



# Carbapenemase Producing Enterobacterales

## What are Carbapenemase Producing Enterobacterales (CPE)?

Enterobacterales are a group of bacteria (bugs) which live harmlessly in the gut of humans and animals, which help us digest our food. Some of these bacteria have become resistant to antibiotics including those called carbapenems. Carbapenems are an important, powerful group of antibiotics that can only be given in hospital through an intravenous drip and are only used when other antibiotics fail to treat an infection.

## What symptoms might I have?

Carbapenemase Producing Enterobacteriaceae (CPE) do not cause diarrhoea but because they are found in the bowel, it could spread more easily if you are suffering with diarrhoea. Most of the time CPE are harmless and there are no signs or symptoms because a person's immune system keeps them in check. This is called 'colonisation'. However, if they get into other parts of the body e.g., the urine, a wound or the blood, they can cause an infection and will need treatment. Infections caused by CPE can be very difficult to treat as the bacteria can produce enzymes (proteins/chemicals), which destroy most antibiotics. Therefore, it is important to prevent the spread of CPE.

## How will I know if I am at risk?

People can be colonised with CPE if they have been in hospital or if you have taken lots of antibiotics in the past. This is because the resistant bugs that survive after you have taken antibiotics can then grow.

You may be asked to be screened for CPE if in the last 12 months you have:

- been an inpatient in any hospital in the UK or abroad (including receiving holiday dialysis),

- had multiple hospital treatments (dialysis dependent and cancer chemotherapy),
- been identified as contact of a known carrier of CPE, or
- has had recent exposures to antibiotics (cephalosporins, piperacillin/tazobactam, fluoroquinolones and carbapenems) in the last 3 months.

## How do we screen for CPE?

The best way to see if you have CPE is to insert a swab just inside your rectum (back passage) or to collect a stool sample. This is where the bugs will be. The sample will be sent to the laboratory and takes 2-3 working days to produce a result. While you are waiting for the results you may be kept in a single room as a safety measure.

## What if my sample is positive for CPE?

If you test positive for CPE, try not to worry. This just means you are carrying these bacteria in your body; it does not mean that you have an infection, so you will not need any treatment.

## What if I have an infection?

Infection occurs when the bacteria gets into parts of the body where it does not normally live and attaches itself to tissues and causes damage. If your doctor thinks you show signs of infection, they will contact the microbiology consultant for specialist advice to make sure you have the right antibiotic, as an infection will be more complicated to treat.

## How is it spread?

CPE is passed directly or indirectly via faecal contamination of hands or objects (e.g., through poor hand hygiene after going to the toilet), and then introduced into the mouth. It can also be spread on the hands of patients, relatives,



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and healthcare workers after contact with an infected patient or contaminated equipment. As patients in hospital are much more vulnerable to infection than patients in their own homes, special precautions are required to prevent the spread of CPE between patients in hospital.

### How can spread be prevented?

You will be moved to a single room with your own toilet to prevent the bacteria spreading on the ward and for your own privacy. If you have an intravenous drip or catheter, it is important that you try to avoid touching them, particularly at the point they are inserted into the body or skin.

The most important method of preventing spread is hand hygiene. It is vital that you wash your hands after you have been to the toilet and before eating. Anyone who comes into contact with you or your environment must wash their hands. Staff will wear gloves and aprons when caring for you.

### What will happen when I go home?

CPE may stay in your bowel for a long time. No special measures or treatment are required. If you are ever in hospital again in the future, it is vital that you stay in a single room and may be swabbed again. Should you or a member of your household be admitted to hospital, you should let the staff know that you have been colonised with CPE.

### Will it affect my family or other visitors?

It is not a risk to healthy people. Ask a member of the clinical team for advice if you are worried. We ask that visitors wash their hands before they leave your room and don't mix with other patients on the ward. This makes it easier for us to prevent the spread of the bugs. Visitors do not have to wear gloves and aprons unless they are helping you with your care (e.g., personal hygiene). If they are visiting someone else apart

from you, it is best if they see them first.

### Can I still go home?

You will not have to stay in hospital any longer than necessary; you will be allowed home when medically fit.

### Further information

If you have further questions, please speak to a member of the ward team or ask them to contact the Infection Prevention and Control team.