

Carbapenemase-producing organisms (CPO)

What are carbapenemase-producing organisms (CPO)?

Carbapenemase-producing organisms (CPO) are bacteria that are naturally found in the gut (digestive system) and that have become resistant to a group of antibiotics known as carbapenems.

You might also hear the terms carbapenem-resistant Enterobacteriaceae (CRE) or carbapenemase-producing Enterobacteriaceae (CPE).

Why are CPO a concern?

CPO are commonly found in a number of countries around the world, particularly in their health care facilities. People who have been admitted to hospital or had treatment (e.g. dialysis or surgery) in a health care facility outside of Canada, or who have travelled outside of Canada may be at increased risk for picking up CPO bacteria. It is important to prevent these bacteria from spreading to other individuals, especially in hospitals and health care settings where patients are vulnerable to developing infections.

CPO are usually a low risk and rarely cause an infection in healthy people. If they spread from the gut to other parts of the body such as the blood, lungs, or bladder, the person becomes infected.

CPO infections are difficult to treat because of resistance to carbapenem antibiotics. Resistance to carbapenem antibiotics is a concern as they are used to treat serious infections when other antibiotics have not worked. If you develop an infection caused by CPO, your doctor will give you specific antibiotics that work for these bacteria.

How is CPO spread?

CPO are normally found in the gut. The most common way CPO spreads from person to person is by direct contact if hands are not cleaned after going to the bathroom and before preparing or eating food.

People identified as having a CPO should follow these instructions to prevent CPO from spreading to others in the home:

- Wash your hands often, especially after going to the bathroom, after touching infected areas and before preparing and eating food
- **Do not** share personal care items such as towels, toothbrushes, or bar soap
- Clothing should be laundered in the usual manner
- Clean bathrooms frequently; no special cleaning agents are required
- Cover open draining wounds using a clean bandage

People who live with a person with CPO should wash their hands frequently. For more information on hand washing, see [HealthLinkBC File #85 Hand washing: Help stop the spread of germs.](#)

How common are CPO?

CPO infections are very rare. Only a small number of cases have been identified in B.C. However, CPO are an emerging threat and are increasing world-wide.

Should family members get tested for CPO?

Family members of someone with CPO do not generally need to be tested, even if they have

travelled or had health care outside of Canada. CPO rarely cause problems or infections outside of hospitals.

What are my chances of getting infected with CPO?

If you are healthy your chances of becoming sick with CPO are low. You may be at higher risk if you have had long-term, frequent, or intensive use of antibiotics.

How are CPO infections treated?

If you develop an infection caused by CPO, your doctor will give you specific antibiotics that will work for these bacteria. Carefully follow the treatment instructions given to you. Make sure to finish all antibiotics, even if your symptoms resolve.

If you carry CPO in your gut and you are healthy, you do not need treatment and you should continue with your normal activities.

You do not need to disclose to your workplace, school or daycare setting that you carry CPO.

How can I prevent a CPO infection?

There is no vaccine to protect you from CPO. The most important thing you can do is wash your hands before eating, drinking, smoking, applying personal care products, touching your face, nose or eyes, and after using the

toilet. Wash your hands well for at least 15 seconds using warm water and soap. Use a paper towel to dry your hands. If soap and water are not available, use an alcohol-based hand sanitizer. Sanitizer can be used as long as your hands are not visibly dirty. For more information on hand washing, see [HealthLinkBC File #85 Hand washing: Help stop the spread of germs.](#)

Some bacteria can survive on surfaces like faucets and sinks for days or even months. Regular cleaning of these surfaces with a household cleaner can also help reduce the spread of bacteria.

What steps are taken to prevent the spread of CPO in hospitals?

If you are visiting a hospital, follow hospital guidelines to prevent the spread of CPO. Wash your hands or use hand sanitizer when entering and leaving the hospital and a patient's room. Patients admitted to an acute care hospital in B.C. may be screened for antibiotic resistant bacteria depending on their risk.

When you are admitted to a hospital, visiting an outpatient clinic or have frequent health care encounters such as dialysis, inform your health care provider if you carry CPO. Infection control measures will be put in place to help prevent the spread of CPO to other vulnerable patients.

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