

This sheet contains only some of the information available on this topic. For more information, please talk to members of your CF care team.

Children's Hospital of Illinois

METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) INFORMATION SHEET

WHAT IS MRSA?

Bacteria and viruses are the most important types of germs that cause infection in people with cystic fibrosis (CF). Bacteria are probably the major cause of lung infection and lung damage in people with CF. Usually the number of bacteria in the lung of a person with CF is low because the body's immune system can keep these bacteria under control. This is referred to as bacterial colonization. There are several bacteria that most often colonize the lungs of people with CF. They are, *Haemophilus influenzae* (sometimes known as H. flu, which is different than the influenzae virus), *Staphylococcus aureus*, and *Pseudomonas aeruginosa*. Other bacteria include, *Escherichia coli*, *Stenotrophomonas maltophilia*, *Alcaligenes xyloxydans*, methicillin resistant Staphylococcus aureus (MRSA) and *Burkholderia cepacia*.

WHY IS MRSA IMPORTANT?

In 2004, the national rate of *MRSA* in people with CF was approximately 15%. One reason that *MRSA* is so important is the concern surrounding the potential for wide spread hospital/community outbreaks. This is why people with CF who have *MRSA* are placed in their own room when they are hospitalized. In addition, anyone who enters their room either in the hospital or in the clinic, wears a gown, a mask and gloves.

HOW DO YOU GET MRSA?

With CF there are problems with salt and water balance in the lining of the breathing tubes. This imbalance causes thick, sticky mucus. This mucus then traps bacteria, like *MRSA*, in the lungs making it hard to clear. This leads to infection and damage to the lung lining. This leads to more mucus production and further trapping of *MRSA*. It is known that *MRSA* can be passed on from one person with CF to another person with CF.

HOW DO YOU AVOID GETTING MRSA?

Bacteria enter the lungs through your mouth and nose. You should, therefore, avoid direct (kissing, physical intimacy) and indirect (standing next to someone who is coughing or sneezing, sharing food, utensils or respiratory therapy equipment) contact with others with who have CF or are known to have *MRSA*. As always, it is important to make sure you wash your hands frequently, take your medications and do your therapies as prescribed. In addition, if you have *MRSA*, you will be scheduled for the last appointment of the day in the clinic.

WHAT ARE THE SYMPTOMS OF MRSA INFECTION?

Symptoms of *MRSA* infection include increased cough, congestion, and possibly fever.

HOW DO YOU TREAT A MRSA INFECTION?

Antibiotics are the most effective way to fight bacteria. A major difference between *Staphylococcus aureus* and *MRSA* is that *MRSA* is killed by fewer antibiotics. An antibiotic that has been known to treat *MRSA* is trimethoprim-sulfamethoxazole (Bactrim). The advantage of Bactrim is that it can be given orally. Another antibiotic that is known to treat *MRSA* is vancomycin. The disadvantage of vancomycin is that it is given through an intravenous (IV) catheter.

