

MRSA Skin Infections In Athletes

By Lindsay Barton

Warnings Issued

Health and sports officials, including the National Federation of State High School Associations, The Centers for Disease Control and Prevention, and the NCAA, all issued warnings in October 2003 about an antibiotic-resistant skin infection once common to hospitals and prisons but now being seen in those playing close-contact sports, such as wrestling and football.

As reported by the Associated Press in an article on the MSNBC website, the contagious infection, methicillin-resistant staphylococcus aureus ("MRSA"), while usually mild, can, in advanced cases, result in a life-threatening blood or bone infection.

Recent Outbreaks

The CDC reports that:

- 10 Pennsylvania college football players were infected in September 2000;
- 2 Los Angeles-area college football players were hospitalized from MRSA in September 2002, one of whom required surgery and skin grafts;
- 2 Indiana high school wrestlers were infected in January 2003;
- 5 Colorado fencers were infected in February 2003;
- 7 University of Southern California football players were infected in August 2003; 4 required hospitalization;
- 7 Wisconsin high school football players were infected in October 2003, with one requiring hospitalization.

Risk Factors

The CDC has identified three factors that might have contributed to transmission in these outbreaks.

1. Sports resulting in skin abrasions. Competitive sports participants might develop abrasions and other skin trauma, which could facilitate entry of pathogens. Even in sports with less direct contact, protective clothing can be hot and might chafe skin, resulting in abrasions and lacerations. Fencers reported developing skin rashes frequently under protective clothing.
2. Sports involving frequent physical contact. Some sports for which MRSA infections have been reported involve frequent physical contact among players (e.g., football and wrestling). Infections can be transmitted easily from person to person with direct contact.
3. Sports requiring athletes to share heavy protective clothing and equipment. Sports such as fencing have limited skin-to-skin contact but require multiple pieces of protective clothing and equipment, which often might be shared. The use of

shared equipment or other personal items that are not cleaned or laundered between users could be a vehicle for transmission.

Recognizing Skin Infections

Health officials are warning coaches, parents, and athletes to look out for:

- Skin wounds or boils;
- Fever;
- Pus;
- Swelling; or
- Pain

Because the infection often looks like an ordinary skin wound or boil, diagnosis is difficult. Treatment with penicillin-related antibiotics is ineffective. "It's important for coaches and parents to be aware MRSA might be a cause of skin problems in children," Dr. Dan Jernigan, a CDC medical epidemiologist, told the AP.

Prevention and Treatment

The best methods for preventing the spread of staph infections are maintaining good hygiene and avoiding contact with drainage from skin lesions of other players. All persons associated with competitive sports teams, including players, coaches, teachers, parents, and administrators, can help prevent sports-related skin infections and should be aware of prevention measures.

The CDC recommends that:

- Sports team administrators be encouraged to provide facilities and equipment necessary to promote good hygiene, such as clean facilities and adequate supplies of soap and towels.
- Coaches and parents:
 - Encourage good hygiene among players by avoiding sharing towels or other personal items, and informing coaches about active skin infections
 - Be taught to administer proper first aid,
 - Practice appropriate hand hygiene themselves, and
 - Implement a system to ensure adequate wound care and to cover skin lesions appropriately before play.

The CDC also recommends the following specific steps to prevent the spread of skin infections among athletes:

- Cover all wounds. If a wound cannot be covered adequately, consider excluding players with potentially infectious skin lesions from practice or competition until the lesions are healed or can be covered adequately;

- Encourage good hygiene, including showering and washing with soap after every practice or tournament;
- Ensure availability of adequate soap and hot water;
- Discourage sharing of towels and personal items
- Establish routine cleaning schedules for shared equipment. Shared athletic equipment, such as pads or helmets, should be cleaned or laundered at least once a week but ideally after each use
- Launder personal items such as towels and supporters after each use
- Train athletes and coaches in first aid for wounds and recognition of wounds that are potentially infected;
- Encourage athletes to report skin lesions to coaches; and
- Encourage coaches to assess athletes regularly for skin lesions.

Specific recommendations for wrestling

In both 2002-2003 and 2005-2006, the NFHS emphasized the importance of taking steps to reduce the spread of communicable skin conditions. Among the suggested practices coaches and athletes should take, said the NFHS, are:

- Daily disinfecting of all wrestling mats
- Immediate showering and washing of clothes and towels after practice
- Use of antibacterial or deodorant soap when showering
- Use of detergent with bleach or drying clothes on "high" setting
- Use of clean practice and match wear, which should be separated from dirty clothing when taken to and from school;
- Consistent trimming of fingernails; and
- Daily disinfecting of all gear including head gear, shoes and neoprene sleeves.

Article Updated August 6, 2007

Article Created November 5, 2003