

## What are VISA and VRSA?

VISA and VRSA are specific types of *Staphylococcus aureus* bacteria that have become resistant to antibiotics. Vancomycin-intermediate *Staphylococcus aureus* (VISA) is only partially resistant to the antibiotic Vancomycin. However, Vancomycin-resistant *Staphylococcus aureus* (VRSA) is completely resistant to Vancomycin.

## What is *Staphylococcus aureus*?

*Staphylococcus aureus*, known commonly as “staph”, is a bacteria commonly found on the skin and in the nose of healthy people. Staph bacteria often cause minor infections on the surface of the skin in the form of pimples and boils. Occasionally, staph can get inside the body and cause a more serious infection. When infection occurs, commonly used antibiotics such as methicillin and penicillin are used to stop the infection.

## How did *Staphylococcus aureus* turn into VISA/VRSA?

VISA/VRSA is likely the result of inappropriate antibiotic use for a *Staphylococcus aureus* infection. When a bacterial infection is treated with antibiotics, there is always a chance that a small percentage of the bacteria will have a natural resistance to the antibiotic. While antibiotics kill most of the bacteria, the small percentage that are resistant to the medication remain alive and reproduce. Inappropriate antibiotic use, such as over using antibiotics or not completing treatment, increases the chances that this event will occur.

## Why can't other common antibiotics be used to treat VISA/VRSA?

Commonly used antibiotics such as methicillin and penicillin are effective only on a normal staph infection. Unfortunately, VISA/VRSA are also resistant to these commonly used antibiotics. Methicillin-resistant *Staphylococcus aureus* (MRSA) originally developed from Staph and cannot be treated with methicillin or penicillin, but is susceptible to Vancomycin. However, VISA/VRSA developed from MRSA, and in turn carry resistance to all three drugs: penicillin, methicillin, and Vancomycin. VISA is only partially resistant to Vancomycin while VRSA is completely resistant to Vancomycin. In the case that Vancomycin does not work, newer antibiotics approved by the FDA such as Linezolid or similar drugs have been used.

## How is a VISA/VRSA infection different than a *Staphylococcus aureus* infection?

A VISA/VRSA infection is identical to a common staph infection. However, different antibiotics treatments must be used.

## How are VISA and VRSA diagnosed?

An infected area must be swabbed and cultured. Laboratory results can confirm VISA or VRSA. A culture only partially resistant to Vancomycin is diagnosed as VISA while a culture fully resistant to Vancomycin is VRSA.

## How is a VISA/VRSA infection treated?

When an infection is only on the skin surface, the infected area is usually removed and antibiotics are not used. However, more serious infections on the inside of the body must be treated with specific antibiotics that will stop either VISA or VRSA. To avoid creating further antibiotic resistant bacteria, it is crucial that a patient strictly follows the treatment plan and stays on their antibiotic regimen for the full length of treatment!

## Who gets *staph* or VISA/VRSA?

Skin infections can happen randomly to almost anyone who has been exposed to staph bacteria or any resistant form. More serious infections frequently occur among people in hospitals or other healthcare facilities with weakened immune systems. Presence of wounds from surgery or artificially induced openings to the body from catheters also increases risk of a serious infection.

## What does a staph or VISA/VRSA infection look like?

Skin infections look like a pimple or boil and can be red, swollen, painful, or have pus or other drainage. More serious infections are varied and may cause pneumonia, bloodstream infections, or surgical wound infections.

**How is staph or VISA/VRSA spread?**

Currently infected individuals with draining lesions pass on staph bacteria either directly to other people or indirectly to surfaces where they are picked up by other people. Staph can live on surfaces for up to a day.

**The “5 C’s” of risk for staph and VISA/VRSA**

Crowding, Close contact, Compromised skin (especially if injury occurs during close contact), Contaminated surfaces and Cleanliness (lack of). Also frequent antibiotic use and delayed or lack of access to healthcare.

**What can be done to stop the spread of staph or VISA/VRSA?**

- Good and frequent hand hygiene using soap and water when hands are visibly soiled, or alcohol-based hand gel when hands are just contaminated.
- Good bodily hygiene: Shower with soap right after all sports practices and competitions, Don’t share towels or other personal items, Ensure adequate availability of soap and water
- Avoid contact with drainage from skin lesions: Cover all wounds, Exclude sports players whose lesions cannot be covered (until healed or coverable), Routine cleaning of shared sports equipment and other common objects
- Sports participants should report skin lesions, and coaches should assess presence of skin lesions regularly.

**What should a person do if he/she believes they have a staph or VISA/VRSA infection?**

See your healthcare provider.

**What can an infected person do to keep other well?**

- Cover your wound
- Clean your hands
- Do not share personal items
- Talk to your doctor

**Is it possible for a person to get a staph or VISA/VRSA infection after one has already been cured?**

Yes. A person may either get a new infection or their last infection may not have been completely cured. It is very important to follow your doctor's orders for medication. Also, follow prevention steps after the infection appears to be gone and immediately report any new symptoms.

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