

Staph bacteria: Sorting through the hype

Many of you have seen the recurrent headlines relating to the MRSA Staph bacteria that have been found in some local schools. On February 21, a NBC4 report titled *Bethesda Student Diagnosed with MRSA* stated that, "Thomas Pyle Middle School sent a letter to parents Thursday to alert them that a student was diagnosed with methicillin-resistant *Staphylococcus aureus*." Several schools have temporarily closed while the staff attempts to rid the school of the MRSA bacteria. For parents, these headlines can cause confusion and stress. This article aims to alleviate some of the fear surrounding MRSA, while explaining what to look out for and how to help prevent the illness.

What is MRSA?

MRSA stands for *Methicillin Resistant Staphylococcus aureus*. *Staphylococcus aureus* is a type of bacteria and is often referred to as "Staph." Methicillin is a type of antibiotic that is similar to penicillin. Thus, "methicillin resistant" refers to bacteria that can no longer be successfully treated with methicillin or similar penicillin like antibiotics.

Until several years ago, most cases of MRSA were acquired in the hospital. Recently, however, MRSA is becoming more common in the community, leading to a new classification known as a "community acquired" staph infection, or "CA-MRSA." When you read about the staph bacterial infection in schools or the community, it is caused by the CA-MRSA bacteria.

Though the media often makes it seem like each MRSA diagnosis is a surprising and noteworthy event, in fact, these infections are becoming more and more common. According to the CDC, MRSA is now estimated to be responsible for approximately 12 million outpatient visits each year.

Where does staph come from and where does it live?

Staph bacteria live on our skin, especially in the nose. It is very common and can be found in approximately 25 – 30% of the population, most of whom are healthy and have no symptoms at all. The bacteria only create a problem when it gets under the skin, typically through a scratch or infected pore.

What are the signs and symptoms of a staph infection?

Staph infections most commonly cause mild to moderate skin infections that can be easily managed at home or after a quick trip to your pediatrician. Superficial staph infections include impetigo which causes honey crusted lesions on the skin and cellulitis which can make the skin red, warm, and painful to touch. Sometimes staph infections can infect hair follicles causing folliculitis which typically appears as a small pustule or redness around a hair shaft. More serious infections can appear as an abscess which is a large collection of pus underneath the skin. Much less commonly, staph infections can lead to blood or bone infections which always have to be managed in a hospital.

How can I prevent staph or MRSA skin infections?

As stated on the CDC website, it is most important to practice good hygiene with the following steps:

15235 Shady Grove Road • Suite 105 • Rockville, MD 20850 • Ph. 301.990.3030 • Fx. 301.990.6767

1. Keep your hands clean by washing thoroughly with soap and water or using an alcohol-based hand sanitizer.
2. Keep cuts and scrapes clean and covered with a bandage until healed.
3. Avoid contact with other people's wounds or bandages.
4. Avoid sharing personal items such as towels or razors.

Remember MRSA is spread from one person to another by direct skin contact or shared items such as towels, razors, or bandages that have come in contact with the infection.

What do I do if I think my child could have a staph infection?

If the skin irritation seems like a very mild infection and your child is acting normally with no fever or painful areas, you can most likely manage it at home with over-the-counter antibacterial creams such as Neosporin or Bacitracin or warm compresses. If you are unsure about the management or your child has more severe symptoms such as fever, significant fussiness, and pain or increased redness at the site, call your doctor.

With early identification and treatment, the vast majority of staph infections can be managed by your doctor and do not necessitate a visit to an emergency room and/or hospitalization. Many of the cases highlighted in the media are due to late identification and treatment. Fortunately, doctors and parents alike are becoming more aware of the early signs and symptoms as well as the appropriate treatments.

If my child goes to a school that has reported a recent MRSA case, does he/she need to go to the doctor to make sure he/she does not have MRSA?

No

Should a new case of a student being diagnosed with MRSA result in a school being closed or an article in the media?

I agree wholeheartedly with the CDC that it is most often not necessary to close schools or alert the media when a child tests positive for MRSA. While working as both an inpatient physician and in the ER at Children's Hospital (CNMC) over the last two years, I have witnessed first-hand a substantial increase in the number of MRSA cases. Unlike the media stories would lead you to believe, when I or any other pediatrician at CNMC diagnosed a new case at the hospital (as we do every day), it does not lead to a news release or urgent notification of a school.

MRSA is so common nowadays that closing down schools or contacting the media for each new case is very impractical and only creates unnecessary hysteria. Furthermore, children with MRSA should be allowed to attend school as long as they have no draining pus and all lesions are covered.

How do you treat staph infections?

It depends on the type of infection. Below please find a description of the most common staph infections and treatments.

- *Superficial infections such as impetigo* -
 - Topical antibacterial creams such as over-the-counter (OTC) Neosporin or Bacitracin (or slightly stronger prescription strength Bactroban if the OTC is not working).
- *Small pimples or pustules* -

- Warm compresses to promote opening and draining as well as the antibacterial creams mentioned above.
- *Abscesses* –
 - Antibiotics - Though antibiotics may improve the infection, often the abscess will not improve until it drains. Previously, the antibiotic most commonly used was called Keflex which is a relative of methicillin. However, with the onset of methicillin resistance, Keflex continues to be less effective every year and now we need to use different classes of antibiotics. The 2 most commonly used are Cindamycin and Bactrim and are still very effective at treating Staph infections. Larger abscesses or those not improving with oral antibiotics sometimes necessitate admission to a hospital for stronger intravenous antibiotics.
 - Incision and drainage – For large abscesses that will not drain with warm compresses, often a doctor will have to perform an incision and drainage.
 - Culture of the pus – This can confirm exactly which bacteria are growing and what antibiotic will work best for it. Though not necessary, cultures can help your doctor figure out which antibiotic can work best.

Conclusion

I hope this article has dispelled some of the common myths surrounding the MRSA bacteria as well as educated you on the diagnosis and management of this increasingly common condition. By sorting through the hype and understanding the basics of MRSA, my goal is that you will feel less anxious the next time another MRSA case hits the news.

Remember that the best way to prevent the spread of all types of germs, including MRSA, is to regularly wash your hands with soap and water or to use an antibacterial gel. It is also wise to regularly wipe down high traffic surfaces such as doorknobs, phones, or remote controls.

Steven F. Hirsch is a pediatrician in solo practice in Rockville, Maryland, and is now participating with most major insurance companies. Please visit www.HirschPediatrics.com for details. If you have questions or ideas for future topics, please e-mail him at shirsch@HirschPediatrics.com.