

Clostridium difficile Infection

Clostridium difficile, or *C difficile*, is a bacterium that infects the colon (large intestine) and causes diarrhea.

Spread of *C difficile* Infection

Clostridium difficile is found in the stool and is spread when people accidentally touch areas contaminated by stool. This often happens in the hospital. Therefore, people who are hospitalized or have recently been hospitalized have a higher chance of being infected with *C difficile*. Because of this, *C difficile* is considered to be a **health care-associated infection**.

Taking antibiotics (to treat another infection) is a major factor that increases the risk of being infected with *C difficile*. Antibiotics can kill normal, "good" bacteria in the gastrointestinal tract, which gives *C difficile* bacteria a chance to multiply and release toxic substances. These toxins then cause diarrhea and other symptoms of infection.

People who are older and people who take acid-lowering medications for heartburn or acid reflux may have a higher chance of being infected with *C difficile*.

Symptoms

Some people who are infected with *C difficile* have mild symptoms, whereas others have severe symptoms that require hospitalization. These symptoms can include

- Diarrhea that is watery, which can lead to dehydration if it is very severe
- Fever
- Abdominal pain and cramping
- Nausea and loss of appetite

Diagnosis and Treatment

Clostridium difficile infection is found by testing a sample of stool. Most cases of *C difficile* infection can be treated with a short (2 weeks or less) course of antibiotic pills. However, some strains of *C difficile* do not respond to these antibiotics and require more treatment with different antibiotics for longer periods.

Sometimes, the infection can be very difficult to treat with antibiotics alone. An experimental procedure that has worked for some patients with difficult-to-treat *C difficile* infection is **fecal microbiota transplantation** (stool transplant). In this procedure, the "good" bacteria from the gastrointestinal tract of a person who does not have *C difficile* infection are collected from a stool sample and placed directly into the gastrointestinal tract of the person infected with *C difficile*.

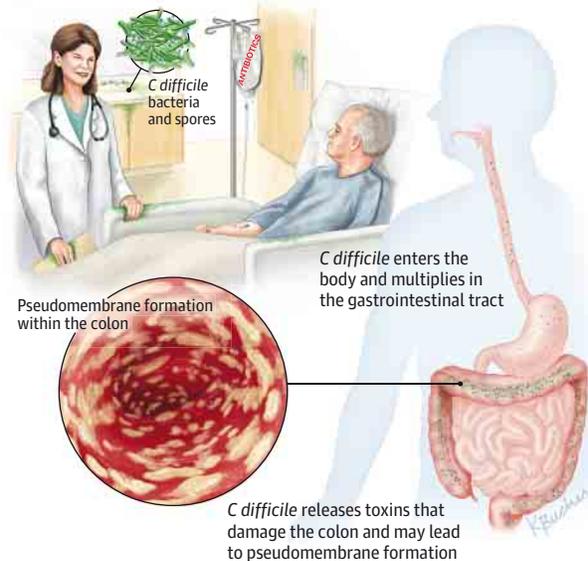
The November 5, 2014, issue of *JAMA* contains an article about fecal microbiota transplantation for relapsing *C difficile* infection.

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Source: Ananthakrishnan AN. *Clostridium difficile* infection: epidemiology, risk factors and management. *Nat Rev Gastroenterol Hepatol*. 2011;8(1):17-26.

Health care-associated *C difficile* infection

C difficile can spread from contaminated surfaces and hands of hospital staff



A Growing Problem

In recent years, *C difficile* infections have become more common worldwide. They are also becoming more severe and harder to treat. Some people are getting *C difficile* infection without being in a hospital (**community-associated *C difficile***). Also, children, pregnant women, and people with inflammatory bowel disease seem to be getting infected more often than before.

Good hand-washing (especially when in the hospital) and taking antibiotics only when necessary can help lower the risk of getting or spreading *C difficile* infection.

FOR MORE INFORMATION

Centers for Disease Control and Prevention
www.cdc.gov/hai/organisms/cdiff/Cdiff-patient.html

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