

Advice for Patients

Carbapenemase-producing *Enterobacteriaceae* (CPE)

What does 'carbapenemase-producing *Enterobacteriaceae*' mean?

Enterobacteriaceae are bacteria (germs) that usually live harmlessly in the gut of humans. This is called 'colonisation' (a person is said to be a 'carrier'). However, if the bacteria get into the wrong place, such as the bladder or bloodstream they can cause infection. Carbapenems are one of the most powerful types of antibiotics.

Carbapenemases are enzymes (chemicals), made by some strains of these bacteria, which allow them to destroy carbapenem antibiotics and so the bacteria are said to be resistant to the antibiotics.

Why does carbapenem resistance matter?

Carbapenem antibiotics can only be given in hospital directly into the bloodstream. Until now, doctors have relied on them to successfully treat certain 'difficult' infections when other antibiotics have failed to do so. In a hospital, where there are many vulnerable patients, spread of resistant bacteria can cause problems.

Does carriage of or infection with carbapenemase-producing *Enterobacteriaceae* need to be treated?

If a person is a carrier of carbapenemase-producing *Enterobacteriaceae* (sometimes called CPE), they do not need to be treated. However, if the bacteria have caused an infection then antibiotics will be required as advised by a Consultant Microbiologist.

How might I 'pick up' carbapenemase-producing *Enterobacteriaceae*?

These bacteria can sometimes be found, living harmlessly, in the gut of humans and so it can be difficult to say when or where you picked it up. However, there is an increased chance of picking up these bacteria if you have been a patient in a hospital abroad **or** in a UK hospital that has had patients carrying the bacteria, **or** if you have been in close contact with a carrier in hospital **or** in the community. If any of these apply to you, and you need to be admitted to hospital, screening will be arranged and you may be accommodated in a single room at least until the results of the tests are known.

How will I be cared for whilst in hospital?

You may be accommodated in a single room whilst in hospital and on any subsequent admissions. You may be asked to provide a number of samples to send to the laboratory to check if you are carrying or have an infection with the bacteria. These will probably be taken on a weekly basis during your stay. You may also be tested if you have been in close contact with a patient in this hospital who has been found to have a resistant organism. The samples might include e.g. the site an intravenous drip enters the skin, a rectal swab i.e. a sample taken by inserting a swab briefly just inside your rectum (bottom), and/or a sample of faeces. You will normally be informed of the results within two to three days but none of these measures will hinder your care in any way

How can the spread of carbapenemase-producing *Enterobacteriaceae* be prevented?

If a patient in hospital is carrying these bacteria it can get into the ward environment and be passed on by direct contact to another patient. For that reason, you may be accommodated in a single room to help prevent spread. Healthcare workers must wash and clean their hands regularly. They will use gloves and aprons (or gown) when caring for you. The most important measure for you to take is to wash your hands well with soap and water, especially after going to the toilet. You should avoid touching any medical devices (if you have any) such as your urinary catheter tube and your intravenous drip, particularly at the point where it is inserted into the body or skin. Visitors will be asked to clean their hands on entering and leaving the room and may be asked to wear gloves and an apron (or gown) especially if they are assisting in your care. Effective environmental cleaning and good hand hygiene by all, staff, patients and visitors, can reduce the risk of spread significantly.

What about when I go home?

While there is a chance that you may still be a carrier when you go home quite often this will go away with time. No special measures or treatment are required; any infection will have been treated prior to your discharge. You should carry on as normal, maintaining good hand hygiene especially after using the toilet. If you have any concerns you may wish to contact your GP for advice.

Before you leave hospital, ask the doctor or nurse to give you a letter or card advising that you have had an infection or have been/are colonised with carbapenemase-producing *Enterobacteriaceae*. This will be useful for your future care and it is important that you make health and social care staff aware of it e.g. when attending an outpatient appointment or being visited by the community nursing team. Should you or a member of your household be admitted to hospital, you should let the hospital staff know that you are, or have been a carrier and show them the letter/card.

Where can I find more information?

Do ask your doctor or nurse to explain this to you in more detail. They may also contact the Infection Prevention and Control Team for you if you need further information about the management of CPE.

The Public Health Wales and the Public Health England websites are another source of information:

<http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/CarbapenemResistance>

This information has been produced from the Public Health England Toolkit and with reference to the Guideline: Prevention and control of multi-drug-resistant Gram-negative bacteria: recommendations from a Joint Working Party. APR Wilson et al. Journal of Hospital Infection 92 (2016) S1-S44
<https://www.gov.uk/government/publications/carbapenemase-producing-enterobacteriaceae-early-detection-management-and-control-toolkit-for-acute-trusts>