CYSTIC FIBROSIS

CFfacts
cystic fibrosis fact sheet

Pseudomonas

Pseudomonas aeruginosa (Pa) is a bacteria that can infect people with cystic fibrosis (CF). There are many species of pseudomonas, however, Pa is the most common organism involved in infection in CF.

How does it affect lung function in those with CF?

Infection with Pa is associated with a decline in lung function, although it affects people differently, and some will not have the decline straight away. The structure of the Pa germ can change over time and it looks different under the microscope. The laboratory can identify a change to a "mucoid" appearance and this is associated with a decline in lung function. Some strains are associated with more lung function decline than others. Once Pa is established in the airway it is difficult to eradicate, but initially prompt treatment can delay the development of chronic infection.

Sources of Pseudomonas aeruginosa (Pa)

Anyone can get a pseudomonas infection; however, it is more common in those who have a weak immune system or chronic lung condition. Research has shown that people with CF can get Pseudomonas from others with CF who are infected with the bacteria. Germs spread by direct contact such as kissing, shaking hands or indirectly by touching things such as doorknobs, pens, toys or items that have been touched by a person infected with the organism. This infection transmission can happen at social events or meetings and in small places such as cars.

Pa is common in the environment and is sometimes known as a "water loving bug" because it is frequently found in water, soil, sinks and drains. Although it thrives in moist environments, high salt concentration inhibits its growth. Swimming pools are usually safe as long as the chlorination is at a safe level. Spas are not ideal for people with CF as the combination of warm water, aeration and potential for inadequate disinfection prove an ideal place for growth conditions. In many people, infection cannot be traced to contact with another infected person and in these cases, is thought to have come from the environment.

Can you get rid of Pseudomonas?

Antibiotics will work for a period; however, eradication strategies eventually are not effective and chronic infection establishes. The focus of treatment then is preventing more growth of the

organism. It is important to complete the course of antibiotics to prevent bacteria from developing resistance to the antibiotic.

Prevention and reducing the transmission risk

To reduce the transmission risk, it is recommended people with CF:

- keep at least 4 metres apart if not living in the same house
- do not share respiratory equipment, toothbrushes or eating equipment
- wash hands before entering a clinic or hospital room; after coughing/sneezing, lung function tests, touching shared objects e.g. toys, pens, keyboards, gym equipment
- limit exposure time/avoid cleaning out pet litter, stables, fish tanks
- limit exposure time to handling garden mulch
- keep bathrooms as dry as possible, leave window open to reduce humidity
- avoid water/bath toys with holes that trap water inside
- Service air conditioning units annually

Ways to protect yourself and others from spreading germs

- Cough and sneeze into your elbow
- clean and disinfect your nebuliser
- get vaccinated
- use alcohol based hand sanitiser as a quick way to prevent transmission of germs

Useful Resources

- Hand washing bookmark https://cfsmart.files.wordpress.com/2014/02/hand-washing-book-mark-year-3-to-year-6.pdf
- Good Clean Hands film https://www.youtube.com/watch?v=d-WVOBTW6iA
- Pseudomonas: where can you get it from and how to avoid it https://www.youtube.com/watch?v=EFsAyRHU6iU
- Pseudomonas and Other Bugs Part 1: The truth about pseudomonas and other bugs https://www.youtube.com/watch?v=peWm76uYxFE
- Pseudomonas and Other Bugs Part 2: The best way to keep physio devices infection free https://www.youtube.com/watch?v=dY_ug_1AEUU

- Common Infections Factsheet https://www.cfwa.org.au/wp-content/uploads/2017/12/CF-Fact-Common-Infections.pdf
- Infection Control in Schools Factsheet

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