

Information for patients being screened for Carbapenemase-producing Enterobacteriaceae (CPE)

What is CPE?

Enterobacteriaceae is the name given to a family of bacteria that normally lives in our bowel. A well-known type of Enterobacteriaceae you may have heard of is *Escherichia coli*, or *E.coli* for short.

Carbapenemases are enzymes (chemicals) made by some strains of bacteria that prevent carbapenem antibiotics from working against the bacteria.

Carbapenemase-producing Enterobacteriaceae (CPE) are bacteria that produce an enzyme that breaks down carbapenem antibiotics so they no longer work – the bacteria are resistant to these and many other antibiotics.

How do you get CPE?

Healthy people do not usually get CPE infections. However, it is important to know that people may carry CPE in their bowel or in a wound, without symptoms. People who carry CPE are at risk of getting a CPE infection if they have an operation or need treatment involving ventilators, catheters, or intravenous drips. If you have taken antibiotics for long periods of time you may also be at risk of developing a CPE infection.

In Australia, CPE infections are rare, and are often identified in people who have had medical care overseas. CPE are found in hospitals and clinics around the world, including Europe, North America and the Middle East. A small number of outbreaks of CPE have occurred in Australian health facilities; the first Australian outbreak of CPE was in 2012.

Why is screening important?

Screening is important to identify people who have an infection due to CPE or who may be carriers of CPE (colonised). CPE are usually resistant to many antibiotics, which limits the options available to treat infections. Screening ensures that people with CPE get the most appropriate treatment, and that CPE are not spread to other people. If you do have an infection, you should tell your doctor that you are carrying CPE. You may be accommodated in a single room with your own toilet facilities and staff may use infection control precautions until the screening results are known.

CPE Treatment

Because CPE are usually resistant to many antibiotics, the options available to treat infections are very limited. If you do get an infection, you must tell your doctor, if you are aware, that you are carrying CPE. This means that they can work out if the CPE might be causing the infection and can identify the best antibiotic to treat you.

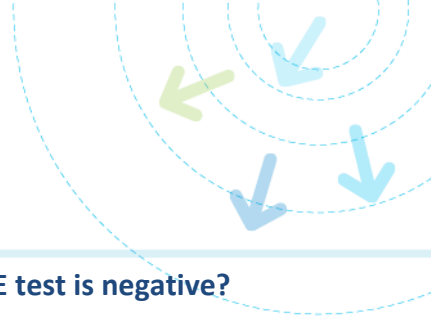
When will I be screened?

Screening is usually done following admission to hospital for people who have been identified as being at risk of having CPE. Some hospitals may choose to screen patients admitted to areas where there is a higher risk for CPE; these areas in the hospital include intensive care unit and renal unit or aged care homes.

Screening will be required if you:

- Are known to have CPE or have a history of CPE from a previous hospital admission
- Have been identified as a 'contact' of a patient known to have CPE, e.g. you were a patient in a ward at the same time as a patient with CPE
- Have been admitted to a hospital or aged care home outside Australia in the past 12 months
- Have been admitted to a high-risk unit such as ICU.

Screening swabs or samples may be collected a number of times during a hospital stay. The need for repeated screening depends on the risk of a person having CPE or being exposed to CPE.



How will I be screened for CPE?

Screening usually involves taking a rectal swab by inserting a swab just inside your rectum (bottom), or you may be asked to provide a sample of faeces. If you have any intravenous lines (drips), a urinary catheter or any wounds, a swab of these will also be taken. The swab or sample will be sent to the laboratory and you will normally be informed of the result within two to three days.

What happens if my CPE test is negative?

Patients at risk of having CPE may be screened a number of times, even if the results are negative. For example, you may be screened each week for as long as you are in hospital. The number of times you will be screened will depend on your specific circumstances.

What happens if my CPE test is positive?

If your screening test for CPE is positive, it means you are carrying (or colonised with) CPE. People may not know that they are carrying CPE and may never develop an infection or require treatment. However, in the unlikely event of an infection caused by CPE, this can be serious as CPE infections may be very difficult to treat.

If you are in a hospital with CPE, the staff will use special practices to reduce the risk of spreading CPE to other patients. These include:

- Caring for you in a single room with your own toilet
- Wearing a gown and gloves while they are caring for you.

You can help prevent spreading CPE to other patients by:

- Regularly washing your hands with soap and water or using an alcohol-based hand rub
- Staying in your room, unless you need to be transferred for special tests or treatment.

To prevent the spread of CPE to other people when you are at home, it is important that you follow these precautions:

- Wash your hands with soap and water and dry them thoroughly – for example, after going to the toilet, before preparing and eating food and after touching animals
- Use your own towels and face cloths, and do not share these items with other people
- Avoid sharing grooming items such as nail scissors, tweezers, razors and toothbrushes
- Cover any skin wounds whenever possible
- Make sure you follow instructions and advice provided by your doctor or healthcare provider on how to care for wounds, or manage medical devices.

However:

- All your clothing and towels can be washed the way you normally do
- All eating utensils and dishes can be washed the way you normally do.

If I have CPE, can I have visitors?

If you have CPE, you can have visitors, but it is important to know that CPE can affect people who have some long-term health problems. Talk with your doctor or nurse if someone is visiting you and has a long-term health problem.

It is important that your visitors wash their hands or use an alcohol based hand rub before and after visiting you. Visitors may also be asked to wear gloves or gowns.

Where can I get more information?

If you have any questions, ask the doctor or nurse looking after you or your family member, or ask to speak with someone from the hospital's infection control team.

More information on CPE is available from

The Australian Commission on Safety and Quality in Health Care [Recommendations for the Control of Carbapenemase Producing-Enterobacteriaceae: A guide for acute care health facilities \(2017\)](#)
www.safetyandquality.gov.au