

MRSA Among Athletes – Methicillin-Resistant *Staphylococcus aureus* (MRSA)

Information taken from the Centers for Disease Control website: www.cdc.gov

What is *Staphylococcus aureus* and MRSA?

Staphylococcus aureus, often called “staph”, is a type of bacteria commonly found on the skin or in the nose of healthy people. Approximately 30% of people have staph in their noses and do not have any symptoms. MRSA which stands for *Methicillin-Resistant Staphylococcus aureus* is staph that is resistant to commonly used antibiotics such as penicillins and currently available cephalosporins. In the past, MRSA was found only in healthcare facilities and caused infection in people who were sick. More recently, MRSA has emerged in the community and can cause infections in otherwise healthy people.

What types of infections does MRSA cause?

In the community, most MRSA infections are minor skin infections that may appear as sores or boils that often are red, swollen, painful, or have pus or other drainage. These skin infections commonly occur either at sites of breaks in the skin such as cuts and abrasions, and areas of the body covered by hair (for example, the back of the neck, groin, buttock, armpit, or beard area of men).

Almost all MRSA skin infections can be effectively treated by drainage of the pus by a healthcare provider with or without antibiotics. More serious infections such as pneumonia, blood or bone infections are rare in healthy people who get MRSA skin infections.

How is MRSA spread?

Like other causes of skin infections in athletes, MRSA is usually spread from person to person through direct skin contact or contact with shared items or surfaces (e.g., towels, used bandages, weight-training equipment surface, etc.) that have touched a person’s infection.

MRSA might spread more easily among athletes because during participation athletes have repeated skin-to-skin contact, get breaks in the skin such as cuts and abrasions that if left uncovered allow staph and MRSA to enter and cause infection, share items and surfaces that come into direct skin contact, and have difficulty staying clean.

Which athletes are more at-risk for MRSA skin infections?

Skin infections including MRSA have been reported mostly in high physical-contact sports such as wrestling, football, and rugby. However, MRSA infections have been reported among athletes in other sports such as soccer, basketball, field hockey, volleyball, rowing, martial arts, fencing, and baseball.

Even though little physical contact occurs in some sports during participation, skin contact or activities that may lead to spread of MRSA skin infections may take place before or after participation such as in the locker room. Therefore, anyone participating in organized or recreational sports should be aware of the signs of possible skin infections and follow prevention measures.

Advice for Athletes and Parents: How do I protect myself from getting MRSA and other skin infections?

Practice good personal hygiene

- ☑ Keep your hands clean by washing frequently with soap and water or using an alcohol-based hand rub.
- ☑ At a minimum, hands should be cleaned before and after playing sports and activities such as using shared weight-training equipment, when caring for wounds including changing bandages, and after using the toilet.
- ☑ Both plain and antimicrobial soap are effective for hand washing, but liquid soap is preferred over bar soap in these settings to limit sharing.
- ☑ If hands are not visibly dirty and sinks are not available, while on the field of play or in the weigh-room, alcohol-based hand rubs and sanitizers can be used. Alcohol-based rubs with at least 60% alcohol content are preferred.
- ☑ Shower immediately after exercise. Do not share bar soap and towels.

- ☑ Wash your uniform and clothing after each use. Follow the clothing label's instructions for washing and drying. Drying clothes completely in a dryer is preferred.

Take care of your skin

- ☑ Wear protective clothing or gear designed to prevent skin abrasions or cuts.
- ☑ Cover skin abrasions and cuts with clean dry bandage until healed.

Do not share items that come into contact with your skin

- ☑ Avoid sharing personal items such as towels and razors that contact bare skin.
- ☑ Do not share ointments that are applied by placing your hands into an open-container.
- ☑ Use a barrier like clothing or a towel between your skin and shared equipment like weight-training, sauna and steam-room benches.

What should I do if I think I have an MRSA infection?

- ☑ Tell your parent, coach, athletic trainer, school nurse, team doctor or other healthcare provider if you think you have an infection so it can be treated quickly. Finding infections early and getting care will reduce the amount of playing time lost and decrease the chance that the infection will become severe.
- ☑ Pay attention for signs of infections such as redness, warmth, swelling, pus, and pain at sites where your skin has sores, abrasions, or cuts. Sometimes these infections can be confused as spider bites.
- ☑ Infections can also occur at sites covered by body hair or where uniforms or equipment cause skin irritation or increased rubbing.
- ☑ Do not try to treat the infection yourself by picking or popping the sore.
- ☑ Cover possible infections with clean dry bandages until you can be seen by a healthcare provider (e.g., doctor, athletic trainer).

I have an MRSA skin infection. How do I prevent spreading it to other?

- ☑ Get medical care for your infection. Do not try to treat it yourself.
- ☑ Cover your wounds. Keep wounds covered with clean, dry bandages until healed. Follow your healthcare provider's instructions on proper care of the wound. Pus from infected wounds can contain staph and MRSA, so keeping the infection covered will help prevent the spread to others. 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 clothes completely.

Advice for schools, athletic directors, and coaches: How should athletic facilities be managed when an MRSA infection occurs?

- ☑ Athletic facilities such as locker rooms should always be kept clean whether or not MRSA infections have occurred among the athletes.
- ☑ Review cleaning procedures and schedules with the janitorial/environmental service staff.
- ☑ Cleaning procedures should focus on commonly touched surfaces and surfaces that come into direct contact with people's bare skin each day.
- ☑ Cleaning with detergent-based cleaners or Environmental Protection Agency (EPA)-registered detergents/disinfectants will remove MRSA from surfaces.
- ☑ Cleaners and disinfectants, including household chlorine bleach, can be irritating and exposure to these chemicals has been associated with health problems such as asthma and skin and eye irritation.
- ☑ Take appropriate precautions described on the product's label instructions to reduce exposure. Wearing personal protective equipment such as gloves and eye protection may be indicated.

- ☑ Follow the instruction labels on all cleaners and disinfectants, including household chlorine bleach, to make sure they are used safely and correctly.
- ☑ Some key questions that should be answered by reading the label include:
 - ? How should the cleaner or disinfectant be applied?
 - ? Do you need to clean surface first before using the disinfectant (e.g., pre-cleaned surfaces)?
 - ? Is it safe for the surface? Some cleaners and disinfectants, including household chlorine bleach, might damage some surfaces (e.g., metals, some plastics).
 - ? How long do you need to leave it on the surface to be effective (i.e., contact time)?
 - ? Do you need to rinse the surface with water after using the cleaner or disinfectant?
- ☑ If you are using household chlorine bleach, check the label to see if the product has specific instructions for disinfection. If no disinfection instructions exist, then use ¼ cup of regular household bleach in a gallon of water (a 1:100 dilution equivalent to 500-615 parts per million [ppm] of available chlorine for disinfection of pre-cleaned surfaces).
- ☑ Environmental cleaners and disinfectants should not be put onto skin or wounds and should never be used to treat infections.
- ☑ The EPA provides a list of registered products that work against MRSA (List H):<http://epa.gov/oppad001/chemregindex.htm>
- ☑ There is a lack of evidence that large-scale use (e.g., spraying or fogging rooms or surfaces) of disinfectants will prevent MRSA infections.
- ☑ Repair or dispose of equipment and furniture with damaged surfaces that do not allow surfaces to be adequately cleaned.
- ☑ Covering infections will greatly reduce the risks of surfaces becoming contaminated with MRSA.

How should sports equipment be cleaned?

- ☑ Equipment, such as helmets and protective gear, should be cleaned according to the equipment manufacturers' instructions to make sure the cleaner will not harm the item.
- ☑ Shared equipment should be cleaned after each use and allowed to dry.

Should athletes with MRSA skin infections be excluded from participation?

- ☑ If sport specific rules do not exist, in general, athletes should be excluded if wounds cannot be properly covered during participation.
- ☑ The term "properly covered" means that the skin infection is covered by a securely attached bandage that will contain all drainage and will remain intact throughout the activity. If wounds can be properly covered, good hygiene measures should be stressed to the athletes such as performing hand hygiene before and after changing bandages and throwing used bandages in the trash.
- ☑ A healthcare provider might exclude an athlete if the activity poses a risk to the health of the infected athlete (such as injury to the infected area), even though the infection can be properly covered.
- ☑ Athletes with active infections or open wounds should not use whirlpools or therapy pools not cleaned between athletes and other common-use water facilities like swimming pools until infections and wounds are healed.

What should I do if I notice an athlete with a possible infection?

- ☑ Refer athletes with possible infections to a healthcare provider such as team physician, athletic trainer, school nurse, or primary care doctor.
- ☑ If the athlete is less than 18 years old, notify parents/guardians of the athlete with the possible infection.
- ☑ Educate athletes on ways to prevent spreading the infection.
- ☑ Using the criteria above, consider excluding the athlete from participation until evaluated by a healthcare provider.

How can I improve hygiene among my athletes?

- ☑ Make sure supplies are available to comply with prevention measures (e.g., soap in shower and at sinks, bandages for covering wounds, hand hygiene such as alcohol-based hand rubs).
- ☑ Enforce policies and encourage practices designed to prevent disease spread.
 - Make sure athletes:
 - Keep wounds covered and contained
 - Shower immediately after participation
 - Shower before using whirlpools
 - Wash and dry uniforms after each use
 - Report possible infections to coach, athletic trainer, school nurse, other healthcare providers, or parents.

Who should be contacted if an outbreak occurs?

Contact local public health authorities

Advice for team healthcare providers

- ☑ Use standard precautions, including hand hygiene before and after contact and after removing gloves when caring for nonintact skin or possible infections.
- ☑ Use barriers such as gowns, masks, and eye protection if splashing of body fluids is possible
- ☑ If hands are not visibly dirty and no sinks are available for hand washing, for example, while on the field of play, alcohol-based hand rubs and sanitizers can be used to improve hand hygiene.