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**What is MRSA?
Fact Sheet for Patients**

What is MRSA and where is it found?

Staphylococcus aureus (staph) is a bacteria commonly found on the skin and in the nose of healthy people. Some staph bacteria have developed resistance to certain antibiotics commonly used to treat staph infections, and are called methicillin-resistant *Staphylococcus aureus*, or MRSA. Staph, including MRSA, can cause minor infections such as pimples and boils, or it can cause more serious infections, such as abscesses, pneumonia, and bone or bloodstream infections. Many MRSA skin infections are initially misdiagnosed as spider bites. However, verified spider bites are extremely rare and the spiders that cause significant bites are uncommon in Southern California. Some people have MRSA on their body or in their nose but no symptoms of infection. This is called colonization.

How is MRSA spread?

Staph, including MRSA, is almost always spread person to person by skin-to-skin contact, mostly by the hands. It can also be spread by objects, such as towels and clothes, that have been contaminated with the bacteria and then are shared or used by someone else. It is not uncommon to have MRSA infections spread among household members, sports team members, or other people who have frequent close contact and/or share personal items.

Who is at risk for MRSA infection?

People may be at increased risk for MRSA if their body's immune system is weak and unable to fight off infections. Several factors may contribute to increased risk for MRSA infection in some people. The most common factors are having frequent contact with the healthcare system, having a chronic illness such as diabetes, cancer, HIV/AIDS, being very young or very old, frequent use of antibiotics, having an open wound, dermatitis or skin lesions, poor nutrition and poor hygiene. Some people are at increased risk because they have a tube going into their body, such as kidney dialysis patients or people with urinary catheters. In the past, people who developed MRSA infection usually had one of these factors.

However, more and more frequently, healthy people have been getting MRSA in the community, without contact with hospitals or healthcare facilities. Crowded living conditions, frequent skin-to-skin contact, breaks in the skin, lack of cleanliness, and recent antibiotic use are risk factors for MRSA infections in the community. In the past few years, there have been clusters of skin and soft tissue infections in certain groups, such as prison inmates, players of close-contact sports, and men who have sex with men. Other healthy people may develop MRSA infections just from being in close contact with people who carry these bacteria on them.

Can MRSA be treated?

Yes. Although MRSA is resistant to many antibiotics, there are others that can be used to treat MRSA infection, especially the type that is acquired in the community. Special laboratory testing can help doctors decide which antibiotics will be the most effective for treating an infection. If antibiotics are prescribed, it is very important to finish taking the medicine entirely, as prescribed by the doctor. This will help prevent the staph bacteria from becoming resistant to the antibiotics used to treat the infection. Often drainage of the pus in a staph infection by the doctor is enough to treat it and antibiotics are not needed at all.

What should you do if you think you have a staph infection?

See your doctor. If you have an infected wound or sore, especially one that is not getting better, your doctor may do laboratory testing to see if it is caused by MRSA. The test will also tell the doctor which antibiotic will be most effective in treating your infection, if antibiotics are needed at all. If you are diagnosed with MRSA, be sure to tell your future health care providers that you have had this infection.

Can MRSA infections be prevented?

Good personal hygiene is the most important way to prevent MRSA infection and transmission. Bathe or shower regularly, avoid touching the nose, wash hands often with soap and warm water, don't share personal items, and keep any breaks or cuts in the skin clean and dry to prevent infections. Since MRSA is easily spread by skin-to-skin contact, regular hand washing is important for prevention. If someone in your household has MRSA infection, see "**What precautions should be followed if someone at home has MRSA?**" below on how to limit spread within the household.

Is MRSA a reportable disease?

Effective February 13, 2008, severe infections with *Staphylococcus aureus* (not just methicillin-resistant strains) resulting in death or intensive care unit admissions in a previously healthy person are reportable. In addition to these severe infections, any clusters or outbreaks of *S. aureus*, including MRSA, are reportable.

Do patients with MRSA in the hospital have to be isolated?

Patients with MRSA who are in the hospital may have to be isolated, especially if the infection is in a wound that is draining or in the lungs and they are coughing. These patients should be separated from other patients who are very ill in order to avoid spreading the infection. Sometimes they may be placed in a room with another patient who also has MRSA.

What precautions should be followed if someone at home has MRSA?

- 1) Wash your hands with soap and water often and after any contact with wounds, infected band-aids, bandages, or dressings. Warm water is best.
- 2) Keep any skin infections, especially those with pus or drainage, covered with clean, dry bandages.
- 3) Avoid sharing personal items (towels, razors, etc.,) that may come in contact with infected fluids.
- 4) All clothing, towels and linens that come in contact with the wound should be handled separately from those of other members of the household. This includes using a separate hamper. Wash linens, towels and clothes in hot water and laundry detergent and dry in a hot dryer
- 5) Clean the infected person's room, personal items, and any non-cloth items that come in contact with the wound or drainage with a commercial disinfectant or a fresh solution of one part bleach to 100 parts water (i.e., one tablespoon of bleach to one quart of water). Be sure to make a fresh solution every day. A phenol-containing product such as Lysol® or Pinesol® may also be used and a phenol-containing spray can be used to disinfect cloth or upholstered surfaces if needed, always following the manufacturer's directions on the label.
- 6) The infected person should have a designated chair or area for sitting as long as there are still draining wounds. This chair or area should have a hard surface or an easily cleaned plastic or similar cover that can be disinfected. No one else should sit here until the person's wound(s) has/have healed. The chair should be disinfected (as above) after the infected person sits on it.
- 7) Wear gloves if you handle bodily fluids (blood, urine, wound drainage) or have to change dressings. Wash your hands after removing the gloves.
- 8) Carefully dispose of dressings and gloves in a plastic bag. Again, wash your hands well after discarding the plastic bag. The plastic bag may be disposed of with the regular household trash.

- 9) If you have or develop an infection, inform any healthcare providers about the MRSA in your household.
- 10) If possible, people with MRSA infections should limit close contact with persons with open wounds or skin lesions.

Resources for patients

- California Department of Public Health (CDPH): A Parent's Guide to MRSA in California
<http://www.cdph.ca.gov/healthinfo/discond/Documents/MRSAParentsGuide.pdf>
- Methicillin-Resistant *Staphylococcus aureus* for Athletes (CDPH):
<http://www.cdph.ca.gov/healthinfo/discond/Documents/CAMRSAForAthletes.pdf>

Resources for schools

- Skin Infections and MRSA for California Schools (CDPH):
<http://www.cdph.ca.gov/healthinfo/discond/Documents/07MRSASchool.pdf>
- Community-Associated (CA-MRSA)/Staph Infections: A Guideline for Athletic Departments (CDPH):
<http://www.cdph.ca.gov/healthinfo/discond/Documents/CAMRSAInfectionsGuidelineAthleticsDepartment.pdf>

General Resources

- CDC (general): www.cdc.gov/ncidod/dhqp/ar_mrsa_ca_public.html
- CDC (MRSA in the workplace): <http://www.cdc.gov/niosh/topics/mrsa/>
- CDC (National MRSA Education Initiative):
http://www.cdc.gov/mrsa/mrsa_initiative/skin_infection/index.html
- CDPH: www.cdph.ca.gov/healthinfo/discond/Pages/MRSA.aspx