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Public Health

Clostridium Difficile
Fact Sheet

What is it?
Clostridium difficile (*C.difficile*) was first identified as a cause of antibiotic-associated diarrhea in the late 1970's. Many people carry these bacteria in their intestines without any symptoms (colonization). Antibiotics reduce the number of normal bacteria in the small intestine. This allows the organism to thrive, overgrow, and produce toxins. These toxins cause inflammation of the intestinal tract. *C. difficile* is the most common cause of hospital-acquired diarrhea. It has been implicated in diarrheal outbreaks in institutional settings.

What are the symptoms?
Once in the intestines, the organism can produce a toxin that damages the colon. Patients may experience:

- fever
- nausea and loss of appetite
- abdominal pain and tenderness
- diarrhea which can be mild and watery
- severe diarrhea which can result in bowel perforation, septic shock and death.

How is it spread?
Spores form that can survive for long periods outside the body. They are resistant to common hospital disinfectants. The spores prefer to live in dry dusty areas but have been found on handrails and toilet seats days or weeks after thorough sterilization with bleach. Person-to-person transmission via the hands of healthcare workers or contact with contaminated environmental surfaces are the main modes of transmission.

How is it treated?
Treatment of colonized (asymptomatic) patients is not recommended. Discontinuing the use of antibiotics is often all that is necessary. Oral metronidazole (Flagyl) is the first line of treatment for symptomatic patients.

Who is likely to become infected?
Patients are often elderly or immunocompromised. They have usually been in hospital for another illness when they contract the infection. *C. difficile* associated diarrhea (CDAD) also occurs in ambulatory patients on oral antibiotics.

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Who is at risk?

Patients at highest risk are those who:

- are currently taking or have recently taken antibiotics
- have had gastrointestinal surgery or manipulation
- have had a long stay in a health care setting
- have a serious underlying illness
- are immunocompromised
- are of advanced age.

How is it prevented?

- Careful use of antibiotics is important.
- Hand washing is the single most effective method of preventing this and other infections.
- Good personal hygiene of patients and health care workers is essential.
- Placement in a private room is ideal. If none is available, place infected patients together when possible.
- Healthcare workers should wear gloves for patient care, and gowns if soiling of clothing is likely.
- Dedicate equipment whenever possible.
- Ensure adequate environmental and medical device cleaning and disinfection, especially for items likely to be contaminated with feces.
- Use approved hospital disinfectant for environmental cleaning.

Other Questions?

Talk to your health care provider or call our Communicable Disease Program at 613-966-5500 or 1-800-267-2803, ext. 349. | TTY Dial 711 (1-800-267-6511) | hpepublichealth.ca

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