospitals and this is why measuring the rate of *C. difficile* is important. This rate lets the hospital know if there is a *C. difficile* problem and that they need to take steps to prevent spread of this germ.

Where are these rates of *C. difficile* reported?

Hospitals are required to report their rates of *C. difficile* diarrhea to the Ontario Ministry of Health and Long-Term Care and on their own website. If a hospital is

experiencing an outbreak of *C. difficile* they must report this to the Ontario Ministry of Health and Long-Term Care and to the local Public Health Unit.

What is an outbreak?

An outbreak of *C. difficile* diarrhea exists when a hospital has more cases of *C. difficile* diarrhea than are normally seen indicating that the germ is spreading in a part of or the entire hospital.

What does the hospital do if there is an outbreak of *C. difficile*? What precautions are used to prevent spread?

If a hospital determines that it has an outbreak of *C. difficile* diarrhea then it must report this to the Ontario Ministry of Health and Long-Term Care and to the local Public Health Unit. The hospital and its infection prevention and control professionals must take the necessary steps to stop the spread of the *C. difficile* germ. There are many actions a hospital takes to combat the spread of *C. difficile* including placing patients with *C. difficile* diarrhea in a private room and all persons entering that room at any time must clean their hands carefully, put on gloves and a long sleeved gown before they enter the room. Extra cleaning of the room and other affected areas is carried out and a careful search for other cases of diarrhea that might be caused by the *C. difficile* germ occurs. Further education of patients, staff and visitors occurs on how to prevent the spread of *C. difficile*.

The Ontario Provincial Infectious Diseases Advisory Committee (PIDAC) has developed detailed best practice recommendations for hospitals and all health-care facilities on the prevention of the spread of *C. difficile*. However, the *C. difficile* germ is very hardy and can survive for a long time on the many surfaces in a hospital. Outbreaks of *C. difficile* diarrhea have been difficult to control in some situations and require a prolonged effort by the hospital to control. It is fair to say that we do not have all of the answers to preventing and treating *C. difficile* diarrhea. But we do know that keeping a close eye out for this infection by surveillance is very important. By combining all of this information from all of Ontario's hospitals, we can learn a great deal about the best ways to control *C. difficile*.

What can I do to protect myself from *C. difficile*?

It is not possible to prevent every case of *C. difficile* yet but each of us can protect ourselves and others by cleaning our hands often. Health-care providers in hospitals must clean their hands according to the Ontario Ministry of Health and Long-Term Care's hand hygiene guidelines (visit www.justcleanyourhands.ca). If you are receiving care in a hospital it is OK to ask anyone providing care to you if they have cleaned their hands. Cleaning your own hands after using the toilet, before you eat, after blowing your nose and any time they are dirty is a basic and important step to prevent the spread of all infections including *C. difficile*. Taking antibiotics only as needed and prescribed by your doctor or nurse-practitioner (advanced practice nurse) and watching out for diarrhea all also important.

Where can I get more information?

For more information on *C. difficile* diarrhea and other related topics we recommend you look at:

www.PIDAC.ca

www.JustCleanYourHands.ca

www.RICN.on.ca