



METHICILLIN-RESISTANT *STAPHYLOCOCCUS AUREUS* (MRSA)

What is MRSA?

Staphylococcus aureus, often referred to as "Staph," is a common bacterium found on the skin of healthy people. Methicillin-resistant *Staphylococcus aureus* (MRSA) is a specific kind of Staph that is more difficult to treat because it is resistant to several antibiotics. About 33% of the population is colonized (when bacteria are present, but not causing an infection) in the nose with Staph, and 2% is colonized with MRSA. Approximately 5% of patients in U.S. hospitals carry MRSA in their nose or on their skin. Staph is one of the most common causes of skin infections in the United States.

If *Staphylococcus aureus* gets into the body, it can cause infections. Most of these skin infections are minor (such as pimples and boils) and can be treated without antibiotics. Staph bacteria, however, can also cause serious infections, such as surgical wound infections, bloodstream infections, and pneumonia. In the past, most serious staph infections were treated with an antibiotic related to penicillin. With widespread use of this antibiotic, treatment of these infections has become more difficult because the Staph bacteria have become resistant to various antibiotics, including penicillin.

MRSA is a bacterial infection that is resistant to several common antibiotics, including methicillin, amoxicillin, penicillin, and oxacillin. Fortunately, there has recently been a decline in serious MRSA infections. For example, from 2005 to 2014, the overall estimated incidence of invasive MRSA infections from normally sterile sites (i.e., blood, pleural fluid, etc.) in the United States declined by 40% and the estimated incidence of invasive hospital-onset MRSA infections declined by 65%. However, MRSA remains an important health care pathogen and preventing MRSA infections is a priority for the Centers for Disease Control and Prevention (CDC). The CDC estimates that MRSA is responsible for more than 70,000 severe infections and 9,000 deaths per year.

Who gets MRSA?

Anyone can get MRSA. Most people get infected from direct skin-to-skin contact with someone with an infection. Indirect contact with contaminated items, including equipment and supplies, may also result in an infection. Non-intact skin, such as when there are cuts or scrapes, is often the site of an MRSA infection.

Those at higher risk for MRSA infection include athletes, daycare and school students, military personnel in barracks, and those who receive inpatient medical care or have surgery or medical devices inserted in their body.



How is MRSA spread?

MRSA is usually spread by direct contact with an infected wound or from contaminated hands, usually those of health care providers. Also, people who carry MRSA but do not have signs of infection can spread the bacteria to others and potentially cause an infection. MRSA can also be spread by sharing personal items, such as towels or razors, that have touched infected skin. It can also be spread by touching surfaces or items, such as used bandages, that are contaminated with MRSA.

The opioid epidemic may also be connected to the rise of Staph infections in communities. People who inject drugs are 16 times more likely to develop a serious Staph infection.

What are the symptoms of MRSA?

The symptoms of MRSA infection vary depending on the body part that is infected. Most Staph skin infections, including MRSA, appear as a bump or infected area on the skin that may be red, swollen, painful, warm to the touch, full of pus or other drainage, and/or accompanied by a fever.

If you suspect a MRSA skin infection, cover the area with a bandage and contact your health care professional. It is especially important to contact your health care professional if signs and symptoms of an MRSA skin infection are accompanied by a fever. The only way to know if MRSA is the cause of an infection is to perform a laboratory culture of the bacteria. Obtaining bacteria to culture is a procedure done by a doctor.

How soon do symptoms appear?

Varies from one to 10 days after exposure to MRSA.

Should an infected person be excluded from work or school?

- A person can attend work or school unless a health care provider tells them not to. However, they should not attend work or school if:
 - There is wound drainage (“pus”) that cannot be covered and contained with a clean, dry bandage.
 - They cannot maintain good personal hygiene.
- It is important that everyone has good hand hygiene, particularly before eating, after touching potentially infected wounds or soiled bandages, and after using the bathroom.



Frequently Asked Questions

- Workers with active infections should be excluded from activities where skin-to-skin contact with the affected skin area is likely to occur, until their infections are healed.
- If a teacher observes a child with open draining wounds or infections, take them to the school nurse. If a nurse is not available, call the child's guardian and tell them to seek medical attention.

What is the treatment for MRSA?

Treatment for MRSA skin infections may include having a health care professional drain the infection and, in some cases, prescribe an antibiotic. Do not attempt to drain the infection yourself, as doing so could worsen or spread it to others. If you are given an antibiotic, be sure to take all of the doses (even if the infection is getting better), unless your health care professional tells you to stop taking it.

What can a person or community do to prevent the spread of MRSA?

- Know the signs of MRSA skin infections and get treated early.
- Cover your wounds with clean, dry bandages until healed.
- Encourage good hygiene such as cleaning hands regularly.
- Wash hands often with soap and water for 20 seconds or use an alcohol-based hand rub, especially after changing a bandage, after touching an infected wound, and after touching dirty clothes.
- Do not share personal items such as towels, washcloths, razors, and clothing.
- Wash laundry before use by others and clean your hands after touching dirty clothes.

Resources

CDC

<https://www.cdc.gov/mrsa/community/index.html>

<https://www.cdc.gov/mrsa/community/schools/index.html>

<https://www.cdc.gov/mmwr/volumes/67/wr/mm6722a2.htm>

<https://www.cdc.gov/mrsa/healthcare/index.html>

Office of Infectious Disease Epidemiology
24/7 Emergency Contact Number: 1-888-295-5156

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