UNIVERSITY OF MARYLAND SPORTS MEDICINE

Staph and MRSA in Athletics: Recognition and Prevention

What is "Staph" / MRSA?:

Staphylococcus aureus, often referred to as "**staph**", is a common type of bacteria that can live harmlessly on the skin or in the nose of 25 to 35 percent of healthy people (this is often referred to as being "colonized" with the germ). Occasionally, staph can cause an infection. Staph bacteria are one of the most common causes of skin infection in the United States, but most of these infections are minor, such as pimples or boils. Most of these infections can be treated without antibiotics, however, some staph infections can cause serious infections, such pneumonia, bloodstream, bone, and joint infections, and surgical wound infections.

In the past, most serious staph bacterial infections were treated with a certain type of antibiotic related to penicillin. In recent years, treatment of these infections has become more difficult because staph bacteria have become resistant to various antibiotics. These resistant bacteria are called **methicillin-resistant staphylococcus aureus (MRSA)**. According to the Centers for Disease Control (CDC) 1% of the population is colonised with MRSA. MRSA is one type of skin infection among several that are of concern in competitive sports.

Who Gets "Staph" / MRSA?:

"Staph" infections, including MRSA, have been traditionally associated with outbreaks in health-care facilities, but they are becoming increasingly common in student-athletes participating in close contact sports (e.g. football, wrestling, lacrosse, etc.), although anyone, including coaches, staff, etc. who come into contact with colonized individuals, can contract the infection. "Staph" and MRSA are spread either by direct physical contact or indirect touching of contaminated objects. This includes touching, using, and/or sharing sheets, towels, clothes, equipment, dressings, personal items, bar soap, etc. which have been used by someone who has "staph" and/or MRSA, along with poor hygiene habits (e.g. hand washing, showering, etc.)

What Does "Staph" / MRSA Look Like?

"Staph" and/or MRSA usually first presents as some type of skin or soft tissue infection such as pimples, abscesses, pustules, and/or boils (see pictures below). Some can be red, swollen, painful, and/or have pus or other drainage. The pustules may be confused with insect bites intiatally, and may also be associated with existing turf burns and/or abrasions.









What to Do:

Without proper referral and care, more serious infections may cause pneumonia, bloodstream, bone, and/or joint infections, and/or surgical wound infections. ***If you or anyone you know has what appears to be what looks like "staph" and/or MRSA, please contact a University of Maryland Team Physician and/or University of Maryland Sports Medicine staff member as soon as possible for evaluation.***

Prevention of "Staph" and/or MRSA:

Although treatable, there can be complications associated with "staph" and MRSA infections, making prevention the best measure to combat these infections. The Centers for Disease Control suggest the following measures for preventing staphylococcal skin infections, including MRSA:

1. Practice good hand hygiene by washing hands frequently and in a thorough fashion with soap and warm water or using an alcohol-based hand sanitizer.
2. Take a shower with hot water and wash with soap (liquid antibacterial soap, not bar soap) following all activities (e.g. strength & conditioning sessions, practices, and competitions).
3. Avoid sharing towels, equipment, razors, soap (use liquid soap instead of bar soap), etc.
4. Use a barrier (e.g. clothing or a towel) between your skin and shared equipment.
5. Wipe surfaces of equipment before and after use.
6. Clean and properly cover any open wounds such as turf burns, abrasions, lacerations, etc. with an appropriate bandage at all times.
7. Avoid whirlpools, hydrotherapy pools, cold tubs, swimming pools, and other common tubs if you have an open wound.
8. Maintain clean facilities and equipment.
9. **Do not ignore skin infections, pimples, pustules, abscesses, etc. Report these to a Sports Medicine staff member and/or physician immediately.**

UNIVERSITY OF MARYLAND SPORTS MEDICINE

MRSA

In order to maintain proper sanitary conditions within University of Maryland Sports Medicine facilities and to prevent the outbreak of Methicillin-resistant Staphylococcus aureus (MRSA) and other harmful infections, the following procedures will be in place.

The individual(s) responsible for cleaning and disinfecting the area will adhere to Universal Precautions at all times and wear PPE as needed;

Treatment / Taping Tables, Weight Room / Rehabilitation Equipment, Countertops, Stools, etc.-

1. Treatment tables, taping tables, weight room / rehabilitation equipment, countertops, stools, etc. must be cleaned everyday and/or following a possible contamination using ***Citrus II Hospital Germicidal Deodorizing Cleaner*** *(Beaumont Products, Inc.; Kennesaw, GA 30144) or other appropriate cleaner.*
    - Pour Citrus II Hospital Germicidal Deodorizing Cleaner into the spray bottle. **No dilution is necessary.**
    - Sporicidin Germicidal Spray, Precise Hospital Foam Cleaner Disinfectant, Claire Disinfectant Spray for Health Care, and/or Isoprophyl alcohol can also be used to clean porous and hard surfaces
    - A 1:10 diluted bleach solution can be used to clean ***hard surfaces*** only,

2. Clean / Disinfect tables, equipment, countertops, stools, etc. in the following manner:
    a) Spray the Citrus II solution on the surface to be cleaned;
    b) Allow the solution to sit on the surface for three (3) minutes; and
    c) Wipe down the surface with a towel.

Coolers-

1. Coolers must be cleaned and disinfected every day following use, or as needed following every possible contamination using a diluted solution of household dishwashing detergent (e.g. Sun Light, Dawn, Joy, etc.) or other appropriate cleaner.
2. Coolers are to be cleaned in the following manner:
    a) Squirt the detergent solution inside and outside the cooler and inside and outside the cooler top / lid.
    b) Partially fill the cooler with hot water.
    c) Use the assigned “gong” scrub brush to thoroughly scrub the inside and outside of the cooler and the inside and outside of the cooler top / lid.
    d) Allow the soapy solution to circulate through the cooler spigot and use a 6” cotton-tipped applicator to clean the spigot.
    e) Thoroughly rinse the cooler and cooler top / lid using hot water
    f) Allow the hot water to circulate through the cooler spigot for rinsing.
    g) Coolers should be towel dried and then allowed to air dry.
    h) Store coolers upside down in the designated storage area(s). Cooler tops / lids should be stored standing up in their designated area(s).

Water Bottles, Water Bottle Lids & Carriers, Pouring Pitchers, Etc.-

1. Water bottles, water bottle lids and carriers, pouring pitchers, etc. must be cleaned and disinfected every day following use, or as needed following every possible contamination using a diluted solution of household dishwashing detergent (e.g. Sun Light, Dawn, Joy, etc.) or other appropriate cleaner.
2. Water bottles, water bottle lids and carriers, pouring pitchers, etc. are to be cleaned using the "two-sink" system:
    a) Fill Sink 1 (Cooler 1) with a soapy solution of dishwashing detergent or other appropriate cleaner and hot water.
    b) Fill Sink 2 (Cooler 2) with hot water.
    c) Submerge the water bottles, water bottle lids and carriers, pouring pitchers, etc. in Sink 1 (Cooler 1).
    d) Use the assigned brush to thoroughly scrub the inside and outside of the water bottles, water bottle lids and carriers, pouring pitchers, etc.
    e) Submerge the water bottles, water bottle lids and carriers, pouring pitchers, etc. in Sink 2 (Cooler 2).
    f) Thoroughly rinse all items with hot water.
    g) Store water bottles upside down in their carriers and place the carriers in the designated area(s)
    h) Store water bottle lids in the designated container marked for lids.
    i) Store pouring pitchers upside down in the designated storage area(s).

Game Ready Attachments-

1. ***Game Ready attachments must be cleaned / disinfected following every use.***
2. Game Ready attachments are to be cleaned using ***Citrus II Hospital Germicidal Deodorizing Cleaner*** *(Beaumont Products, Inc.; Kennesaw, GA 30144)*
    - Pour Citrus II Hospital Germicidal Deodorizing Cleaner into the spray bottle. **No dilution is necessary.**
3. Clean / Disinfect Game Ready attachments in the following manner:
    d) Spray the Citrus II solution on the inner surface of the Game Ready attachment;
    e) Allow the solution to sit for three (3) minutes; and
    f) Wipe down the Game Ready attachment with a towel.

Towels-

- Cloth towels should only be used on a single patient and should be laundered following every use.
- Disposable towels should be used whenever feasible on the field / court and should be disposed of after a single use.

Hydrocollator Packs / Covers-

- A cloth and/or disposable towel should be placed between the patient and the hydrocollator pack / cover.
- Hydrocollator covers should be laundered every day and/or following a possible contamination.

Soft Goods-

- Soft goods *(e.g. neoprene braces / sleeves, knee / elbow / forearm / shin pads, splints, lace-up ankle braces, shoulder harnesses, walking boot liners, cast shoes, back braces, etc.)* should be laundered upon return to the athletic training facility BEFORE being returned to inventory and/or administered to another student athlete.
    - Soft goods that cannot be laundered *(e.g. Philadelphia collars, Donjoy Velocity ankle braces, Aircast ankle braces, hard splints, etc.)* should be disinfected using the aforementioned guidelines for treatment / taping tables, weight room / rehabilitation equipment, etc.

Whirlpools-

1. Whirlpools shall be cleaned on a daily basis, or as needed following every possible contamination;
2. Whirlpools are not to be used by student-athletes with open or draining wounds;
3. Whirlpools are to be cleaned using ***Dispatch Hospital Cleaner Disinfectant with Bleach*** *(CalTech Industries, Inc.; Midland, MI 48642; 1-800-234-7700)* or a commercial tub & tile cleaner AND a 1:10 diluted bleach solution.
4. Whirlpools are to be cleaned in the following manner:
    a. Spray the whirlpool cleaner in and around the sides of the whirlpool;
    b. Allow the whirlpool cleaner to sit for five (5) minutes;
    c. Using the long-arm "gong" brush (black handle) and ***hot water***, scrub all surfaces of the whirlpool, including the bottom, sides, turbine, etc.
    d. Rinse the tank very well with ***hot water*** and allow it to drain;
    e. Towel dry or air dry;
5. Whirlpool turbines are to be cleaned using household bleach or ammonia by allowing the bleach or ammonia solution to circulate through a running turbine with hot water for ten (10) minutes.
    - **DO NOT use bleach and ammonia at the same time as this will create harmful / hazardous fumes.**

Chemical Controlled Hydrotherapy Pools (Swimex, spas, etc.)-

- Chemical controlled hydrotherapy pools should be monitored on a daily basis as per State of Maryland Regulations.
- All monitoring and water chemistry must be recorded as per State of Maryland and University of Maryland Sports Medicine regulations.
- Chemical controlled hydrotherapy pools will be "shocked" on a weekly basis and/or as needed.
- Chemical controlled hydrotherapy pools will be vacuumed and the water-line scrubbed every other day and/or as needed.
- Chemical controlled hydrotherapy pools will be drained, thoroughly cleaned, waxed and polished, and refilled as per the manufacturer's directions at the end of every semester and/or as needed.