



**Countess of
Chester Hospital**
NHS Foundation Trust

ESBLs

**Information for patients,
relatives and staff**

A large graphic at the bottom of the page. It features a dark blue circular area with the letters 'ESBL' written in a light blue, textured font. This circle is surrounded by several overlapping, curved lines in yellow, teal, and red, creating a dynamic, multi-colored border.

ESBL

What are ESBLs?

ESBL (Extended-Spectrum Beta-Lactamase) are enzymes produced by some bacteria, these enzymes then make the bacteria resistant to many antibiotics. Examples of bacteria which have been found to be ESBL-producing are *Klebsiella pneumoniae* and *Escherichia coli* (E.coli).

Klebsiella pneumoniae and E.coli are very common bacteria that normally live harmlessly in the gut, however when detected in other parts of the body they can cause infections (such as urine, blood or chest infections). Most strains of *Klebsiella pneumoniae* and E.coli are not ESBL producing and therefore infections caused by these can usually be treated with antibiotics.

However, when found to produce the ESBL enzyme this makes them more resistant to antibiotics and makes the infections harder to treat.

Where do these ESBL producing bacteria come from?

As with other multi-resistant bacteria (such as MRSA) the general overuse of antibiotics has encouraged bacteria to change and become resistant to certain antibiotics. It seems that the genes for ESBL production arose in one particular bacterium and then this has spread to other bacteria.

There is some evidence suggesting they can be found in the faeces of farm animals as well as humans. This means that it is possible that contamination of food e.g. raw meat, by bacteria from animal faeces has led to the infections in humans.

Who gets ESBL producing bacteria?

ESBL producing bacteria can be found in anybody but are most commonly found in persons aged over 65 years old.

ESBL-producing bacteria are most commonly found in urine specimens; often from patients who have had multiple courses of antibiotics for repeated infections.

How are they spread?

People who develop an ESBL producing bacterial infection may have been carrying the bacteria harmlessly in their gut for years and it may be that the bacteria from their own gut has travelled to another part of their body and caused an infection.

It is possible that these bacteria are passed from person to person on contaminated hands (of patients or health care workers) or by poor practice in urinary catheter care.

Infection prevention & control measures

Effective control measures are less well understood than for other types of antibiotic resistant bacterium, for example MRSA.

Until we know more about how to control these bacteria, the following are recommended:

- Care homes and hospitals should ensure that hand washing and other infection prevention & control procedures are rigorously enforced
- Urinary catheter hygiene should be strictly maintained and catheters should be removed as soon as clinically appropriate.
- Where possible, people with an ESBL producing bacterial infection should be nursed in a single room with isolation precautions in place.

Can a person be cleared of an ESBL-producing strain?

Sometimes the strain will be lost naturally.

Some people may be positive for ESBL producing strains for months or years without showing any signs of illness. In this instance, use of antibiotics probably does not help; antibiotics can treat infections but do not necessarily eliminate the ESBL producing bacteria that may be carried in the gut. Good infection prevention & control practices should be rigorously enforced at all times for all patients.

Can ESBL infections be treated?

If you are not symptomatic of an infection then antibiotic treatment will not always be required, even in the presence of an ESBL positive result

For the majority of symptomatic ESBL infections there will be antibiotics that can be used to treat the infection. These often may be from a group of antibiotics called 'Carbapenems'.

However, a particular strain of the microorganism *Klebsiella pneumoniae* has developed a resistance to carbapenem antibiotics. This strain of *Klebsiella pneumoniae* is classed as both an ESBL producing bacteria and a CPE (Carbapenemase producing Enterobacteriaceae).

Do I need to be nursed in a single room?

A risk assessment will be made to assess whether it may be necessary for you to be nursed in a single room. Any patient's found to have the ESBL & CPE *Klebsiella pneumoniae* will be nursed in a single room.

Can I have visitors?

Yes, all visitors should wash their hands with soap and water before and after visiting you.

Who can I speak to if I have further questions?

Please speak to any of the staff who are caring for you.

If the staff are unable to answer your questions or, if you require further information, please ask a member of staff to contact the Infection Prevention and Control Nurse Team on your behalf.

Further information on ESBLs is also available via:
www.gov.uk/government/organisations/public-health-england



If you require a special edition of this leaflet

This leaflet is available in large print, Braille, on compact disk and in other languages on request. Please contact the Patient Advice and Liaison Service (PALS) on:

Telephone: 01244 366066
or email: cochpals@nhs.net

إذا ترغب في الحصول على النسخة باللغة العربية ، فضلاً إتصل بمركز معلومات المرضى أو تحدث مع أحد الموظفين

若是你想索取這份傳單的中文譯本，請聯絡「病人預約中心」或向其中一名職員查詢。

Si vous voulez cette brochure en français, contactez le bureau des rendez-vous ou demandez à un membre du personnel.

यदि आप यह पत्रचा हिन्दी में लेना चाहते हैं तो कृपया पेशेन्ट अॅपॉइन्टमेन्ट सेन्टर से संपर्क करें या किसी स्टाफ से पूछें।

Haddii aad jeclaan laheyd buug-yarah-an oo af-Soomaali ku qoran la soo xiriir xarruunta bukaan ballaminta ama wax weydii xubin shaqaalaha ka tirsan.

Si desea recibir este folleto en español, sírvase contactar al Centro de Citas para Pacientes o solicitarlo al personal.

اگر آپ کو یہ کتابچہ اردو میں درکار ہے تو ویشنٹ اپ انٹرنٹ سینٹر یا کسی رکن سے رابطہ قائم کریں۔

Mae'r daflen hon ar gael (ar gais), mewn print bras, ar dâp sain neu ar ddisg, ac efallai mewn ieithoedd eraill ar gais. Cysylltwch â chanolfan apwyntiadau cleifion i ofyn am gopi.

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