



- DSM Clinical Microbiology Discipline Publication -

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***Clostridium difficile* - Fact Sheet for Patients and Families**

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What is *Clostridium difficile*?

Clostridium difficile (kloss-TRID-ee-um diff-ih-SEEL) is a type of bacteria that can cause diarrhea, fever and/or pain and bloating in the lower belly. In some cases, the diarrhea will be mild and may get better on its own; however, the infection can be very serious and may need to be treated with antibiotics.

Clostridium difficile is often called *C. difficile* or *C. diff*.

The bacteria

The bacteria are found in stool ("poop") and live in the large bowel, also called the colon. Some *C. difficile* bacteria can produce toxins (thing that causes damage in humans) that can cause diarrhea. The bacteria also change to a tough form (called a spore) that can survive hot and cold temperatures and contact with many chemicals, including alcohol-based hand sanitizers. The spores can be spread in the environment of an infected person. Contact with the spores can lead to infections in other people.

The disease

A healthy large bowel contains many different types of bacteria that do not make you sick. Some people have *C. difficile* among these other bacteria, but in normal conditions in the large bowel, the other bacteria are able to stop *C. difficile* from growing too much. Sometimes, like when you are taking antibiotics, the normal bacteria can be killed and *C. difficile* can grow to high levels. If the *C. difficile* strains present are the type that produce toxins, these toxins may make you sick. The diarrhea and other symptoms that you may develop because of a toxin-producing *C. difficile* infection are called *Clostridium difficile*-associated disease (CDAD).

You can also have diarrhea while taking antibiotics that is not caused by *C. difficile*. This is called antibiotic-associated diarrhea (AAD).

The transmission i.e. how it is spread

When a person gets diarrhea from a *C. difficile* infection, the bacteria and spores can be spread to the environment from the stool. The bacteria and spores can be found on toilet fixtures, furniture, personal items, and health care equipment that an infected person uses. The bacteria and spores can be spread by unwashed hands or contaminated gloves. If another person touches the contaminated objects and then touches his or her face or mouth, he or she can get sick with *C. difficile*. Frequent hand washing with soap and water, especially after using the toilet and before touching food, is very important in stopping other people from getting sick.

The treatment

Your doctor may ask you to stop taking certain antibiotics and this may end your symptoms. If your symptoms continue, there are two antibiotics that may be used to treat *C. difficile*. Usually, your doctor will give you metronidazole, which is also called Flagyl®, first. If this doesn't work, then your doctor may give you vancomycin. If the diarrhea comes back, contact your doctor immediately. You may need more antibiotics. About 1 in 4 people with CDAD will have to be treated more than once. The antibiotics do not kill the spores. Sometimes the spores start growing again and go on to cause disease.

Why is testing needed?

Testing helps your doctor know if the diarrhea you have is caused by the *C. difficile* bacteria. If this bacterium is



making you sick, it can spread from you to other patients. Appropriate protection measures will be put in place if the test is positive to help protect other patients. Testing will help decide the best treatment for you.

How do we test for *C. difficile*?

Stool (“poop”) samples (up to 3 samples collected on different days) will be collected to test for *C. difficile*. Results are usually ready within 24 hours, but may take up to 5 days.

Can family and friends get *C. difficile*?

If your family and friends are healthy and not taking antibiotics, they are unlikely to get sick. Visitors are still welcome in your room. However, in order to help protect your family and friends and others in the hospital, everyone must wash their hands with soap and water when they enter and leave your room. They must also wear gowns and gloves when they enter your room. If any of your visitors are worried about *C. difficile* or have diarrhea, they should talk to your nurse or doctor.

How can the person with *C. difficile* help prevent spread to others?

Hand washing is the best way for a person to avoid spreading *C. difficile* to

other people. It is also the best way for a person to avoid accidentally becoming sick from this bacterium. Washing your hands with soap and water is a good way to remove *C. difficile* from your hands.

Alcohol hand sanitizers do **not** kill *C. difficile* spores. You should always wash your hands with soap and water before making or eating food and after using the toilet or bedpan. Visitors and health care workers should always wear disposable gloves. When leaving the room, the gloves should be taken off and thrown away and then the person still needs to wash their hands.

What can you do at home after you leave the hospital?

If you are at home, you can prevent the spread of *C. difficile* by washing your hands with soap and water after using the toilet and before touching food. Family and friends should also often wash their hands with soap and water to avoid getting infected. Clean the bathroom every day. Throw out garbage such as disposable gloves and diapers (if used by the sick person) into plastic bags. Tie the bags tightly before putting them in the regular trash. If clothes get dirty with stool (“poop”), wash them separately in detergent and bleach.
