

What is VRE?

Enterococci are bacteria that are normally present in the human intestines and in the female genital tract and are often found in the environment. These bacteria sometimes can cause infections. Vancomycin is an antibiotic that is often used to treat infections caused by enterococci. In some instances, vancomycin is no longer able to kill enterococci. These enterococci are then called vancomycin-resistant enterococci (VRE). Most VRE infections occur in hospitals.

Who is at risk for VRE?

The following individuals are at an increased risk becoming infected with VRE:

- People who have been previously treated with vancomycin and combinations of other antibiotics, such as penicillin and gentamicin
- People who are hospitalized, particularly when they receive antibiotic treatment for long periods of time
- People with weakened immune systems, such as patients in intensive care units or in cancer or transplant wards
- People who have undergone surgical procedures, such as abdominal or chest surgery
- People with medical devices that stay in for some time, such as urinary catheters or central intravenous catheters

What are the symptoms of VRE?

The symptoms of VRE can vary. Among the infections that can be caused by VRE are urinary tract infections, blood stream infections and wound infections.

How soon do symptoms appear?

The period between being infected and developing symptoms is variable and not well understood.

How is VRE spread?

VRE usually is passed to others by direct contact with stool, urine or blood containing VRE. It also can be spread indirectly via the hands of health-care providers or on contaminated environmental surfaces. VRE usually is not spread through casual contact such as touching or hugging. VRE is not spread through the air by coughing or sneezing.

When and for how long is a person able to spread the disease?

An individual is able to spread VRE as long as they have an active infection. In addition, individuals with colonized infections may be a carrier for later transmission.

How is a person diagnosed?

Diagnosis is made by laboratory testing.

What is the treatment?

Most VRE infections can be treated with antibiotics other than vancomycin. The treatment of VRE is determined by laboratory testing to determine which antibiotics are effective. For people who get VRE infections and have urinary catheters, removal of the catheter when it is no longer needed can help eliminate the infection. People who are colonized (bacteria are present, but they have no symptoms of an infection) with VRE do not usually need treatment.

Does past infection make a person immune?

No.

Should children or others be excluded from day care, school, work or other activities if they have VRE?

No. Infants, toddlers and school-age children should not be excluded unless the staff determines the child is unwilling or unable to participate in activities. They also should be excluded if the staff determines that they cannot care for the child without compromising their ability to care for the health and safety of the other children in the group.

All others can attend work and other functions as long as they are well enough to do so. As always, good hand washing, covering any cutaneous wounds and respiratory etiquette is recommended. Infected people should be educated to take precautions and follow good hygiene/hand washing principles.

What can be done to prevent the spread of VRE disease?

If you or someone in your household has VRE, the following are some measures to prevent spread of VRE:

- Always wash your hands thoroughly after using the bathroom and before preparing food. Clean your hands after close contact with people who have VRE. Wash with soap and water (particularly when visibly soiled) or clean with an alcohol-based hand cleaner.
- Frequently clean areas of your home such as your bathroom that may become contaminated with VRE. Use a household disinfectant or a mixture of one-fourth cup bleach and one quart of water to clean those areas and surfaces that are touched frequently.
- Wear gloves if you may come in contact with body fluids that may contain VRE, such as stool. Always wash your hands after removing gloves.
- Be sure to tell any health-care providers that you have VRE so that they are aware of your infection.

Additional Information:

Additional information available at www.ndhealth.gov/disease or by calling the North Dakota Department of Health at 800.472.2180.

This disease is a reportable condition. As mandated by North Dakota law, any incidence of this disease shall be reported to the North Dakota Department of Health.

Resources:

1. *Red Book: 2015 Report of the Committee on Infectious Diseases*. 30th ed. [Children in Out-Of-Home Care]. Kimberlin, DW; Brady, MT; Jackson, MA; Long, SS. American Academy of Pediatrics. 2015: 132-151.
2. *Red Book: 2015 Report of the Committee on Infectious Diseases*. 30th ed. [Non-Group A or B Streptococcal and Enterococcal Infections]. Kimberlin, DW; Brady, MT; Jackson, MA; Long, SS. American Academy of Pediatrics. 2015: 750-753.
3. Centers for Disease Control and Prevention. (2011). Healthcare-associated Infections (HAIs). www.cdc.gov/HAI/organisms/vre/vre.html.