

■ WHAT IS CARBAPENEM-RESISTANT ENTEROBACTERIACEAE (CRE)?

Carbapenem-resistant *Enterobacteriaceae* (CRE) refers to a family of bacteria that are resistant to the carbapenem class of antibiotics and many other types of antibiotics. *Klebsiella pneumoniae* and *E. Coli*. are in the *Enterobacteriaceae* family and are commonly associated with CRE infections. Currently, there are few effective treatments for CRE and invasive CRE infections have resulted in mortality rates as high as 40%.

■ HOW IS CRE SPREAD?

CRE infections are typically acquired in healthcare settings, so most healthy people are not at risk. CRE infections are transmitted from person to person through the hands of healthcare personnel or by contaminated medical devices like catheters or ventilators. Also people who are taking antibiotics or have a weakened immune system are at higher risk of developing a CRE infection.

■ WHAT ARE THE SYMPTOMS OF CRE?

The symptoms of CRE can vary depending on which area of the body is infected, but they can include:

- Urinary tract infections
- Cyanosis (Bluish discoloration of skin)
- Sepsis (Overwhelming immune response and inflammation)
- Pneumonia
- Fever
- Low blood pressure

■ HOW DO I PREVENT GETTING CRE?

Patients can do the following to prevent getting a CRE infection:

- Make sure to carefully follow instructions from your doctor on how to take antibiotics
- Expect all healthcare providers to wash their hands before touching your body and if they do not tell them to do so
- Frequently wash your hands especially before preparing or eating food, before and after changing a bandage, after using the bathroom, after blowing your nose, coughing or sneezing
- Most importantly ask questions to your doctor to make sure you understand what is being done to you

To prevent the spread of CRE in a healthcare setting it is recommended to:

- Always to properly wash hands with soap and water before and after caring for a patient
- Make sure to thoroughly clean all rooms and medical equipment
- Wearing gloves and gown before entering the room of a CRE patient and removing them before leaving
- Keep patients with CRE isolated from other patients and if possible assign dedicated staff and equipment to CRE patients.
- Only prescribe antibiotics when absolutely necessary
- Remove temporary medical devices like catheters as soon as possible

■ HOW CAN CRE BE TREATED?

Many people can have CRE in their body without it producing an infection. These people are said to be colonized with CRE and they do not require antibiotics. If the CRE is causing an infection there are a limited number of antibiotics that will work against it. Additionally, some CRE infections may be treated with other therapies, such as draining the infection. There has been strains of CRE that are resistant to all known antibiotics, but they are extremely rare.

■ WHERE CAN I LEARN MORE ABOUT CRE?

Long Beach Department of Health and Human Services:
Longbeach.gov/cre

California Department of Public Health:
https://www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/CRE_InfectionPreventionStrategies.aspx

Centers for Disease Control and Prevention:
<https://www.cdc.gov/hai/organisms/cre/cre-patientfaq.html>

For additional questions, call the **Long Beach Health Department of Health and Human Services at 562-570-4344.**