

For Health Professionals

Health Alerts

Health Update #153 - Community-acquired Methicillin-Resistant *Staphylococcus aureus* (CA-MRSA) Update - December 5, 2005

Recently, physicians in Western New York have observed increased numbers of patients with skin and soft tissue infections. Many of these are due to community-acquired methicillin-resistant *Staphylococcus aureus* (CA-MRSA) bacteria, which are now widespread in the U.S. Because sports participants have an increased risk of acquiring CA-MRSA infections, we are asking that you share this information with the appropriate personnel in your school or district.

Overview

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).

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.

Characteristics

Staph infections, including MRSA, occur most frequently among persons in hospitals and healthcare facilities (such as nursing homes and dialysis centers) who have weakened immune systems. These healthcare-associated staph infections include surgical wound infections, urinary tract infections, bloodstream infections, and pneumonia.

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. Community-acquired MRSA accounts for approximately 12% of MRSA infections.

MRSA infections in the community can cause skin infections that may look like a pimple or boil and can be red, swollen, painful, or have pus or other drainage. These infections occur in otherwise healthy individuals. More serious infections may cause pneumonia, bloodstream infections, or surgical wound infections.

The Centers for Disease Control (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.

Prevention

In general MRSA infections can be prevented with the practice of good hygiene:

- Keep hands clean by washing thoroughly with soap and water or using an alcohol-based hand sanitizer.
- Keep cuts and scrapes clean and covered with a bandage until healed.
- Avoid contact with other people's wounds or bandages.
- Avoid sharing personal items such as towels or razors.

In addition, sports participants, athletes, and fitness club members should practice the following:

- Cover all wounds. If a wound cannot be adequately covered, consider excluding participants with potentially infectious skin lesions from practice or competition until the lesions have healed or can be covered adequately.
- Encourage good hygiene including showering and washing with soap and water after all practices and competitions.
- Ensure availability of adequate soap and hot water.
- Discourage sharing of towels and personal equipment (clothing, protective gear, etc.)
- Wash towels, uniforms and other sports clothing that become soiled with water and laundry detergent. Drying clothes in a hot dryer, rather than air-drying, also helps kill bacteria in clothes.
- Establish routine cleaning schedule for shared equipment.
- Encourage participants to utilize a barrier (i.e. clothing or towel) between skin and shared equipment; and wipe equipment surfaces before and after use.
- Train participants and coaches in first aid for wounds and recognition of potentially infectious wounds.
- Encourage participants to report skin lesions to coaches/trainers and encourage coaches/trainers to regularly assess participants for skin lesions.

Treatment

Most staph and MRSA infections are treatable with antibiotics. If given an antibiotic, all of the doses should be taken, even if the infection is getting better, unless otherwise directed by a healthcare provider. Antibiotics should not be shared with other people or saved to use at another time.

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

the infection does not improve after a few days, participants should contact their healthcare provider again.

For additional information please visit the following link:

http://www.cdc.gov/ncidod/diseases/submenus/sub_mrsa.htm