

CARBAPENEMASE-PRODUCING *ENTEROBACTERIACEAE* (CPE) Fact Sheet

What are *Enterobacteriaceae*?

Enterobacteriaceae are a family of germs (bacteria) which naturally live in our bowel. Many people carry this germ, are not aware, and are completely healthy. This is known as colonization. If *Enterobacteriaceae* get “inside” the body, for example, into an open wound, urine, or blood, an infection may occur. These infections can be treated with antibiotics. Antibiotics are drugs used to treat infections caused by bacteria.

What is Carbapenemase-producing *Enterobacteriaceae*?

Carbapenemase-producing *Enterobacteriaceae* (CPE) are bacteria which produce an enzyme that can break down many types of antibiotics, making the bacteria very resistant. CPE does not harm healthy people including pregnant women, children and babies. People with CPE do not look or feel different from anyone else.

The fatality rate for serious infections may be as high as 50%. Because CPE are resistant to many antibiotics, treatment of infections with CPE is difficult.

How does a person get CPE?

CPE can spread from one person to another by touch (usually with hands), for example touching, hugging or shaking hands. It can be spread by touching surfaces that a person positive for CPE has touched such as door knobs, bed rails, tables, counter tops, water taps or medical equipment such as a blood pressure cuff. Like many other bacteria, CPE can get into the body if hands are not cleaned before eating or touching the mouth or an open wound or touching something the person positive with CPE has touched. Hospitals are places where bacteria may be passed from one patient to another. CPE is most commonly spread by unwashed hands of staff.

Who gets CPE?

Patients in hospitals who have open wounds, catheters or drainage tubes, and those who are very ill, are most likely to get CPE. Residents living in personal care homes are at a lower risk for CPE. Their risk is increased if they are admitted for a long stay in hospital, receive a lot of antibiotics, or have contact with a person positive for CPE or with equipment contaminated with CPE. Health care workers who follow the suggested precautions are not at increased risk for CPE. Their chances of infection with CPE does not increase even if they have been in contact with a CPE positive person. If the health care worker has low immunity or is pregnant, the risk is still very small. Those receiving care in community settings are not at increased risk of getting CPE.

What Infection Prevention and Control Measures Are Necessary for People with CPE?

Everyone should clean their hands well at all times. This includes health care workers, people positive for CPE, family and visitors. Good hygiene practices include cleaning hands with alcohol-based handrub (sanitizer) or soap and water for at least 15 seconds.

Containment Precautions are used for a patient who is found to have CPE during a hospital stay.

This will involve:

- Placement in a private room
- Placement of a sign on the room door to alert everyone of the precautions needed
- Use of alcohol-based hand rub (sanitizer) or handwashing by everyone entering and exiting the room, including the patient
- Use of a long sleeved gown and gloves by caregivers and visitors

• **Before visitors go into the patient's room:**

1. Talk to the nurse.
2. Ask for help if you need it.
3. Clean your hands with hand sanitizer or soap and water. Use soap and water instead of hand sanitizer if you can see dirt on your hands.
4. Put on a yellow gown. Tie the gown at the back.
5. Put on gloves. Pull the gloves over the gown cuffs.

• **Before visitors leave the patient's room:**

1. Take off your gloves
 2. Put them in the garbage.
 3. Take off your yellow gown.
 4. Put it in the SOILED laundry hamper in the patient's room.
 5. Clean your hands when leaving the patient's room.
- If the patient has to leave the room (e.g. medical appointment), hands must be cleaned well and open wounds covered
- To transfer a patient in a bed or wheelchair which is already in the patient room, clean and disinfect high touch areas (e.g., handles, bed rails) before leaving the room
- Patients may not go to other areas of the hospital or to the cafeteria

Follow the procedures outlined by the staff to prevent spreading CPE to others.

We understand these measures may be inconvenient, but it is important to protect others from CPE. Your cooperation is appreciated.

In a long-term care facility or personal care home, precautions may include the above if the person has a CPE infection which cannot be contained (e.g., covering a wound with a dressing).

What about at home?

The risk to healthy family members and friends is very low. The best way they can protect themselves is to clean their hands often.

See a health care provider as soon as possible if an infection is suspected; and tell health care providers you are CPE positive. This includes home health care workers, therapists and staff in the doctor's office.

At home, the chance of spreading CPE to family is low

- Cleaning hands well is important for the CPE positive person as well as their family members all of the time. This includes before preparing food, before eating and after using the toilet.
- Shower or bathe regularly
- Use own towels, clothes and bed sheets.
- Do not share personal items such as nail scissors, tweezers, razors or toothbrushes.
- Keep sores or wounds covered, if they share a bed with someone.
- No special cleaning of items in your home (e.g. dishes) is required.

How is CPE detected?

Testing for CPE is important to see if these bacteria are spreading to other patients. Usually we look for CPE by taking swabs of the rectum or ostomy. Testing for CPE is not done in a long-term care facility, personal care home, or for people living in the community.

If someone tests positive while still in hospital, the patient and his/her doctor will be notified.

How is CPE treated?

People who have CPE in their bowel will likely carry it for a long time. You may be treated if CPE is causing symptoms of infection.

*****Cleaning hands is the best way to prevent the spread of germs*****