

Methicillin Resistant *Staphylococcus Aureus* (MRSA)

What is *Staphylococcus aureus* (*S. aureus*)?

S. aureus is a germ (bacterium) that is usually found on the surface of the skin and in the nose. Many children and adults “carry” or have *S. aureus* on their skin and in their nose – this is natural. Occasionally, this germ enters the body and causes infection in bones, joints, lungs or blood. Most types of *S. aureus* can be treated with an antibiotic called “Methicillin” and other antibiotics.

What is MRSA?

MRSA is an abbreviation for **M**ethicillin **R**esistant **S**taphylococcus **a**ureus. A few types of *S. aureus* are resistant to and cannot be treated with Methicillin and other antibiotics because they do not work on these types of *S. aureus*. If a child has a serious infection with “MRSA,” the child will need a different antibiotic than Methicillin or the other common antibiotics that are usually used to treat *S. aureus*.

What causes MRSA?

Certain bacteria are naturally resistant to antibiotics. Other bacteria can actually change and become resistant to antibiotics. Bacteria can share the ability to be resistant to antibiotics with each other. The overuse of antibiotics may pressure the natural bacteria to become resistant and then when an infection occurs from this type of bacteria, it is much more difficult to treat.

How is MRSA diagnosed?

MRSA is diagnosed in the laboratory when *S. aureus* is found to be resistant to Methicillin or contains the methicillin resistance gene (PBP2a).

How can it be treated?

There is no proven way to get rid of this germ from the surface of the body. Even after treating an infection in the lungs, bones, joints or blood stream, the bacteria can still be found on the skin surfaces and on other surfaces like inside the nose and throat. Most children who have these bacteria will continue to have positive MRSA lab tests (cultures) from the skin or nose for months to years. This is why we recommend isolation precautions for each hospital admission and/or clinic visit when a child has MRSA.

How can you keep from spreading this organism?

MRSA bacteria can spread from one person to another, usually by direct contact (for example, touching). This means that it is possible to spread it to other patients and staff if special procedures are not followed. Since MRSA can be treated with only a few antibiotics, we are trying to make sure these bacteria do not spread to other children in the hospital or clinic. Gown and glove isolation helps reduce the spread of these bacteria. A mask is sometimes needed depending upon your child’s condition. Please tell hospital and clinic staff if your child has MRSA so appropriate steps can be followed.

Can my child ever be taken out of isolation precautions?

Precautions should be taken whenever your child comes to the clinic or Day Surgery at The Children's Hospital. For some inpatient admissions, it may be possible to culture your child and remove them from isolation for that admission only. Specific guidelines have been created to assist staff with evaluating your child's situation. Please understand that the guidelines may not always pertain to your child's situation and they will need to remain in isolation for the duration of the hospital stay.

What about day care or school for my child?

In 2002, the Colorado Department of Public Health and Environment (CDPHE) convened an MRSA in School / Childcare Settings Working Group. The group developed recommendations that can be used to determine the appropriateness of children with MRSA attending these settings. Many factors are taken into consideration as each situation is often unique. These recommendations can be found on the CDPHE Web site (http://www.cdphe.state.co.us/dc/epidemiology/CO_MRSA_schools5_03.pdf).

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