

MRSA Wages War on Schools and Students

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What is MRSA?

Methicillin Resistant Staphylococcus Aureus, shortened to the acronym MRSA (pronounced “Mer-sa”), has been increasing in number for decades, and has recently mounted a full scale assault on our educational system. MRSA, as the name implies, is a Staph bacterium that has mutated to build up a resistance to methicillin and other common antibiotics including penicillin and amoxicillin. Originally discovered in hospitals and sometimes called *hospital-acquired MRSA*, healthcare-associated MRSA (HA-MRSA) would invade patients that had come to the hospital for an illness or injury. Now it is known to attack wherever groups of sick or injured people with weakened immune systems may be found, namely nursing homes, same-day surgery centers, and dialysis centers.

Over time, hospitals began to see signs of another mutation of the Staph bacterium. Where once they saw HA-MRSA with frightening regularity, they now started to see similar signs and symptoms in patients that had no prior hospital stay.

That meant that MRSA had jumped the hospital walls. This new breed, community-associated MRSA (CA-MRSA), is an entirely different beast.

Studies have shown that those most susceptible to CA-MRSA tend to congregate in small, enclosed areas- places such as military barracks, prisons, dorms—and schools. There are two main reasons for this: 1) people are in close vicinity and therefore close physical contact, and 2) MRSA is a bacterium that can live on surfaces for up to 90 days. These reasons account for the two of the most common transmission scenarios for MRSA: skin-to-skin and skin-to-surface-to-skin.

Statistics

- School athletes tend to have the highest rate of CA-MRSA acquisition, especially those involved in high physical-contact sports such as wrestling and football. Cases have also been reported among athletes in other sports such as soccer, basketball, field hockey, rowing, martial arts, baseball—even fencing. This correlation is due to the close contact of players either on the field or off, high potential for abrasions or other injuries, the use of shared equipment, and showering conditions.
- MRSA is now the sixth leading cause of death in the United States. Fatalities due to MRSA have exceeded those due to AIDS annually.
- The average age of HA-MRSA is 68; for CA-MRSA, the large amount of MRSA cases in schools drop the average age to only 25 years old.

Signs and Symptoms of MRSA

The initial signs of a MRSA infection can be deceiving, as they may resemble other, less serious conditions. If you see any of the following, you may want to visit your physician:

- Red bumps that look like pimples, a boil, or a spider bite
- Pus-filled or draining red bump or open wound
- An abscess- a tender open or closed cavity surrounded by inflamed tissue and often filled with pus
- Swollen, painful area of the skin

MRSA is a bacterium that will continue to grow and spread throughout the body via the blood stream. Once this occurs it can lead to pneumonia, organ failure, and eventually death. If the infection spreads to the lungs, you can expect:

- Shortness of breath
- Fever
- Cough
- Chills

If you suspect that you or someone you know has a Staph infection or MRSA, go to the doctor immediately. Be sure to follow their instructions and take all of the antibiotics that may be prescribed to you. Failing to overpower the bacteria with the medicine gives them a tolerance, and eventually a resistance or “immunity” to the drugs. If you do not see improvement within 3-4 days of starting the antibiotics, contact your doctor—the prescribed medication may not be working.

Living with MRSA

Once a MRSA infection is diagnosed, it is very important to make sure the infection does not spread to other people or pets. Disinfection of all surfaces that could be exposed to the bacterium with solutions that are certified to kill MRSA is recommended; follow the instructions on the package to ensure the bacterium is effectively killed. Clothes and fabrics that can harbor MRSA should be washed with bleach and hot water (160°-180°) whenever possible.

Caring for the infected area of the body is an important part of getting well and eliminating the potential of further contamination:

- Always wear disposable gloves when touching the infected area.
- Use enough dressing to completely cover the wound and not let drainage seep out.
- Tape all edges of the dressing to ensure nothing can get in or out of the sides.
- Put all used dressings and gloves in a plastic bag before discarding.
- Wash your hands with soap and water immediately after dressing the wound and frequently throughout the day.

H1N1 and MRSA Link

As more people become infected with the H1N1 virus they also become more susceptible to MRSA with far greater complications. Researchers have discovered MRSA

pneumonia -- this is a MRSA infection of the lungs that causes pneumonia and is believed to have a mortality rate of more than 50 percent. This infection appears most commonly following an influenza-like illness due to a lowered immune system. Positively, researchers noted that antibiotics can kill the MRSA bacteria if it is caught in time. Knowing the signs and symptoms of MRSA and H1N1 is life-saving; as is infection prevention.

Infection Prevention

As Benjamin Franklin said, “An ounce of prevention is worth a pound of cure.” The best way to prevent contracting MRSA and other contagious diseases is to wash hands frequently by using soap and water, instant hand sanitizer, or antimicrobial hand wipes, and to not share personal items like razors, deodorant, or towels.

It is crucial in a school setting to make sure students have access to hand washing items at all times. The Classroom Caddy™ is an infection control unit that contains everything the CDC recommends to defend against the spread of germs. Its revolutionary design brings infection prevention to the classroom by encouraging and promoting good hand (and classroom!) hygiene. The addition of the Caddy to every classroom in the school can help the school achieve up to a 50% reduction in absenteeism due to illness—not just from MRSA, but also from H1N1, the common cold, influenza, and more.