

Carbapenem-Resistant Organisms (CRO), Including Carbapenem-Resistant Enterobacterales (CRE)

Frequently Asked Questions

What are carbapenem-resistant organisms (CRO)?

CRO are types of bacteria that have become highly resistant to carbapenem antibiotics. These antibiotics are considered the last line of defense in treating multidrug-resistant bacterial infections. CRO can cause infections including pneumonia, bloodstream infections, urinary tract infections, wound infections, and meningitis.

Can CRO be harmful?

CRO may live harmlessly in the intestines or the environment. Some people have germs on or in their body, but those germs do not cause an infection. These people are said to be colonized. People colonized with CRO can develop infections, but most will not. CRO can cause infections when the germs enter the body, often through medical devices like ventilators, intravenous catheters, urinary catheters, or wounds caused by injury or surgery.

Who is at risk for getting a CRO infection?

Infections are most often seen in patients who are hospitalized for a long time; those who are critically ill; and those who live in long-term care facilities. Patients on ventilators (breathing machines), with intravenous catheters, urinary catheters, or wounds are more at risk. Patients who have received a lot of antibiotics are also more at risk.

How do people get CRO?

CRO are found in the feces, urine, draining wounds, and on the skin of patients who have the bacteria. Additionally, CRO may be found in the patient's environment including bedding, personal items, doorknobs, bedrails, light switches, toilets, bedpans, bedside commodes, and bathroom fixtures. Healthcare workers can spread CRO if they do not use gowns and gloves when caring for these patients and/or if they do not wash their hands between patients. Blood pressure cuffs, thermometers, and other devices can also have CRO on them that, if not cleaned appropriately, can spread the infection to other patients. Therefore, all equipment used for your care should be dedicated to you only. Expect all healthcare providers to wash their hands with soap and water or an alcohol-based hand rub before and after touching your body or tubes going into your body. If they do not, ask them to do so. SPEAK UP!

How can I tell if someone has CRO?

Patients who are infected with CRO feel sick, but patients who are colonized have no symptoms. The healthcare facility should keep track of which patients have CRO or other drug-resistant bacteria.

Is there a treatment for CRO infections?

Very few antibiotics can treat this infection. A laboratory must run tests to find out which antibiotics still work to treat it. Each case will be different, and the same drugs may not work for different people, even if the organisms share the same name.

Office of Epidemiology and Prevention Services

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What should I do if I am diagnosed with CRO in a healthcare facility?

If you have CRO, you may be placed in a private room with your own toilet or bedside commode. If a private room is not available, you should be placed in the same room with another patient who has the same type of CRO. Always wash your hands with soap and water:

- before eating.
- after using the bathroom.
- after coughing or sneezing.
- after contact with wound drainage or other body fluids.

You may be allowed to leave your room and socialize but you must:

- wash your hands and change into clean clothes before leaving your room.
- keep any wounds covered.
- cover your cough and wash your hands after coughing or sneezing.
- follow any additional instructions from your doctor or nurse.

You should also let your healthcare workers and healthcare facilities know if you have ever had a positive CRO result. They can take special precautions to prevent CRO from spreading to other patients.

What happens when I am ready to leave the healthcare facility?

You can go home as soon as your doctor says you are ready, even if you have CRO. If you are going to another hospital or nursing home, your nurse or doctor should let them know about your positive CRO result so that they can prevent it from spreading to other patients. You should also mention your CRO status to your healthcare provider, regardless of the setting.

What happens when I go home?

Clothes, bed linen and dishes can be washed as usual. It is always very important to wash your hands carefully after using the toilet and before preparing meals or eating to stop CRO spreading to other people. Also, wash your hands after coughing or sneezing, or after changing your dressing. Follow any other instructions your healthcare provider gives you.

How can I prevent spreading CRO to my loved ones?

Most healthy people are at relatively low risk for problems with CRO, but they may become carriers. Make sure that anyone who comes into your house is careful about washing their hands, especially after contact with your wounds or helping you use the bathroom, or after cleaning up stool. Caregivers should also make sure to wash their hands before and after handling any medical device (e.g., urinary catheters). This is particularly important if the caregiver is caring for more than one ill person at home. In addition, gloves should be used before contact with body fluids or blood.

Everybody in your house (including you) should also wash hands with soap and water:

- before eating.
- before preparing food.
- after going to the bathroom.
- any time hands are visibly dirty.

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You should have your own room in your home and be sure to wash your hands and wear clean clothes when you come out of your room.

Your plate, utensils, and glasses can be washed in the dishwasher or in the kitchen sink with warm soapy water. People in your household should use regular household cleaners to keep your bathrooms and kitchen clean and disinfected.

How do antibiotics effect CRO?

If you are prescribed antibiotics, take them exactly as your healthcare provider recommends. Inappropriate use of antibiotics may put you at increased risk for infection.

Here are some steps you can take to use antibiotics appropriately so you can get the best treatment when you're sick, protect yourself from harm caused by unnecessary antibiotic use, and combat antibiotic resistance:

- Take antibiotics exactly as your doctor tells you.
- Do not share your antibiotics with others.
- Do not save them for later. Talk to your pharmacist about safely discarding leftover medicines.
- Do not take antibiotics prescribed for someone else. This may delay the best treatment for you, make you even sicker, or cause side effects.
- Talk with your doctor and pharmacist if you have any questions about your antibiotics.

For more information please visit: www.cdc.gov/healthcare-associated-infections/index.html.



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