



PATIENT & CAREGIVER EDUCATION

Extended Spectrum Beta-Lactamase (ESBL)

This information explains extended spectrum beta-lactamase (ESBL), including how it spread and how infections are treated.

What is extended spectrum beta-lactamase?

Some germs, such as *Escherichia coli* (E. coli) and *Klebsiella*, produce an enzyme called extended spectrum beta-lactamase (ESBL). This enzyme makes the germ harder to treat with antibiotics.

ESBL can cause a variety of illnesses, including:

- Urinary tract infections (UTIs)
- Pneumonia
- Blood infections
- Wound infections

What is the difference between being colonized and being infected with ESBL?

A person can be either colonized or infected with ESBL. If a person is colonized, it means that the germ is present on their skin or in a body opening, but they have no signs of illness. If a person is infected, it means that the germ is present on their skin or in a body opening and it's causing illness.

How is ESBL spread?

Most ESBL infections are spread by direct contact with an infected person's bodily fluids (blood, drainage from a wound, urine, bowel movements, or phlegm). They can also be spread by contact with equipment or surfaces that have been contaminated with the germ. Casual contact, such as touching or hugging, doesn't spread ESBL.

Who is at risk for an ESBL infection?

ESBL infections occur more often in people who:

- Are older
- Have weakened immune systems
- Have chronic illnesses, such as cancer and diabetes
- Have been treated with antibiotics in the past

- Had a recent surgery
- Have had repeated or long hospital stays
- Have open wounds or sores
- Have tubes or drains in their body

What are the symptoms of an ESBL infection?

The symptoms vary depending on the location and type of infection.

How is an ESBL infection treated?

ESBL infections are treated with antibiotics that the germ causing your infection isn't resistant to. Your healthcare provider will decide which medication(s) to give you based on the germ and location of your infection.

What isolation precautions are taken in the hospital if I have an ESBL infection?

Isolation precautions are steps we take to stop infections from spreading from person to person. If you have been diagnosed with an ESBL infection while you're in the hospital:

- You will be placed in a private room.

- A sign will be posted on the door instructing all staff to clean their hands with soap and water or an alcohol-based hand sanitizer before going into and after leaving your room.
- All staff will need to wear a yellow gown and gloves while in your room. These are available outside of your room and can be disposed of inside your room.
- If you leave your room for tests, you must wear a yellow gown and gloves or be covered with a clean sheet.
- If you leave your room to walk around the unit, you must wear a yellow gown and gloves.
- You will not be able to go to the following areas of the hospital:
 - Pantry on your unit
 - Recreation center on M15
 - Pediatric recreation areas on M9
 - Cafeteria
 - Main lobby
 - Any other public area of the hospital
- You can have art or massage therapy in your room while following isolation precautions.

You can stop following these precautions when you get treatment and can no longer pass the infection to others. Your healthcare provider will tell you when you can stop following these precautions.

What precautions should I take at home if I have an ESBL infection?

If you have an ESBL infection, follow these guidelines:

- Wash your hands frequently with soap and water for at least 20 seconds, especially after using the bathroom.
- Wash your hands after having contact with blood, urine (pee), or drainage from a wound.
- Use a disinfectant, such as Clorox® or Lysol®, to wipe any surface that may have been contaminated with the germ.

Where can I get more information about ESBL?

If you have any questions, talk with your healthcare provider. You can also visit the following website for more information:

Centers for Disease Control and Prevention

www.cdc.gov

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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