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

CYSTIC FIBROSIS (CF) AND BACTERIA INFORMATION SHEET

WHY ARE BACTERIA A BIG DEAL FOR PEOPLE WITH CF?

In CF, the respiratory tract gets colonized with certain bacteria (germs). It is believed that because the mucus of someone with CF is sticky and difficult to clear from the airways (breathing tubes), it is easier for bacteria to grow and live in the airways, throat, nose and sinuses. The types of bacteria that grow in the airways can change over time.

Infants with CF are often colonized with *Staphylococcus aureus* and *Haemophilius influenza*. *Staphylococcus aureus* is a bacterium that grows on your skin and can easily grow in your nose and throat. Both of these germs can be treated with many oral antibiotics if they begin to cause problems like an increase in cough or mucus. There are certain strains of *Staphylococcus aureus* that are much harder to treat because they are "resistant" to certain antibiotics. This means the antibiotic cannot kill the bacteria. This strain of *Stapylococcus aureus* is called *MRSA.*

As children get older more bacteria colonize the airway. The most common germ is *Pseudomonas aeruginosa*. Thirty percent of children with CF will grow *Pseudomonas aeruginosa* before they are one year of age and 80% of people with CF grow it by age 18. Once *Pseudomonas aeruginosa* is living in the airway, it can change and become more difficult to get rid of or treat. This leads to scarring of the lungs. Therefore, when *Pseudomonas aeurginosa* is found in the respiratory tract it is treated very aggressively. Sometimes early aggressive treatment will allow us to get rid of the *Pseudomonas aeruginosa* so it will not be able to cause inflammation (swelling) and scarring in the lungs. It is not clear where we come in contact with *Pseudomonas aeuginosa*. We do know that it loves water and can be found in water that is not highly chlorinated such as hot tubs.

Other organisms that can live in the airway include *Stenotrophomonas maltophilia, Achromobacter xylozoxidans, non-tuberculosis mycobacteria, and Aspergillus fumigatus.* Lastly, there are a group of germs called *Burkholderia cepacia.* These germs can cause a rapid drop in lung function. In the United States, about 3% of people with CF are colonized with *Burkholderia cepacia*.

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