

Staphylococcal Infection Information for Parents of Children in Daycare Facilities

These guidelines are to help in informing parents about methicillin-resistant *Staphylococcus aureus* (MRSA) infections specifically in the daycare setting. However, this information can be adapted to address the same problems in other settings and with almost all infectious diseases.

Basic Information about MRSA

The emergence of antibiotic resistant bacteria has become a significant public health concern. Due to the extensive use of antibiotics, the sharing of antibiotics and the failure to complete a course of antibiotics, our current arsenal of antibiotics is becoming ineffective against common bacterial infections. *Staphylococcus aureus* (commonly referred to as “staph”) is a bacteria that can live on human skin of even the cleanest individuals. It can cause boils, wound infections, abscesses, cellulitis, impetigo, pneumonia and even bloodstream infections. The Centers for Disease Control and Prevention estimate that 25-35% of adults and children in the United States have staph colonization—staph living on them, but not harming them. Staph like to live in the nose, groin, around the anus, armpits, finger tips, tracheostomy sites, wounds and in the secretions of intubated patients. Staph spreads by direct skin-to-skin contact with an infected individual or a colonized individual, or more rarely from objects contaminated by these individuals such as sheets soiled with infected wound drainage. Staph is not found in dirt or mud or carried through the air.

The emergence of MRSA

In the past, staph infections were easily treated with a short course of penicillin with very few complications. Unfortunately, staph infections quickly became resistant to penicillin. Methicillin, along with other drugs, was developed in the 1950s to address the problem. However, by the 1960s, methicillin-resistant strains of staph began to appear. By the 1980s, *Staphylococcus aureus* infections resistant to methicillin and methicillin-related drugs were becoming highly prevalent and continue to increase to this day. These resistant infections were labeled methicillin-resistant *Staphylococcus aureus* (MRSA). Fortunately, there are still different classes of antibiotics that can be used to control these infections, but resistance continues to spread to our newer drugs and threatens to exhaust our supply of effective treatments if practices are not put into place to stop irresponsible antibiotic use. MRSA started in hospitals and other medical facilities, but it has progressively become more common in the community and other institutions such as schools and day care centers. In Louisiana, it is estimated that 5-20% of *S. aureus* in the community are MRSA. This means that out of a 4,500,000 population, 1,500,000 are carriers of *S. aureus* and 75,000-300,000 are carriers of MRSA.

General Prevention of MRSA

Parents should always report wounds or skin infections to daycare staff in order to properly manage these infections and prevent their spread among other children. Early treatment is crucial in stopping these infections from causing serious harm. The location of the wound will determine which steps need to be taken to best prevent spread.

HAND WASHING IS THE MOST IMPORTANT STEP IN PREVENTING ALL INFECTIOUS DISEASES.

Correct hand washing technique for you and your child:

When using soap and water:

1. Wet hands with warm running water.
2. Apply liquid soap to palm of hand.
3. Vigorously rub hands together working soap into a lather and covering all surface of wrists, hands, fingers, and under fingernails for at least 15 seconds.
4. Rinse hands with water and dry thoroughly with a clean disposable towel.

5. Turn off faucet with a towel.

When using alcohol-based hand rub:

1. Apply product to palm of one hand (see product instructions for amount).
2. Rub hands together, covering all surfaces of hands, fingers, and nails thoroughly.
3. Continue to rub until hands are completely dry.

When to wash your and your child's hands:

- ❖ After any contact with your or your child's nose, mouth, eyes, ears, groin, anus, blood, or bodily fluids (includes sneezing, coughing, blowing your nose, rubbing eyes, eating, using the restroom, etc.).
- ❖ Before and after direct contact with another person or their belongings especially if infected or a known carrier.
- ❖ Wash hands before coming into and leaving the daycare facility.
- ❖ Anytime hands are visibly dirty or soiled.

Some other recommendations include:

- ❖ Draining wounds should be kept covered.
- ❖ Other children should not come into contact with a child's infection or wound.
- ❖ Non-contact activities are permissible if the wound is covered at all times and the child practices good hygiene—frequent hand washing, showering, and clean clothes.
- ❖ Contact activities should be suspended until the wound is completely healed
- ❖ Utensils, dishes, clothes, and other laundry should be washed normally with hot water and normal detergents. Laundry should be dried on the hottest setting.
- ❖ Clean non-sterile gloves should be used by employees caring for the child's wound or infection.
- ❖ Change gloves when moving from one body site to another or from one child to another.
- ❖ Discourage the sharing of personal care items, towels, sheets, etc.
- ❖ Use liquid soap instead of shared bar soap that is mild and non-irritating.
- ❖ Discourage the use of extended artificial nails especially when caring for wounds.
- ❖ Keep nails neatly trimmed short and free of debris under the nail.
- ❖ Do not add soap to a partially empty soap container. This can lead to bacterial contamination.
- ❖ Use moisturizers or hand lotions to keep skin healthy.
- ❖ Transport soiled items in a plastic bag or other waterproof container.
- ❖ Clean the facility and used recreational equipment daily with a commercial disinfectant or a daily prepared solution of 1:100 bleach and water mix (1 tablespoon bleach in 1 quart of water).

Wound Care Recommendations

When to consult a physician:

Always consult with a physician for any wounds or suspected infections that do not improve or worsen with your usual care. The physician should then examine the child and obtain a culture and sensitivities to determine the best treatment for the child. If antibiotics are deemed necessary by the physician, ensure that the child takes all of the antibiotics as prescribed even if the wound appears healed. The physician should address all other concerns including participation in activities and wound care which should be followed exactly. If the wound does not heal or show signs of improvement in the time frame provided by the physician, the physician should be notified immediately.

Home Care of Wounds:

- ❖ Treat all wounds as potential MRSA infections until confirmed with culture and sensitivities.
- ❖ Do not allow other children or adults to contact the infected person's wound or objects with which the infected person may have contaminated unknowingly (bedding, toys, personal care items, etc.)

- ❖ Address your concern for MRSA with the physician and ask for the results of the culture and sensitivities.
- ❖ If pus continues to build under the skin without drainage, a physician should be consulted to determine if surgical drainage of the wound is necessary. Too much pus build-up can interfere with the ability of antibiotics to work.
- ❖ Commercial disinfectants or bleach solutions (as described earlier) should be used to daily clean equipment, or other parts of the home especially those which have come in contact with the infected child.
- ❖ Phenol-containing sprays such as Lysol® can be used to disinfect upholstered/cloth surfaces.
- ❖ Soiled laundry should be carried in a plastic or waterproof container, and hands should be washed thoroughly after handling any laundry.
- ❖ Wash the infected child's laundry separately.
- ❖ The child should not share a bed with other family members.
- ❖ Change the dressings as instructed by the physician. This is usually at least twice a day or when drainage becomes apparent; whichever is sooner.
- ❖ Always wear clean gloves right before touching the site.
- ❖ Remove gloves and throw them away before touching any non-contaminated object, another site on the child, or another person.
- ❖ Wash hands after removal of gloves and when moving from one site, task, or child to the next.
- ❖ Throw away contaminated items used for wound change in a separate bag from regular trash.
- ❖ Wash with soap and water reusable items such as scissors and tweezers. Then wipe them with 70% isopropyl alcohol (rubbing alcohol) and allow to air dry. These items can be used again, but only for that child. If possible, do not use these items or use disposable equipment.

Medications:

- ❖ Only give antibiotics prescribed by a physician for that child for this particular infection.
- ❖ Never share antibiotics or topical treatments.
- ❖ Finish all antibiotics prescribed even if the wound has completely healed.
- ❖ Never give antibiotics to family members to attempt to prevent an infection.
- ❖ Misuse or overuse of antibiotics can lead to harm to the child and spread of resistant bacteria.

Need More Information:

Always address any concerns or questions about correct treatment to your healthcare provider. More information can also be obtained from your local health department, or the Infectious Disease Epidemiology Section of the Louisiana Office of Public Health and the Centers for Disease Control and Prevention websites listed below.

Louisiana Office of Public Health Infectious Disease Epidemiology
<http://www.dhh.louisiana.gov/offices/?ID=249>

CDC Get Smart Program
<http://www.cdc.gov/drugresistance/community/index.htm>



Infectious Disease Epidemiology

Adapted from Texas Department of State Health Services,
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