

# **VANCOMYCIN-RESISTANT ENTEROCOCCI (VRE) FACT SHEET**

## **Overview**

Enterococci are bacteria normally found in the human gut, in the female genital tract and in the environment. Vancomycin is an antibiotic that is often used to treat infections caused by enterococci bacteria. Sometimes bacteria like enterococci change so that certain antibiotics don't kill them anymore. This is called "resistant." When enterococci become resistant to vancomycin, they are known as vancomycin-resistant enterococci (VRE).

VRE can live in the human intestines and female genital tract without causing disease. This is called being colonized. However, sometimes VRE can cause urinary tract infections, bloodstream infections or wound infections. Most VRE infections occur in hospitals.

## **Signs and Symptoms**

The signs and symptoms of VRE depend on the location of infection. General signs of infection might include:

- fever;
- chills;
- redness;
- swelling;
- pain; and
- drainage or pus from a wound or surgical site.

## **Causes and Transmission**

VRE is usually spread via the hands of health care workers. Health care worker hands can become contaminated after contact with other people with VRE or with contaminated surfaces or equipment. VRE is not spread through the air by coughing or sneezing.

## **Risk Factors**

Certain people are at an increased risk of becoming infected with VRE:

- People who are hospitalized, particularly when they receive antibiotic treatment for long periods of time;

- People who have been previously treated with vancomycin and combinations of other antibiotics, such as penicillin and gentamicin for long periods of time;
- People with weakened immune systems, such as patients in intensive care units or who have cancer;
- People who recently had surgery;
- People with medical devices that stay in the body for some time, such as urinary catheters or central intravenous (IV) catheters; and
- People who are colonized with VRE (bacteria are present but without symptoms of an infection).

## **Complications**

VRE infection can be treated with antibiotics other than vancomycin. If the patient has an infection related to a urinary catheter or a central intravenous (IV) catheter, that catheter may need to be removed.

## **Tests and Diagnosis**

The only way to identify a VRE infection is to collect and test appropriate specimens in the laboratory. For example, a doctor might collect a urine sample for testing if he or she thinks a person has a urinary tract infection. The laboratory can also test to determine which antibiotic will be the most effective to treat the illness. This is how they will know that the bacteria is resistant to vancomycin.

## **Treatments**

Most VRE infections can be treated with antibiotics other than vancomycin. Laboratory testing can determine which antibiotics are effective for treatment. People who are colonized (bacteria are present but without symptoms of an infection) with VRE do not usually need treatment.

## **Prevention**

The best way to prevent the spread of VRE, and all infections, is to clean your hands often. This includes washing hands with soap and water or using an alcohol-based hand rub. Health care workers should follow specific infection control precautions. These might include wearing gowns and gloves when entering a room of patients with VRE infection.

Patients and health care workers should clean their hands often, including:

- before preparing or eating food;
- before touching their eyes, nose or mouth;
- after using the restroom;
- after blowing their nose, coughing or sneezing;
- before and after changing wound dressings or bandages; and
- after touching hospital surfaces such as bed rails, bedside tables, doorknobs, remote controls or the phone.

If you or someone in your household has VRE, you can prevent the spread of VRE by following these guidelines:

- Keep your hands clean, especially after using the bathroom or before preparing food.
- Frequently clean areas of your home, such as your bathroom, that may become contaminated with VRE.
- Wear gloves if you might come in contact with body fluids (for example, stool or bandages from infected wounds) that could contain VRE. Always wash your hands after removing gloves.
- If you have VRE, be sure to tell the health care provider caring for you. Health care facilities use special precautions to help prevent the spread of VRE to others.

### **Additional Information**

Centers for Disease Control and Prevention:  
<http://www.cdc.gov/HAI/organisms/vre/vre.html>.

*This fact sheet provides general information. Please contact your physician for specific clinical information.*

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