

MRSA Infection FactSheet

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Methicillin-Resistant Staphylococcus Aureus (MRSA)

The increase in cases of Methicillin-Resistant Staphylococcus Aureus (MRSA), pronounced Mer-sah, is a growing concern among health care providers. The Centers for Disease Control and Prevention (CDC) recently reported that MRSA infects more than 94,400 Americans each year and kills nearly 18,500 people annually. This represents more deaths annually than the 17,000 attributable to AIDS in 2005.

The "Superbug"

MRSA has been dubbed a "superbug" because of its ability to resist the effects of several different antibiotics. MRSA can cause skin infections, rashes, boils, abscesses and unfortunately it is able to spread to other areas of the body. In rare instances, MRSA can enter the bloodstream, spread to internal organs and cause death. Signs of internal organ infection include fever, chills, low blood pressure, joint pains, severe headaches, shortness of breath and a rash over most of the body.

Although staphylococcus aureus bacteria have been causing infection in humans for time immemorial, only recently have "staph" infections become resistant to several different antibiotics. This resistance has resulted from a methicillin-resistant gene within the bacteria itself which continues to evolve.

Contracting MRSA

MRSA is found world wide and is usually acquired in community settings and in hospitals. MRSA infections can be transmitted in two different ways. Contact with others who have MRSA and contact with surfaces that have come in contact with MRSA bacteria, surfaces like doorknobs, towels, faucets, etc.

Normal skin surfaces that have not been breached by cuts and abrasions or skin flaws do not readily allow MRSA to develop. However, when healthy individuals do not pay attention to scrapes and small skin imperfections, the MRSA bacteria can multiply and spread.



Photo courtesy CDC/Bruno Coignard, M.D.; Jeff Hageman, M.H.S.

Cutaneous MRSA abscess on the knee

Those who are at greater risk are individuals with suppressed immune systems, hospitals patients suffering from burns, skin ulcers or using intravenous needles. Lung infections are especially problematic as they provide a breeding ground for MRSA. Lung infections then can transmit MRSA by airborne droplets.

Treating MRSA

MRSA can be diagnosed by culturing skin and tissue samples for *S. aureus* in the lab. When *S. aureus* grows well in a methicillin culture, the resulting diagnosis is MRSA infection.

Although internal MRSA infections can be fatal if not diagnosed quickly, MRSA can be treated by certain specific antibiotics. As MRSA is able to mutate fairly rapidly, antibiotics may need to be changed and used in combination. It is also true that the full course of antibiotics needs to be taken to keep the bacteria from becoming drug resistant.

Preventing MRSA

Health care providers can prevent contracting and spreading the MRSA by:

- wearing gloves, gowns and masks when assisting MRSA-infected patients;
- avoiding direct contact with skin and clothing of MRSA-infected patients;

- treating skin breaks with soap and water, applying an antiseptic cream and covering with a band aid;
- keeping hands washed;
- washing MRSA infected clothes separately from other family clothing items; and
- using disposable items where possible.

The next “Superbug”

Be aware that new strain of MRSA has recently become resistant to the antibiotic Vancomycin (VRSA). This new strain is not widespread, but it could well be the next “super bug”.

As with all germs, frequent hand washing with soap and water, exposure to sunlight and fresh air, a healthy diet and moderate exercise, will all contribute to a strong immune system which then results in an ability to ward off disease.

Sources This factsheet was developed with information from the Centers for Disease Control and Prevention, *The Houston Chronicle*, Medicine Net and the *Dallas Morning News*.