



## Skin Diseases in Athletics Fact Sheet

### Overview:

At the National Athletic Trainers' Association 61st Annual Meeting & Clinical Symposium, leading health care professionals released the NATA position statement on Preventing Skin Diseases in Athletics. The statement will be published in the July issue of the *Journal of Athletic Training*, the association's scientific publication. To view the statement please visit: <http://www.nata.org/statements/position-statements>.

### Purpose:

To provide comprehensive recommendations for avoiding, identifying and treating fungal, viral and bacterial skin diseases in athletes at all levels.

### Key Insights:

Close quarters that promote skin-to-skin and bodily secretion contact make athletes particularly vulnerable to contracting skin diseases – some of which (e.g., MRSA) can be life threatening. An understanding of basic preventive measures, clinical features and swift management of common skin diseases is essential in preventing the spread of common and serious skin infections. Skin diseases are most commonly seen in sports including football, wrestling and rugby.

### Background:

This position statement outlines the current recommendations to educate athletic program staff and athletes about minimizing disease transmission, preventing the spread of infectious agents and improving the recognition and management of common skin diseases. A recent review of infectious disease outbreaks reported that skin diseases accounted for more than half (56 percent) of all infectious diseases in competitive sports from 1922 through 2005.

### General Information:

- At any given time, one out of every three people in the United States suffers from a skin disease.<sup>1</sup>
- Skin disease is one of the top 15 groups of medical conditions for which prevalence and health care spending grew the most between 1987 and 2000, exceeding spending rate increases for diabetes, cerebrovascular disease and cancer<sup>2</sup>
- The burden of skin disease extends beyond the financial toll, estimated at over \$37 billion per year in medical services and lost productivity in the U.S. alone.<sup>1</sup>

### Basic Recommendations:

1. Institutions must provide adequate financial and human resources to implement a comprehensive infectious disease control policy.

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2. Maintenance of clean facilities is paramount in limiting the spread of infectious diseases.
3. Adequate hand hygiene including frequent hand washing and showering after every sport activity may be one of the biggest factors in reducing the spread of infectious diseases.
4. Athletes and coaches must be educated about, and encouraged to follow, good overall hygiene practices.
5. Athletes must be discouraged from sharing towels, athletic gear, water bottles, disposable razors and hair clippers.
6. All clothing and equipment should be laundered and/or disinfected on a daily basis.
7. Athletes should be encouraged to complete daily skin surveillance and report any suspicious lesions for treatment.

### Common Skin Diseases:

Skin diseases fall into three basic categories based on the type of infectious agent: fungal, viral and bacterial

#### • Fungal infections:

- Caused by dermatophytes, fungal organisms living in soil, on animals, or on humans.<sup>3</sup>
- The infectious organisms responsible for fungal infections include *trichophyton tonsurans* and *trichophyton rubrum*.<sup>4</sup>
- Tinea capitis – a common fungal infection of the scalp manifested by gray scaly patches accompanied by mild hair loss in many cases.
- Tinea corporis – a fungal infection on the body commonly referred to as “ring worm,” a name gleaned from its characteristic ring-like appearance.
- Tinea cruris – a fungal infection in the groin area commonly referred to as “jock itch.”
- Tinea pedis – the most common fungal infection in humans in North America and Europe,<sup>5</sup> which affects the feet, and is commonly referred to as “athlete’s foot.”
- Treatment: Athletes in non-contact sports or with localized cases of fungal infections may initially be treated with topical preparations for two to four weeks. More widespread, inflammatory or otherwise difficult-to-treat cases may require the use of systemic antifungal drugs which can have substantial side effects.

#### • Viral infections:

- Caused by the herpes simplex virus and molluscum contagiosum virus.
- Herpes simplex virus – HSV is a painful, often recurring, infection consisting of clusters of small fluid filled sacs on a base of red skin.
  - Viruses may remain dormant in the body for years manifesting themselves in situations of depressed immunity and stress.
- Molluscum contagiosum – MC is a highly infectious viral disease caused by the poxvirus. It is common in children and is manifested by smooth flesh-colored, dome-shaped bumps with a depression (umbilication) in the center.
- Treatment: Treatments include destruction of the lesions with a sharp curette or antiviral medications, depending on the virus for which the athlete is treated.

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- **Bacterial infections:**
  - Humans are natural hosts for many bacterial species that colonize the skin as normal flora.<sup>6</sup>
  - *Staphylococcus aureus* and *streptococcus* bacteria account for a wide variety of bacterial infections.<sup>7</sup>
  - Predisposing factors to infection include minor trauma, preexisting skin disease, poor hygiene and depressed immune system of the host.
  - Impetigo – a common bacterial infection caused by *staph a.*, characterized by thin walled sacs of fluid that rupture into a honey colored crust commonly occurring on the face.
  - Folliculitis/furunculosis/carbunculosis – Folliculitis is a superficial infection of the hair follicles characterized by redness, fluid or pus filled sacs at the base of hair follicles. Furuncles are deeper infections of the hair follicle characterized by inflamed nodules that drain fluid, which can join together to form larger nodules called carbuncles.
  - Methicillin resistant *staphylococcus aureus* (MRSA) – strain of *staph a.* that has acquired a specific gene (*mecA*) making it resistant to common antibiotic therapy.
    - Presents initially as standard bacterial infections.
    - Commonly confused with spider bites.<sup>8</sup>
    - Previously only found in hospital settings, but now common in community settings (CA-MRSA).
    - Reported to be the most frequent cause of skin infections presented to emergency rooms across the country.<sup>9</sup>
  - Treatment: Affected athletes must complete, at minimum, a 72-hour course of directed antibiotic therapy; also, due to the communicable nature of bacterial infections, active lesions must *not* be covered to allow for participation in sports.

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### About NATA:

Athletic trainers are health care professionals who specialize in the prevention, diagnosis, treatment and rehabilitation of injuries and sport-related illnesses. They prevent and treat chronic musculoskeletal injuries from sports, physical and occupational activity, and provide immediate care for acute injuries. Athletic trainers offer a continuum of care that is unparalleled in health care. The National Athletic Trainers' Association represents and supports 32,000 members of the athletic training profession. NATA supports the Athletic Trainers' Equal Access to Medicare Act (H.R. 1137). Visit [www.nata.org](http://www.nata.org)

### Web Site:

For more information, please visit [www.nata.org](http://www.nata.org).

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### References:

1. Bickers DR, Lim HW, Margolis D, et al. The burden of skin diseases: 2004 a joint project of the American Academy of Dermatology Association and the Society for Investigative Dermatology. *J Am Acad Dermatol*. Sep 2006;55(3):490-500.
2. Thorpe KE, Florence CS, Joski P. Which medical conditions account for the rise in health care spending? *Health Aff (Millwood)*. Jul-Dec 2004;Suppl Web Exclusives:W4-437-445.
3. Murphy GF. The skin. In: Cotran RS, Kumar V, Collins T, eds. *Robbins pathologic basis of disease. 6th Edition*. Philadelphia: WB Saunders; 1999:1170-1213.
4. Pleacher MD, Dexter WW. Cutaneous fungal and viral infections in athletes. *Clin Sports Med*. Jul 2007;26(3):397-411.
5. Carroll JA. Common bacterial pyodermas. Taking aim against the most likely pathogens. *Postgrad Med*. Sep 1996;100(3):311-313, 317-322.
6. Kluytmans J, van Belkum A, Verbrugh H. Nasal carriage of *Staphylococcus aureus*: epidemiology, underlying mechanisms, and associated risks. *Clin Microbiol Rev*. Jul 1997;10(3):505-520.
7. Adams BB. Dermatologic disorders of the athlete. *Sports Med*. 2002;32(5):309-321.
8. Gorwitz RJ, Jernigan DB, Powers JH, Jernigan JA. Strategies for Clinical Management of MRSA in the Community: Summary of an Experts' Meeting Convened by the Centers for Disease Control and Prevention. 2006; [http://www.cdc.gov/ncidod/dhqp/ar\\_mrsa\\_ca.html](http://www.cdc.gov/ncidod/dhqp/ar_mrsa_ca.html).
9. Klevens RM, Morrison MA, Nadle J, et al. Invasive methicillin-resistant *Staphylococcus aureus* infections in the United States. *JAMA*. Oct 17 2007;298(15):1763-1771.

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