

# **MRSA: A GROWING MEDICAL CHALLENGE**

**MRSA, a strain of antibiotic-resistant staph once confined to hospitals, is striking athletes at an alarming rate and with sometimes dire consequences!!**

## **Facts:**

- An assistant wrestling coach in Oregon felt like it was just a bug bite or an ingrown hair--two days later, the once red spot swelled to the size of a baseball. The Rx drugs that the family doc prescribed were not working. So, as the temperature and pain increased, the entire leg continued to swell and no one seemed to know what was wrong. The first operation was performed to drain the fluid and a culture was sent to the lab. The incision on his leg was a foot long. Three days later, more surgery was necessary. This time, the incision was along his thigh because the infection had spread from his calf to his hip. By this time, the lab results indicated the bacterium was MRSA, an insidious bug that, true to its name was now a fast moving infection that might necessitate the amputation of all or part of the leg. If it reached his stomach or other vital organs, the infection could kill him.
- Eight cases of MRSA were reported in a 2005 New England Journal of Medicine article. In 2003, several St. Louis Rams football linemen were stricken by MRSA during their pre-season summer camp.
- The San Francisco 49ers scrimmaged the Rams during the preseason and hence several members were diagnosed with the bacteria.
- SI confirmed in the same season the hospitalization of Miami Dolphins linebacker Junior Seau and Cleveland Browns linebacker Ben Taylor for 2 or more weeks due to bacterial infections. More recently, Indiana State's football team had 16 players afflicted. The San Francisco 49ers, Pittsburgh Steelers, Miami Dolphins, and Washington Redskins are just several of many professional football teams that have dealt with MRSA-related issues.
- Ricky Lanetti, a senior wide receiver for Lycoming College in Williamsport, PA wasn't as lucky. He discovered what appeared to be a pimple on his buttocks as he was getting dressed for practice one afternoon in December 2003. He called his mother complaining of nausea on Tuesday. By Saturday, he was dead because of the MRSA infection.
- In 2004 both USC and the University of Georgia went public with their respective outbreaks and hospitalizations among team members who contracted MRSA.
- UConn leading scorer Rashad Anderson was admitted to the hospital on February 8<sup>th</sup>, 2004 for a small abscess on his thigh (a small pimple he picked/scratched) to be drained and ended up in intensive care with breathing difficulties and a week in the hospital. UConn officials would not state it was not a MRSA infection.

- Summer 2005 Barry Bonds and Sammy Sosa acquired MRSA and were placed on the disabled roster twice during the summer. Barry Bonds battled a bacterial infection after surgery and Mr. Sosa had a staph infection on the bottom of his foot. Interestingly, disease professionals determined the carpet in front of his locker and the ripped mats in the weight room contained the MRSA organism.
- In 2006, two members of the Toronto Blue Jays—All Star right fielder Alex Rios (left leg) and pitcher Ty Taubenheim (left foot)--were both infected and spent time on the 15-day disabled list.
- Late in 2007, multiple high schools in Western PA had MRSA outbreaks in the football and wrestling programs involving multiple athletes.
- Very recently, former professional NFL St. Louis Rams player and sportscaster Jack Snow died at age 62 after being hospitalized for several months with a staph infection.
- Staph bacteria are the most common causes of skin infection in the USA, and are the common cause of pneumonia and bloodstream infections. Staph and MRSA are not routinely reported to public health authorities, so precise numbers are not known.
- **Final note: the same dire fate might have befallen the assistant coach in our opening statement/info, but he was placed on the antibiotic Vancomycin which was effective. It took a month before he was healthy enough to return to work. He still hasn't recovered all the sensation in his leg and there is no guarantee that he ever will. He, Chris Bettineski considers himself to be very lucky.**

## DO WE HAVE YOUR ATTENTION YET?!

### **Evolution:**

Unless you've washed your hands in the last few minutes, they probably have bacteria on them at this moment. The bacterium staphylococcus, or staph, is much like gunpowder-harmless under some conditions, lethal under others. About 33% of all people carry staph in their noses, but conditions have to be right for it to start to grow. It can adhere to an abrasion or turf burn and cause a superficial infection. Usually when a staph infection (common staph) occurs, it is easily treatable with antibiotics from the penicillin family, such as cloxicillin or cephalixin.

**But when an antibiotic effectively treats an infection, a few bacteria survive, and in essence what doesn't kill the germ makes it stronger. The bacteria that survive a dose of antibiotics can mutate into a more nasty strain that's resistant to those drugs, and therein lays the catch-22: Powerful antibiotics are needed to combat bacteria, but their use helps to develop stronger germs.**

## **HOW:**

Staph and MRSA can spread among athletes having close contact with an infected person. MRSA is almost always spread by direct contact, and not through the air. Spreading may also occur through indirect contact by touching objects (sharing towels, practice gear, t-shirts/shorts, disposable razors), improper laundering of all practice gear along with improper disinfecting of locker rooms and workout equipment areas.

**NOTE: MRSA can be a threat anytime athletes come in contact with each other and incur tiny scrapes/abrasions that allow bacteria the smallest opening to infiltrate the bloodstream.**

**NOTE: MRSA is difficult to control for two main reasons – its early symptoms are so benign that athletes with the infection don't seek attention right away or until it begins to spread (grow in size) and it can be passed so easily from athlete/person to another.**

## **PROTOCOL FOR EDUCATION/PREVENTION FOR SM AND COACHES**

1. **REQUIRE** hygiene practices to include showers after each practice with antibacterial soap (i.e., **SATIN®**) in dispensers placed in showers and at sinks.
2. **REQUIRE** laundering of all practice gear i.e., undergarments and outerwear.
3. **COMMUNICATE** avoidance toward sharing of towels, athletic gear and disposable razors.
4. **REQUIRE** all athletes to report and seek attention for all abrasions, cuts, and skin lesions to athletic trainers for proper cleansing and disinfecting (i.e., **TECHNI-CARE®** Antiseptic & **CLINICAL CARE®** Antimicrobial Rinse), treatment and wound dressing.
5. **REQUIRE** all wounds must be treated and covered prior to practice.

### **ADDITIONAL:**

1. **SM** will refer any suspicious skin lesion to team physician (dermatologist) and seek a bacterial culture to establish a diagnosis.
2. **SM** will work closely with both facilities and equipment operations regarding appropriate disinfection of locker rooms, bathroom, showers, weight equipment, training rooms, and athletic gear.
3. **SM** will provide skin exams when necessary for team members prior to practice.
4. **SM** will post guidelines for all to read regarding prevention and control of MRSA among college athletes: in locker rooms, conditioning areas, and training rooms.
5. **SM** will as health care providers dispose of all bandages in biohazard containers and thoroughly clean and disinfect hands with antibacterial soap (i.e., **SATIN®**) routinely. Especially after use of toilet facilities.

# **GUIDELINES FOR THE PREVENTION AND CONTROL OF COMMUNITY-ACQUIRED MRSA AMONG COLLEGE ATHLETES**

## **EDUCATION**

1. Hygiene practices to include showers after each practice with antibacterial soap (i.e. **SATIN®**) in dispensers placed in showers and at sinks.
2. Proper laundering of all practice gear i.e., undergarments and outerwear.
3. Avoid sharing towels on sidelines, mat side, or court side.
4. Avoid whirlpools or common tubs with any wounds, scrapes, or abrasions without seeking advice from an athletic trainer.
5. Avoid sharing razors disposable or otherwise and athletic gear i.e., t-shirts/shorts and gear/equipment.

## **PRIORITY**

1. Athletes must report all abrasions (turf, grass, mat, or court), cuts or skin lesions to athletic trainers for proper cleansing and disinfecting (i.e., **TECHNI-CARE®** and **CLINICAL CARE®**), treatment and wound dressing.
2. Athletic trainers should refer any suspicious skin lesion to team physician (dermatologist) to seek a bacterial culture to establish a diagnosis.
3. All wounds must be treated and covered by an athletic trainer prior to any athletic participation.
4. Facilities must be cleaned daily with a hospital grade, broad-spectrum disinfectant to be used on all surfaces including locker rooms, showers and weight rooms.
5. All healthcare personnel must keep hands clean and disinfected by washing thoroughly with an antiseptic soap (i.e., **SATIN®**) routinely.

## **RECOMMENDATIONS**

1. Provide skin exams when necessary for team members prior to practice.
2. Provide spray bottle of hard surface disinfectant to wipe down weight equipment after each use by athlete according to labeled instructions.
3. Athletic trainers should disinfectant bandage scissors routinely after use for wound management for skin lesions.

# **MRSA TREATMENT & PREVENTION**

## **ATHLETICS/SPORTS MEDICINE**

### **WOUND CARE PROTOCOL**

1. Apply **TECHNI-CARE®** with a sterile 4x4 or cotton tip applicator to wound bed to break down organic material, eliminate bacteria, and soften tissue. Gently scrub wound bed for 2 minutes to loosen necrotic tissue and stimulate antimicrobial action.
2. Irrigate with **CLINICAL CARE®** dermal wound cleanser to rinse and remove organic materials.
3. Cover with appropriate dressing.

### **SKIN HYGIENE PROTOCOL**

1. Healthcare hand washing:  
Apply several drops of **SATIN®** antimicrobial skin cleanser on hands and rub all surfaces for 30 seconds, rinse and dry.
2. Bathing/showering:  
Apply several drops of **SATIN®** antimicrobial skin cleanser/body wash on a dampened wash cloth and wash/shower body in a normal manner. Rinse and dry.
3. Shampooing:  
Apply several drops of **SATIN®** antimicrobial skin cleanser/body wash/shampoo to damp scalp. Shampoo hair and rinse.
4. DRY WITH A CLEAN TOWEL.

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