

Pseudomonas

Pseudomonas is a common infection in people with CF, affecting about half the CF population in Australia. There are many species of Pseudomonas, however, Pseudomonas aeruginosa is the most common organism found in CF.

Pseudomonas infection will affect each person with CF differently. It is commonly associated with a decline in lung function, but this might not happen straight away. Once infection is established it is difficult to eradicate, or get rid of, but early, aggressive treatment can delay the development of chronic infection.

How do people with CF get Pseudomonas

Anyone can get a Pseudomonas infection; however, it is more common in those who have low immunity or a chronic lung condition like CF. Mucus in the CF lung provides ideal conditions for the growth of Pseudomonas.

People with CF can get Pseudomonas from the environment, or from other people who are infected with the bacteria, known as cross-infection. Pseudomonas bacteria are widely found in the environment and live and breed in warm, moist places. They can often be found in stagnant water, soil and damp areas such as bathroom sinks and drains.

Diagnosis of pseudomonas in CF

Pseudomonas is diagnosed by analysing a sample of mucus from the lungs. This sample can be obtained by coughing up mucus or by bronchoscopy.



Pseudomonas treatment

A combination of oral, inhaled and intravenous antibiotics are used to treat Pseudomonas infections. These 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.

Antimicrobial Resistance (AMR)

AMR occurs when bacteria, viruses, fungi and parasites change over time to become resistant to the medications that treat them. Many pseudomonas infections are resistant to antibiotics, making them difficult to treat. AMR has been identified as a top global research priority, prompting the development of new treatments for these infections around the world.

Reducing the transmission risk- cross infection

The following recommendations can help reduce the risk of transmission of pseudomonas between people with CF:

- Keep at least 4 metres apart if not living in the same house.
- Good hand hygiene- regularly wash hands or use alcohol-based hand gel.
- Cough and sneeze into your elbow.
- Do not share equipment with other people with CF.
- Wear a surgical mask before entering a hospital, health facility or CF clinic.

Reducing the transmission risk- environmental

Pseudomonas in the environment is hard to avoid but there are some things that can be done to help reduce the risk of infection. It is important to ensure that people with CF are still able to participate in activities with family and friends but may need to use extra precautions such as handwashing and use of gloves and/or mask.

The following guidelines can help reduce the risk of exposure to environmental Pseudomonas infections:

- Limit exposure to warm, moist environments such as garden mulch/compost, cleaning animal enclosures, fish tanks, tropical greenhouses and outdoor misting systems.
- Avoid squirting water/bath toys that trap water inside.
- Take caution in hot tubs, spas, hydrotherapy pools.
- Avoid swimming in dirty or stagnant water.
- Change your air compressor nebuliser tubing regularly as recommended by your team.

If you have any concerns about Pseudomonas, please discuss them with your CF team.

Useful resources

- [Tips to reduce Pseudomonas aeruginosa exposure, while being safe and having fun](#)
- [CFWA factsheets](#)