

MRSA, Methicillin Resistant *Staphylococcus aureus* What is it? How to prevent it? Are you Prepared?

What is MRSA?

Methicillin-resistant *Staphylococcus aureus* (MRSA) are a type of staphylococcus or "staph" bacteria that are resistant to many **antibiotics**. It is a mutant strain of the common *Staphylococcus aureus* (staph) bacteria. Staph is ordinarily found in the noses and on the skin of normal healthy people, and generally poses no risk to the person. MRSA is resistant to the previous standard hospital antibiotics, such as penicillin or methicillin. The medical professional have over prescribed such antibiotics to the point where common pathogenic (disease causing) bacteria have mutated. They have changed their form and began producing new mutant strains which cannot be treated with standard antibiotics.

MRSA infections are not spread through the air, but among persons having close, physical contact with others who are already infected. MRSA has also been called the "superbug" or a flesh eating bacteria.

According to the Centers for Disease Control, (CDC), some 25 to 30 percent of the population carry *staphylococcus* bacteria - one of the most common causes of infection - in their bodies. While such infections are usually minor, invasive MRSA infections can become fatal because they are caused by drug-resistant staph.

Yes, if you were to take some skin scrapings right now and look under a microscope, you would probably find some of the staphylococcus bacteria. The problem arises when that bacteria becomes resistant to antibiotics. That's when it becomes "Methicillin-resistant *Staphylococcus Aureus*" or MRSA.

How Does MRSA Spread?

It is most commonly found in hospitals, nursing homes and other health care facilities. These infections are listed as nosocomial infections. In hospitals, patients may be found who have open wounds and weakened immune systems and who are therefore at great risk for infection. Hospital staff who do not follow proper sanitary procedures may inadvertently transfer bacterial colonies from patient to patient.

Governor Jon Corzine, in August, signed a bill requiring hospitals to test all high-risk patients for MRSA. All New Jersey Hospitals are now required to create "screen and isolate" programs to fight MRSA. He very soon will sign a law to require hospitals to make public such information so consumers can compare which hospitals in the state are safest when it comes to nosocomial infections.

MRSA can also be transmitted within the community, most often amongst players of close-contact sports, such as football, wrestling and fencing, where the sharing of equipment like protective clothing is common practice.

MRSA, like other contagious diseases, may also spread through indirect contact, such as by touching shared items like towels, sheets, used bandages, clothing and sports equipment, including items found in fitness centers, equipment areas and locker rooms.

A study published Wednesday in the Journal of the American Medical Association estimates that MRSA infections occurred in nearly 95,000 Americans in 2005. Based on those figures, an estimated 19,000 people died due to their MRSA infection in 2005. That death rate is higher than the HIV/AIDS death rate for that year, and the number of MRSA related deaths is much higher than previously thought. According to the CDC, 2005 was the first such year a measurement of MRSA statistics was able to be gathered.

The Big Picture

A larger issue may be whether or not we are developing new antibiotics fast enough. There is no question that antibiotic resistance develops as a result of our increased and sometimes inappropriate use of antibiotics. So, there is a real need for new antibiotics. The problem is these new antibiotics are incredibly expensive to develop and take years of clinical testing before they are approved. After that, doctors will only prescribe them in rare cases, when other antibiotics do not work. That makes drug companies less enthusiastic about developing the new medications.

There in lies a dilemma. Obviously, it would make sense for society to do everything possible to prevent antibiotic resistance. As we learned, however, that ship may have already sailed. There were around 90,000 cases of MRSA in 2005 and almost 19,000 deaths. And, we are already starting to hear of infections resistant to all the antibiotics that exist.

How will we take care of antibiotic resistant infections if there are no new medications in the pipeline? Keep in mind, this is not a theoretical question -- this is starting to happen already.

What Does “Staph” / MRSA Look Like?

“Staph” and/or MRSA usually first presents as some type of skin or soft tissue infection such as pimples, abscesses, pustules, and/or boils. Some can be red, swollen, painful, and/or have pus or other drainage. The pustules may be confused with insect bites initially, and may also be associated with existing athletic turf burns and/or abrasions. Surf the web to find pictures of MRSA, some are very graphic.

What to Do?

Show the school nurse immediately. If you are an athlete show your coach. See a doctor. Without proper referral and care, more serious infections may cause pneumonia, bloodstream, bone, and/or joint infections, and/or surgical wound infections.

How to Avoid the MRSA Super Bug

The CDC has posted the following consumer tips for staying safe.

It is transmitted through skin to skin contact, or through contact with an object or surface that has been touched by another's infection, such as a towel.

6 Ways to Protect Yourself:

Keep Your Hands Clean: wash regularly with soap and water, and as an added protection, use an alcohol based hand sanitizer such as Kutol or Purell.

Keep Your Cuts and Abrasions Covered: Put clean, dry bandages over open wounds, cuts, scrapes to keep them from touching possibly infected surfaces.

Don't Share Sports Equipment: Weight training benches and other gym surfaces should be handled with a barrier such as a towel.

Don't Share Toiletry Items: Razors and towels and such items should never be shared, but especially now with the rise of MRSA.

Keep it Clean: Regularly clean surfaces around your home and office that come in contact with others. That may mean telephones, counter tops, and other places touched by others' skin.