

Clostridium Difficile Infection, C. diff

What is *Clostridium difficile* infection?

Clostridium difficile, often referred to as “C. diff,” is a bacterium that can cause diarrhea. The most common symptoms of C. diff infection include watery diarrhea, fever, nausea and belly pain/tenderness.

Almost all cases of C. diff are in persons taking antibiotics. Antibiotics can be lifesaving medicines, as they kill bad bacteria. However, when they kill bad bacteria, they also kill good bacteria that help protect you from infection. Until the good bacteria in your stomach and intestines can grow back, you can get sick from C. diff.

C. diff is spread through feces. Surfaces such as toilets, bathroom fixtures, bed linens, medical equipment and door handles can get contaminated with feces when a person has C. diff diarrhea, especially if the person or the caregiver/healthcare provider does not wash hands. C. diff bacteria are able to live for a long time on surfaces. The C. diff bacteria is most often picked up from touching surfaces contaminated with C. diff bacteria, then touching the mouth, or from health care providers’ hands if they do not clean them as they should. The population most at risk for C. diff infection is older adults who are on antibiotics and are hospitalized or who live in a long-term care facility. C. diff infection can be difficult to treat and in some cases can be life-threatening.



How can C. diff be prevented?

- Make sure all doctors, nurses and other healthcare providers clean their hands before and after caring for you — if you do not see someone from your health care team clean his or her hands, please ask that person to do so.
- Only take antibiotics as prescribed by your provider.
- Clean your own hands often, especially after using the bathroom and before eating.

How is C. diff diagnosed?

If you are having watery diarrhea and have recently been on antibiotics, your healthcare provider may collect a stool specimen to test you for C. diff.

How is C. diff treated?

Once you have been diagnosed with C. diff, your healthcare provider will prescribe an antibiotic that can kill the C. diff bacteria. You may also be taken off other antibiotics that may have caused you to get C. diff. If you are given medication for C. diff, take the medicine exactly as prescribed. Do not skip doses, take partial doses or

stop taking the medication before it runs out, even if you feel better and your diarrhea resolves.

The infection returns in about 20 percent of patients and must be treated again. In a small number of cases, infection returns over and over again. These cases require special treatment. In very rare cases, a person might have to have surgery to remove the infected part of the intestines.

What can healthcare providers and patients do to prevent the spread of C. diff in healthcare settings?

Doctors, nurses and other healthcare providers:

- Health care providers will clean their hands with soap and water after caring for a patient with C. diff. This prevents C. diff from being carried on their hands.
- Any room or medical equipment that has possibly been contaminated with feces is cleaned using a product that kills C. diff.
- Healthcare providers will wear a gown and gloves to care for a patient who has C. diff and is incontinent of stool. Gowns and gloves are removed before the healthcare provider leaves the room.

Patients and their visitors:

- Tell your provider right away if you are having diarrhea.
- Always wash your hands with soap and water after you use the bathroom. Scrub your hands with soap for at least 15 seconds, covering all surfaces of your hands, then turn the faucet off with a clean paper towel. Using hand rubs does not kill C. diff and some other germs that cause diarrhea. Washing hands well with soap and water ensures you wash the bacteria down the drain.
- If you have an accident in a bathroom or are incontinent of stool anywhere in the facility, tell an employee right away so the area can be appropriately cleaned.

What precautions can be taken at home to prevent the spread of C. diff to friends, family and visitors?

C. diff infection usually does not occur in persons who are not taking or have not recently taken antibiotics. Healthy individuals not on antibiotics are unlikely to get C. diff. You are also much less likely to spread C. diff to others once your diarrhea has resolved, even if you are still on medication. However, there are several things that can be done at home to keep you and everyone else healthy while you are being treated for C. diff:

- Use soap and water to clean your hands. Alcohol-based and other hand rubs do not kill C. diff. You must wash hands thoroughly with soap and water to remove the bacteria from your hands and wash them down the drain.
- Everyone in your home should wash hands often with soap and water, especially:
 - After using the bathroom
 - After assisting a person with C. diff
 - Before touching the face
 - Before preparing or eating food.
- Any linens or clothing soiled with feces should be laundered separately in hot water cycles with chlorine bleach and laundry soap.
- C. diff is resistant to many commonly used home disinfectants, sanitizers and cleaning agents. Bleach is able to kill C. diff and should be used for cleaning.

- **Using bleach:** Use a 1:10 bleach/water ratio. For example: mix 1 cup of bleach into 9 cups of water, and clean with that solution. Discard solution after 24 hours and mix a fresh solution. Surfaces should be kept wet with solution for ten minutes to kill the bacteria. Once a surface has air dried, you can wipe it with a damp cloth to remove any residue. It is best to use disposable wipes, paper towels or cloths that can be washed in hot bleach water after use.
 - **What to clean:** Clean hard surfaces such as bed frames/rails, counters, medical equipment, door handles, light switches and all bathroom fixtures. Clean any items shared between individuals in the home such as the TV remote and phones. Toilet seat, handle and lid should be disinfected after each diarrhea episode.
 - **How to clean:** Move from cleaner areas to dirtier areas to avoid spreading germs. Bathrooms should be cleaned last. While cleaning the bathroom, clean the toilet last.
 - Protect your hands and skin by wearing disposable gloves, and ensure areas are allowed to be ventilated to the best extent possible.
 - If you do not want to use bleach, look for a product that specifically states on the label that it kills C. diff.
- Recommendations for home bathrooms:
 - Remove fabric shower curtains. Replace with liners that can be cleaned with bleach.
 - Remove towels stored on hooks or stacked near the toilet.
 - Store toothbrushes, personal grooming items and towels in a cabinet or in plastic bag.

Visit our website for more information about support groups, clinical trials and lifestyle information.

PTE.350 © Copyright 2016

NOTE: This information is provided to you as an educational service of National Jewish Health. It is not meant to be a substitute for consulting with your own physician.

National Jewish Health is the leading respiratory hospital in the nation. Founded 121 years ago as a nonprofit hospital, National Jewish Health today is the only facility in the world dedicated exclusively to groundbreaking medical research and treatment of patients with respiratory, cardiac, immune and related disorders. Patients and families come to National Jewish Health from around the world to receive cutting-edge, comprehensive, coordinated care. To learn more, visit njhealth.org.