



MRSA in Schools: A New Arena for Infection

Infections related to MRSA (methicillin-resistant *Staphylococcus aureus*) in school-aged children are all too common and indicate there is an emerging infection control issue among school aged children and in particular among athletes. In the past, Staph infections such as MRSA, have been attributed to persons with weakened immune systems such as those being treated in hospitals and nursing homes. Most recent data, however, suggests an increase in community-associated (CA-MRSA) and acquired by school children who have not been recently (within the past year) hospitalized or had a medical procedure.

What is Staph (*Staphylococcus aureus*)?

Staphylococcus aureus, often referred to simply as "staph," are bacteria commonly carried on the skin or in the nose of healthy people. Approximately 25% to 30% of the population is colonized (when bacteria are present, but not causing an infection) in the nose with staph bacteria. Sometimes, staph can cause an infection. Staph bacteria are one of the most common causes of skin infections in the United States. Most of these skin infections are minor (such as pimples and boils) and can be treated without antibiotics (also known as antimicrobials or antibacterials). However, staph bacteria also can cause serious infections (such as surgical wound infections, bloodstream infections, and pneumonia).

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

Some staph bacteria are resistant to antibiotics. MRSA is a type of staph that is resistant to antibiotics called beta-lactams. Beta-lactam antibiotics include methicillin and other more common antibiotics such as oxacillin, penicillin and amoxicillin. While 25% to 30% of the population is colonized with staph, approximately 1% is colonized with MRSA.

What is community-associated MRSA (CA-MRSA)?

Staph and MRSA can also cause illness in persons outside of hospitals and healthcare facilities. MRSA infections that are acquired by persons who **have not** been recently (within the past year) hospitalized or had a medical procedure (such as dialysis, surgery, catheters) are known as CA-MRSA infections. Staph or MRSA infections in the community are usually manifested as skin infections, such as pimples and boils, and occur in otherwise healthy people.

How common are staph and MRSA infections?

Staph bacteria are one of the most common causes of skin infection in the United States and are a common cause of pneumonia, surgical wound infections, and bloodstream infections. The majority of MRSA infections occur among patients in hospitals or other healthcare settings; however, it is becoming more common in the community setting. Data from a prospective study in 2003, suggests that 12% of clinical MRSA infections are community-associated, but this varies by geographic region and population.

What does a staph or MRSA infection look like?

Staph bacteria, including MRSA, can cause skin infections that may look like a pimple or boil and can be red, swollen, painful, or have pus or other drainage. More serious infections may cause pneumonia, bloodstream infections, or surgical wound infections.

Are certain people at increased risk for community-associated staph or MRSA infections?

CDC has investigated clusters of CA-MRSA skin infections among athletes, military recruits, children, Pacific Islanders, Alaskan Natives, Native Americans, men who have sex with men, and prisoners.

Factors that have been associated with the spread of MRSA skin infections include: close skin-to-skin contact, openings in the skin such as cuts or abrasions, contaminated items and surfaces, crowded living conditions, and poor hygiene.

How can I prevent the spread of MRSA in School Environments?

1. Keep your hands clean by washing thoroughly with soap and water or using an alcohol-based hand sanitizer. Regular soap is just as effective at removing transient bacteria as antibacterial hand cleaners. There is no need to purchase anti-bacterial products for an outbreak. Be sure to keep all soap and paper towel dispensers working properly. Consider using a touchless paper towel dispensing system.
2. Keep cuts and scrapes clean and covered with a bandage until healed.
3. Avoid contact with other people's wounds or bandages.
4. Avoid sharing personal items (e.g. towels, clothing or razors).
5. Utilize a barrier (e.g. clothing or towel) between your skin and shared equipment.
6. Wipe surfaces of equipment (e.g. weight benches, athletic training tables) before and after use with a fast acting disinfectant.
7. Avoid whirlpools, hydrotherapy pools, cold tubs, swimming pools, and other common tubs if you have an open wound.

8. Maintain clean facilities and equipment. A microfiber dust mop program should be implemented for the floors underneath areas where mats are used for activities. In addition to dust mopping, the mats should be disinfected by mopping them prior to practice and after practice.
9. Locker room area floors and shower areas should be disinfected by mopping them daily.

What should I do if I think I have a staph or MRSA infection?

See your healthcare provider.

Are staph and MRSA infections treatable?

Yes. Most staph and MRSA infections are treatable with antibiotics. If you are given an antibiotic, take all of the doses, even if the infection is getting better, unless your doctor tells you to stop taking it. Do not share antibiotics with other people or save unfinished antibiotics to use at another time.

However, many staph skin infections may be treated by draining the abscess or boil and may not require antibiotics. Drainage of skin boils or abscesses should only be done by a healthcare provider.

If after visiting your healthcare provider the infection is not getting better after a few days, contact them again. If other people you know or live with get the same infection tell them to go to their healthcare provider.