

What is methicillin-resistant *Staphylococcus aureus* (MRSA) disease?

Staphylococcus aureus, often referred to as “staph,” is a common bacterium that can be found on the skin, in the nose and in moist body areas. MRSA is a strain of *Staphylococcus aureus* that is resistant to the antibiotic called methicillin. The acronym, MRSA, stands for methicillin-resistant *Staphylococcus aureus*. MRSA is a type of *staph* that is not able to be treated with the most common types of antibiotics such as penicillins and cephalosporins. These two types of antibiotics are the most widely used antibiotics to treat both clinic and hospital patients. MRSA can cause a number of infections from skin infections and food poisoning, to severe disease which can result in pneumonia and/or septicemia (bacteria gets in the blood) or even death.

Not everyone who has MRSA has an infection. Some people can have MRSA just living on their skin. These people are considered colonized with MRSA. These people have no symptoms and might not know they have it.

Who is at risk for MRSA?

Anyone can get MRSA infection through direct contact with an infected wound or by sharing personal items, such as towels or razors that have touched infected skin. Most susceptible are newborns, the elderly and people with chronic health conditions. Additionally, those with open wounds, long-term antibiotic treatments, invasive medical devices (catheters or surgical drains) and those with repeated hospital stays may have increased risk of MRSA infection.

What are the symptoms of MRSA?

The most common infections are of the skin: impetigo, wounds and infected cuts. However, if the organism invades the bloodstream or lungs, it can become very serious and even life-threatening to the patient. Symptoms are extremely variable.

How soon do symptoms appear?

This varies depending on how and where the person became infected. Some people may never show symptoms.

How is MRSA spread?

MRSA bacteria are very common organisms that often live in the human nose. The main mode of transmission of MRSA is via unwashed hands. Transmission is also by direct contact with draining skin lesions or other sources of infection. People who are colonized can infect others without having any symptoms themselves.

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

An individual is able to spread MRSA as long as he or she has an active infection or is colonized with the bacteria.

How is a person diagnosed?

Diagnosis is made by laboratory testing.

What is the treatment?

MRSA is difficult to treat because it does not respond well to certain antibiotics that may be used to treat it. The treatment of MRSA will depend on laboratory testing to determine which antibiotics are the most useful. Your doctor may have additional advice, such as covering draining sores and washing infected area with soap and water.

Does past infection make a person immune?

No. People are able to become re-infected or re-colonized.

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

If not seriously ill, infected people can work or attend schools. Infected people should be educated on the proper precautions to not spread the infection to others and follow good hygiene/hand-washing principles.

Children should be excluded from a child-care setting if the illness prevents the child from participating or if the child has a fever, lethargy, irritability, persistent crying or shortness of breath. If the staff feels that they are jeopardizing the health and/or safety of other children in the group by having to care for the child, the child also may be excluded.

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

- Cover your wounds. Keep wounds covered with clean, dry bandages until healed. Follow your doctor's instructions about proper care of the wound. Bandages and tape can be thrown away with the regular trash.
- Clean your hands often. You, your family, and others in close contact should wash their hands often with soap and water or use an alcohol-based hand rub, especially after changing the bandage or touching the infected wound.
- Do not share personal items. Personal items include towels, washcloths, razors, clothing, and uniforms.
- Wash used sheets, towels, and clothes with water and laundry detergent. Use a dryer to dry them completely.
- Wash clothes according to manufacturer's instructions on the label

Additional Information:

Additional information is 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. [Staphylococcal Infections]. Kimberlin, DW; Brady, MT; Jackson, MA; Long, SS. American Academy of Pediatrics. 2015: 715-732.
3. Centers for Disease Control and Prevention. (2015) Methicillin-resistant *Staphylococcus aureus* (MRSA) Infections. www.cdc.gov/mrsa/