

THE CRUEL REALITY OF MRSA & STUDENT-ATHLETES

THWARTING MRSA INFECTION IN THE WASH

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Staph and MRSA outbreaks among student-athletes are a major concern for colleges and universities. Staph bacteria, and MRSA, an antibiotic-resistant strain of staph, have migrated from hospital settings, where they are commonplace, into locker rooms and athletic facilities – infecting high school, college and professional athletes. Highly contagious, MRSA in particular can be difficult to treat and easily spread from person-to-person or surface-to-person. Key to a healthy athletic program are healthy student-athletes. Thus, infection prevention is critical.

Preventing MRSA/Staph Infections

How does a college or university prevent the spread of MRSA and staph? While hand washing, good hygiene, clean surfaces and bandaged wounds are important, so is properly cleaned and disinfected laundry, according to the Centers for Disease Control (CDC). Prompt cleaning and disinfection of all soiled laundry – towels, loops, clothing and uniforms – stops the spread of infection. The right laundry solution will disinfect contaminated athletic uniforms, loops, towels, pads and helmets—eliminating viruses and bacteria during the wash cycle. An effective laundry system – in combination with good hygiene – can lower and help eliminate MRSA outbreaks. The University of Wisconsin Oshkosh (UWO) averages one MRSA infection per year since the installation of a disinfecting laundry system, compared with as many as 10 in the past. “Preventing illness and injury is our focus,” said Jack Johnsen, UWO assistant athletic trainer.

Nonetheless, many colleges and universities lack a laundry solution that actually disinfects as it cleans.

Stopping Infection in the Wash

With player safety in mind, T-Joe Breaux, assistant athletic director and equipment manager at Rice University, recently installed a laundry system that teams high-speed washer-extractors, ozone injection and commercial drying tumblers to achieve disinfection. It works by infusing a validated amount of ozone gas into the wash cycle at exactly the right time, water



temperature and water level. With Rice University’s system, the amount of ozone infused automatically adjusts according to the soil level of each laundry load—maintaining enough ozone to achieve disinfection. That system is clinically proven to kill 99.9 plus percent of viruses and bacteria in the wash.

“Player safety is my number one priority,” said Breaux. “This extends beyond helmets, pads and cleats. Locker rooms are close-knit and it takes just one contaminated piece of laundry to spread infection. If you don’t have a laundry system that disinfects, you are taking a risk.”

MRSA Can Destroy an Athlete and/or Athletic Program

A two-year Vanderbilt University research study recently revealed that 8 to 31 percent of college athletes carry MRSA, and college athletes who play contact sports are more likely to carry MRSA, even if

they do not show signs of infection. By comparison, only 5 to 10 percent of the general population carry the bacteria.

Additionally, athletes with MRSA infections generally stay infected for just under 10 days, according to the MRSA Research Center at the University of Chicago Medical Center. During that time, they cannot practice or play in games. When antibiotics don’t control staph and MRSA infections, other serious complications can occur. Approximately 19,000 people die each year due to MRSA.

Staph has taken down many healthy and strong athletes, according to Ric Bucher, of “ESPN The Magazine.” These players include MLB slugger Sammy Sosa and White Sox outfielder Alex Ríos; and NBA players such as Grizzlies forward Rudy Gay, Rockets forward Shane Battier, and Nuggets forward Kenyon Martin.

No doubt you’ve also heard about the \$20 million lawsuit against the Tampa Bay Buccaneers by former Super Bowl-

winning kicker Lawrence Tynes. In 2013, he contracted a MRSA infection in his toe that prematurely ended his career.

More recently, MRSA reared its ugly head at Steinert High School in Hamilton Township, near Trenton, N.J. The outbreak struck 11 students and put three in the hospital, according to CBS. "Dr. Seth Rosenbaum, an infectious diseases specialist, explained that MRSA can be contracted when 'Someone shares a towel, someone shares sporting equipment [or] a piece of apparatus that's been infected with the bacteria.'" That's why the laundry component of infection prevention is so important.

Choosing the Right Equipment

Does it Disinfect?

When colleges and universities look for laundry equipment, they should consider the most important aspect – disinfection – first and foremost. IMG Academy, a college preparatory school in Bradenton, Fla., just installed a disinfecting system in its new field house. "Because it doesn't just clean, but truly disinfects dirty laundry in the wash, the system helps prevent the spread of infection to student-athletes from contaminated laundry," said Equipment Manager Cortez Robinson.

Determine if the laundry equipment you're considering is proven to disinfect and kill bacteria and viruses. If it isn't, keep looking.

Is it Highly Programmable?

Second, seek a laundry solution that offers solid programmability and automatic chemical injection. Here's why ... Once individual programs are set up for cleaning towels, uniforms, loops and practice gear, users just load the washer, select the appropriate program number and press start.

There will be times when student workers and coaches operate laundry equipment. A highly programmable system makes it dummy proof. That way, a load of uniforms is cleaned exactly the same way no matter who is operating the washer. This reduces human error and eliminates damage to expensive uniforms and fabrics.

Moreover, some laundry systems offer programmable quarter- and half-turn rotation options. This allows facilities to disinfect bulky items.

"Washing helmets and shoulder pads is one part of the reconditioning process that I can do in-house," he said. "I put the helmets in the washers programmed for a quarter-turn rotation. The washers combine the ozone and detergent to disinfect the helmets. Once washed, the helmets are air-dried."

Does it Validate Ozone & Disinfection?

Because ozone infusion is critical to attaining disinfection, ensure the laundry solution you purchase validates the levels of ozone in the wash. In other words, be sure it automatically adjusts ozone levels according to the soil content of the load and validates that disinfection is achieved.

Did you know that ozone (O₃), which is a gas that can destroy bacteria and viruses, is commonly used to disinfect wastewater, according to the U.S. Environmental Protection Agency (EPA)?* It works the same way to disinfect athletic laundry as part of the washing process. It's good for the environment also, as it decomposes rapidly and leaves no harmful residual to remove after treatment.

Formed when oxygen molecules (O₂) collide with oxygen atoms to produce ozone (O₃), it's more effective than chlorine in destroying viruses and bacteria, according to EPA. However, the EPA warns, "Low dosages may not effectively inactivate some viruses, spores and cysts."

This is why you should choose a laundry solution that validates ozone disinfection. If it works for wastewater, it'll work for contaminated laundry, as well.

Is it Productive?

Look for productivity in your laundry solution. You don't want contaminated laundry piling up. By properly sizing laundry equipment to match productivity needs, colleges will easily keep pace with dirty laundry.

Look for washers with high extract speeds 300-400 plus G-force. As a washer's extract speed increases, so does the amount of water removed from every load, which shortens resulting

dry time and improves productivity. Many uniforms shouldn't be dried in the first place. When they come out of a high-speed washer, they'll line dry very quickly, which is important.

Tim Toon, head volleyball coach at Walla Walla Community College, in Walla Walla, Wash., maintains a new laundry system on campus has cut the time it takes to complete laundry by 25 percent. Before the new laundry equipment, uniforms were hung and air-dried overnight. "Now, they air dry in three or four hours," said Toon. He also reports that with the new system, a load of towels are cleaned, disinfected and dried in just 50 minutes.

Is it Efficient?

Finally, remember that there are very efficient laundry solutions out there. Some can cut water usage by up to 50 percent and hot water usage by 30 percent. Keep in mind that when you cut hot water usage, you decrease natural gas consumption and resulting costs, as well. An efficient system will give you a much quicker return on your investment. Additionally, by selecting a solution with washers that generate high G-force extract speeds, you'll cut resulting dry time, related natural gas consumption, and elevate laundry productivity.

Employing Best Practices in Infection Prevention

Colleges and universities should strive to prevent the spread of infection among student-athletes by embracing every possible prevention technique. While your institution is likely practicing many methods for infection prevention, be certain disinfection of athletic laundry is among them.

To find out more about MRSA and its prevention, visit <http://www.niaid.nih.gov>.

About the Author



A retired high school teacher and college football coach, Steve Leib knows first hand the threat MRSA poses to student-athletes and athletic programs. Now, as national sales manager at Sports Laundry Systems, in Oshkosh, Wis., he shares his knowledge of MRSA prevention, which includes the use of laundry systems that disinfect.

* source: www.nesc.wvu.edu/pdf/WW/publications/eti/Ozone_Dis_gen.pdf