



# What is ESBL and CPE

Extended Spectrum Beta-Lactamase (ESBL) and Carbapenemase-producing Enterobacteriaceae (CPE) are enzymes normally produced by micro-organisms (bugs) in the gut, such as E coli and Klebsiella. These organisms live harmlessly in the gut but occasionally can cause urine, abdominal and bloodstream infections.

These resistant bugs contain enzymes that can destroy certain antibiotics, making them ineffective, and subsequently infections become more difficult to treat. These bacteria are easily spread from person-to-person such as by not washing hands after using the toilet (faecal contamination) or through contact with contaminated equipment or ward environment.

## Who contracts ESBL and CPE producing bacteria?

The majority of people who contract ESBL are over 65 years old. The most common test for ESBL is a urine test. Often patients have had multiple courses of antibiotics for repeated infections.

CPEs may occur in patients previously hospitalised in countries where CPEs are more widespread eg this includes Turkey, Israel, Greece, Indian sub-continent and the USA. There have also been a number of outbreaks reported in the UK.

If, within the last 12 months, you have been an in-patient in a hospital abroad or a UK hospital known to have a problem with CPE you will be screened for this germ. This involves taking a number of rectal swabs or a 'stool' sample.

It is possible that the ESBL/CPE -producing bacteria are acquired months or even years before they cause infection. They live harmlessly in the gut until the patient becomes ill or requires antibiotics. It is usually first identified when an individual comes to hospital and a specimen of urine or blood is sent to the microbiology laboratory for testing.



## What are the symptoms?

There are generally no symptoms to show someone is a carrier of this resistant bug. If an infection does occur this will manifest itself like any other infection but the antibiotics available to treat the infection will be severely limited.

## How will CPE be treated?

CPEs are treated using 'carbapenems' antibiotics. These antibiotics are given directly into the blood stream intravenously (via a vein) and are only administered in hospital. Depending on your length of stay, you may be asked to provide weekly samples to see if you are still carrying the bacteria.

## How will I be managed in hospital?

To stop the spread of CPE, you will be cared for in a single room. Healthcare workers should wash their hands regularly. They will use gloves and aprons when caring for you.

The most important thing is for you to regularly wash your hands well with soap and water, especially after going to the toilet. Avoid touching medical devices (if you have any) such as your urinary catheter tube or your intravenous drip, particularly at the point where it is inserted into the body or skin. Visitors will be asked to wash their hands on entering and leaving the room and may be asked to wear an apron.

## Prevention

Careful use of antibiotics is essential in reducing the risk of bacteria developing resistance and then passing this information to other bacteria. Your Doctor or GP will only prescribe antibiotics if there is a strong indication of a bacterial infection. Remember antibiotics do not work on viruses such as colds. If antibiotics are needed whilst you are an in-patient, these will be prescribed using the hospitals antibiotic guidelines and monitored closely.

## Discharge home

Any infection will have been treated before you leave hospital. There is a chance that you may still be a carrier when you go home, but often this will go away with time. No special measures or treatment are required. You should carry on as normal, but make sure you maintain good hand hygiene. If you have any concerns, please contact your GP for advice. Before you leave hospital, ask

the doctor or nurse to give you a letter or card saying that you have had a CPE infection or have been a carrier of CPE.

If you or a member of your household is admitted to hospital, you should tell the hospital staff that you are, or have been a carrier and show them this letter / card.

## Where can I find more information?

If you require further information or advice, please ask the Senior Nurse in charge of the ward.

## Further information can also be obtained from the Infection Prevention & Control Team:

Bassetlaw Hospital, Tel: 01909 500990 ext 2357  
Doncaster Royal Infirmary, Tel: 01302 366666 ext 3748.

For further information please visit the Public Health England website: [www.gov.uk/government/organisations/public-health-england](http://www.gov.uk/government/organisations/public-health-england)

## Patient Advice & Liaison Service (PALS)

PALS staff are available to offer advice or information on healthcare matters. The office is in the Main Foyer (Gate 4) of Doncaster Royal Infirmary. Contact can be made either in person, by telephone or email. PALS staff can also visit inpatients on all Trust sites.

## The contact details are:

**Telephone:** 01302 553140 or 0800 028 8059

