CYSTIC FIBROSIS

CFfacts
cystic fibrosis fact sheets

Pseudomonas

What is Pseudomonas?

Pseudomonas aeruginosa (Pa) is one of a number of 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 pseudomonas 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 inhibit 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 2 metres apart if not living in the same household
- 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 play/ bath toys with holes that trap water inside
- Service air conditioning units annually

General 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

The truth about pseudomonas and other bugs:
https://www.youtube.com/watch?v=peWm76uYxFE

The best way to keep physio devices infection free:
https://www.youtube.com/watch?v=dY_ug_1AEUU

CFA (2014). *Infection Prevention and Contol Guidelines for CF.* Baulkam Hills, NSW: Cystic Fibrosis Aust
https://www.cff.org/Living-with-CF/Germs-and-Staying-Healthy/
https://www.cff.org/Living-with-CF/Germs-and-Staying-Healthy/How-Can-You-Avoid-Germs/Resources/Germs-and-CF--The-Facts/

Contact your local CF office

Cystic Fibrosis Australia
Unit 26, 5 Inglewood Place
Norwest Business Park
Baulkham Hills 2153

Postal Address
PO Box 8007
Baulkham Hills NSW 2153

T: +61 (0) 2 8883 4477
F: +61 (0) 2 8883 5515
E: general@cfa.org.au