

# VRE

## Vancomycin-Resistant Enterococci

### What is VRE?

Enterococci are common bacteria that are normally found in the bowel. There are many different types of enterococci. Vancomycin-resistant enterococci (VRE) are a type of enterococci which has become resistant to an antibiotic called vancomycin. Vancomycin is a powerful antibiotic used to treat serious infections.

### How does VRE spread?

VRE are found in feces and can be spread from one person to another by direct skin-to-skin contact (e.g., unwashed hands) or indirect contact by touching surfaces contaminated with VRE. VRE are hardy organisms that can survive outside the body and on environmental surfaces for weeks (e.g., toilet seats, door knobs). Touching someone with hands that are contaminated with VRE can lead to colonization of these bacteria in their digestive tract. It is very important to practice good hand washing, especially after caring for someone with VRE. VRE is not spread through the air.

### What if I am colonized with VRE?

VRE colonization means the organism is living in the bowel without causing any illness. With time, our body will get rid of the organism on its own. People who are colonized with VRE can contaminate the environment with their unwashed hands. It is very important to practice good hand washing, especially after using the toilet.

### Who is likely to get a VRE infection?

VRE can cause illnesses such as blood infections, urinary tract infections or abscesses. This is usually only seen in those with recent hospitalization in health care facilities outside Canada, critical illness(es) in intensive care units, severe underlying disease or weakened immune system, the use of urinary catheters, exposure to (or contact with) a person with VRE, and the use of antibiotics, particularly vancomycin. Healthy people are usually not at risk of becoming infected with VRE.

### How is VRE treated?

People who are colonized with VRE do not require any special medical treatment. If a person is infected with VRE, his/her physician will determine the best course of treatment.



## What can be done to stop the spread of VRE?

1. Practice good hand washing. This is the most effective way to stop the spread of VRE.



- Wash hands frequently for at least 15 seconds using the 6-step method OR
- Use a hand sanitizer when handwashing facilities are not available and hands are not visibly soiled. When using a hand sanitizer, apply enough to wet the entire hand and rub solution into hands until completely dry.

2. Clean the environment. Our environment plays a crucial role in disease spread. In addition to practicing good hand hygiene, it is important to clean and disinfect highly touched surfaces following the two-step method:

- **Step#1 - Cleaning.** Remove dirt and debris from a surface. Clean with an all-purpose detergent, water and friction, and clean from least soiled to heaviest soiled areas.
- **Step#2 - Apply a disinfectant.** Disinfectants need to be applied to a clean surface for the correct period of time and at the correct strength to achieve proper disinfection. Disinfectants must have a Drug Identification Number (DIN); the exceptions are common household bleach and isopropyl alcohol. Always follow manufacturer's recommendations. If you are using a bleach solution, ensure it remains wet on the surface for five minutes to allow for proper disinfection.

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A 500ppm bleach solution will kill VRE (concentration of 1:100).

**To make this solution follow these steps:**

- Use undiluted household bleach (5.25% or ~50,000ppm)
- Add bleach to water - do not add water to bleach

**Recipes to make a 500ppm bleach solution:**

- Mix ¼ cup + 2 t (50 ml) of bleach with 19 ¾ cups (5L) of water OR
- Mix 5 t (25 ml) of bleach with ~10 cups (2.5L) of water OR
- Mix 2 t (10 ml) of bleach with ~4 cups (1L) of water
- Store bleach solutions in closed, properly labelled containers, away from heat and light

Note: No special precautions are required for handling dishes or waste.

- 3. Clean clothes/fabric. Wash clothes/fabric** separately if they are heavily soiled with feces. First rinse off feces, and then clean in a hot water cycle with soap. Dry items in the dryer with high heat if possible. Dry clean where appropriate.
- 4. Use antibiotics wisely.** To limit the development of new antibiotic resistant organisms, antibiotics must be used properly. It is important to take and finish any antibiotics as prescribed for you (do not share with others), and use antibiotics only for serious bacterial infections (they do not work against viruses).

**Can people with VRE have visitors?**

**Yes.** Restrictions on activities or visitors at home or in the community are not necessary.

- If you are visiting a person with VRE in a hospital or a long-term care home, staff may ask you to wear gloves and a gown before having contact with the person or his/her environment. It is very important to perform hand hygiene after visiting these facilities.
- If you have VRE, it is important to inform health care providers in the community (doctor, nurse, physiotherapist) so they can take the appropriate precautions (e.g., hand washing, use of gloves).

**References:**

Fact Sheet – Vancomycin-resistant Enterococci (VRE). Public Health Agency of Canada. 2010.  
<http://www.phac-aspc.gc.ca/nois-sinp/vre-erv-eng.php>

