

Introduction

MRSA is a bacterial infection that is difficult to treat with antibiotics. MRSA infections are a concern in hospitals and healthcare institutions. However, MRSA can also spread in communities. Children are more vulnerable to MRSA than adults.

MRSA infections at hospitals can be life-threatening. In the community, MRSA infections are usually less serious; however, they can still be life-threatening. Washing your hands often and keeping bandages on wounds is essential in preventing MRSA infections.

This reference summary will help you and your loved ones learn how to prevent MRSA infection and recognize its signs. The tutorial also discusses the causes, diagnosis and treatment of MRSA.

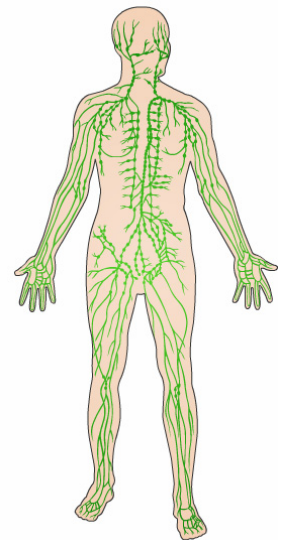
Background Info (Bacteria & Antibiotics)

This section reviews important words and concepts that will help you understand MRSA infections.

Germs are all around us. There are millions of them in the air and on our skin. Viruses and bacteria are examples of germs. Staphylococcus or “staph” is a type of bacteria. The MRSA germ is staph bacteria.

Many parts of the body specialize in fighting germs. All of the germ-fighting parts of the body together make up the immune system. Sometimes germs can get past the immune system’s defenses and cause infection and inflammation.

If the immune system does not win the fight against an infection, the infection could spread to the blood and other parts of the body. If not treated, these infections could be life-threatening.



Immune system

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Scientists have developed antibiotics to fight bacteria. Antibiotics are not good at fighting viruses. There are powerful antibiotics to treat bacteria but they can sometimes cause side effects.

Viruses and bacteria keep changing their structure through a process called mutation. Scientists call these new mutated germs “strains.” New strains of germs can become more resistant to antibiotics.

If the new strains are more resistant to antibiotics, they become difficult to fight and more dangerous. MRSA is a strain of staph that is resistant to the antibiotic Methicillin.

MRSA

One type of staph bacteria is called *Staphylococcus aureus*. Some strains of these bacteria become resistant to the antibiotic Methicillin. That is why they are known as Methicillin-Resistant *Staphylococcus aureus*, or MRSA.

There are 2 ways you can have MRSA:

- You can have an active infection. An active infection means you have symptoms. The types of symptoms depend on where the bacteria are located. Usually an active infection is a skin infection, such as a boil, a sore, or an infected cut.
- You can be a carrier. If you are a carrier you do not have symptoms that you can see, but you still have MRSA living on your skin and in your nose. If you are a carrier your doctor may say that you are “colonized”. The words “carrier” and “colonized” mean the same.

It is important to remember that if you don’t wash your hands properly, the things that you use or touch with your hands can give the bacteria to other people. MRSA can still be found in the secretions that come out of your nose or mouth when you cough or sneeze.



If the infection is not discovered in time, it could spread through the body causing skin infections or pneumonia. It may be life-threatening if not treated successfully.

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People who have the MRSA bacteria in their body but are not sick are described as “colonized” and are called “carriers.” About one third of all people have MRSA on their skin and in their nose.

MRSA bacteria are generally harmless unless they enter the body through a cut or a wound. Even then, MRSA causes almost no trouble in healthy people because the immune system fights it. People who have weak immune systems cannot fight infections as well as healthy people. That is why MRSA infections are more serious in young children, older adults and sick people.

MRSA infections can also cause more serious illness in people with weak immune systems, such as HIV patients and patients undergoing chemotherapy.

Transmission

A person can get infected with MRSA either from a person who is carrying it or from someone who is infected by it. The bacteria are spread by touching the person with MRSA directly or by touching something he or she touched.

In serious cases of MRSA infection, the patient may develop pneumonia. Pneumonia is an infection of the lung. Patients with pneumonia cough a lot.

Healthy people who get MRSA on their skin do not develop infections because healthy skin does not allow MRSA infections to develop. However, if there are cuts or scrapes on the skin, the bacteria invade the tissue and may start an infection.



Scientists distinguish 2 types of MRSA, depending on where the person got the infection.

1. Healthcare-acquired MRSA, which means the person got the infection at the hospital or another healthcare facility
2. Community-acquired MRSA, which means the person got the infection in the community

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When a patient contracts MRSA at a hospital, it is usually more serious because the patient is already sick. In addition, hospitalized patients may have an incision or wound because of surgery or the insertion of a medical device in the skin. This makes it easier for MRSA to get inside the body and start a deep infection.

Community-acquired MRSA is common in places where people get a lot of skin scrapes or wounds. Outbreaks of community-acquired MRSA tend to show up among team players of contact sports, such as football and wrestling. They also occur often in military training camps, prisons and in areas where children play in unsanitary conditions.

Symptoms

Early MRSA infections are skin infections that produce small red bumps on the skin. These skin infections could become filled with pus and cause blisters that become painful.

When the MRSA infection spreads to deeper parts of the body, more severe symptoms occur. Signs include fever, chills, headaches, rash, joint pains, and shortness of breath. These symptoms require immediate medical attention. Tell your doctor if you have these signs and if you notice any skin abnormality.



Diagnosis

If you have MRSA or have had it in the past, tell your healthcare provider. That way, they can give you the extra care you need and the right antibiotics when needed.

To diagnose MRSA, your healthcare provider takes a sample from your skin or pus on the skin and sends it to the lab. Blood, urine and other tissue samples can also be used. The lab technicians may use a culture to test your sample. When a culture is done, a small sample of cells is placed on a special material and allowed to grow and multiply. This may take a few days.

Treatment

Doctors prefer not to use antibiotics to treat mild MRSA that is not causing severe infections. This is so MRSA doesn't become even more resistant to antibiotics.

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For mild to moderate skin infections, doctors may first drain the skin abscess caused by MRSA. For severe infections, doctors may use an antibiotic such as vancomycin.

Prevention

You can reduce your risk of MRSA by following these guidelines.

- Wash your hands well and often.
- Use hand sanitizer when you can't wash your hands. Keeping a bottle of hand sanitizer gel or foam with you at all times can make it easier for you to sanitize your hands at any time.
- Keep wounds and scrapes clean and covered.
- Avoid sharing towels, sheets, razors, clothing and other personal items.



When exercising at the gym or participating in athletic games, shower immediately after each game or session, wash towels and athletic clothes after each wearing and don't share personal items.

You can help prevent new strains of antibiotic-resistant germs by taking antibiotics only when necessary and prescribed by the doctor. Follow your doctor's or pharmacist's instructions when taking antibiotics. If the doctor wants you to take all of the prescribed pills, don't quit taking them just because you feel better.

If you or your loved one is hospitalized, to protect yourself and your visitors from MRSA, wash your hands often and ask hospital staff if they have washed their hands before touching you.

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Conclusion

MRSA infection is a bacterial infection that is difficult to treat with antibiotics. While at the hospital, you should be extra careful to avoid getting infected. MRSA infection could be life-threatening.

You can reduce your risk of MRSA by following these guidelines.

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- Keep wounds and scrapes clean and covered.
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