



***Staphylococcus aureus* (Methicillin-Resistant [MRSA] and Methicillin-Sensitive [MSSA])**

What is *Staphylococcus aureus*?

- *Staphylococcus aureus* are bacteria that primarily cause skin infections, although, less commonly, these bacteria can cause pneumonia and bone, joint, and blood infections. The “resistant” or “sensitive” part of the name refers to how effectively these bacteria can be treated with methicillin or related antibiotics, such as penicillin, amoxicillin, and cephalosporins.
- Having a methicillin-resistant *Staphylococcus aureus* (MRSA) skin infection is no more serious than other staphylococcal skin infections. Either type can sometimes cause severe infections.
- Although community acquired MRSA is resistant to some antibiotics, there are other effective antibiotics that can be given by intravenous and oral routes.
- Most people who have *S aureus* bacteria living in their noses, on their skin, and around the anus do not become infected; rather, they are carriers (ie, they just carry the bacteria). These bacteria tend to be carried for months to years. Almost half of children carry some type of *S aureus*.

What are the signs or symptoms?

- Carriers have no signs or symptoms.
- With an infection, the signs and symptoms depend on the site of infection.
- When *S aureus* causes skin infections, there may be red bumps that progress to pus-filled pimples, boils, or abscesses.
- Boils may spontaneously drain pus.
- Sometimes, boils and abscesses can progress to *cellulitis*, an enlarging, painful, red area of the skin that extends beyond the boil. Cellulitis may be associated with fever.
- Rarely, the infection spreads from the skin into the deeper tissues, causing a rapidly spreading, dangerous, and very painful infection called *fasciitis*.
- Symptoms of *S aureus* infection in areas other than the skin include fever, tiredness, pain and swelling of the joints or bones, and cough when the infection is in the lungs.

What are the incubation and contagious periods?

- Incubation period: Unknown.
- Contagious period: Children are contagious with *S aureus* when they have actively draining sores or boils. But children may also be contagious with *S aureus* without any symptoms (carriers).

How is it spread?

- Close skin-to-skin contact.
- Crowded conditions.
- Poor hygiene.
- Contact with open sores or boils.
- Contact with toys or surfaces that have been contaminated with the bacteria. A carrier who picks his or her nose could easily contaminate a toy or surface.

How do you control it?

- Use good hand-hygiene technique at all the times listed in Chapter 2.
- Any skin condition that may cause skin breaks, such as eczema, is a risk factor for having a skin infection (including *S aureus*) and passing this on to others. Educators with eczema on their hands or excessively dry skin should practice good eczema/dry skin control. Educators with cracked skin on their hands should wear gloves during activities that involve touching the skin of the children. For children and staff members who have eczema or excessively dry skin, work with the child’s family, adults, and the affected people’s health professionals to control the eczema/dry skin condition.
- Avoid sharing personal items, such as dress-up clothing.
- Cover open or draining sores or boils.
- Occasionally, *S aureus* may cause infections in multiple individuals in a family or early childhood education program.
- Infectious disease specialists may recommend special soaps and/or baths for individuals and families who get recurrent disease caused by *S aureus* infections; however, the infections may come back despite this treatment.
- Children infected with boils may occasionally have a culture taken; however, more commonly, the health professional may also choose to treat with antibiotics without taking a culture based on their knowledge of local antibiotic resistance patterns.
- Children who do not have symptoms of infection may be carrying *S aureus* but should not be cultured.

What are the roles of the educator and the family?

- Use good hand-hygiene technique at all the times listed in Chapter 2. Provide hand lotion to use following handwashing to reduce the drying effect of frequent hand hygiene.
- Review Standard Precautions, particularly hand hygiene.
- Identify children with red or draining skin lesions, cover the lesions, and report the problem to parents/guardians. Recommend seeking care from their child's health professional.

Exclude from educational setting?

No, unless

- The child is unable to participate and staff members determine they cannot care for the child without compromising their ability to care for the health and safety of the other children in the group.
- The child meets other exclusion criteria (see Conditions Requiring Temporary Exclusion in Chapter 4), or the lesions cannot be covered so that contact with others and surfaces with drainage does not occur.
- Having a MRSA or methicillin-sensitive *S aureus* (MSSA) infection or harboring MRSA or MSSA bacteria (carrier) is not a reason for exclusion unless other exclusion criteria are met.

Readmit to educational setting?

Yes, when all the following criteria are met:

When exclusion criteria are resolved, the child is able to participate, and staff members determine they can care for the child without compromising their ability to care for the health and safety of the other children in the group

