

Common Infections

Individuals with CF are more vulnerable to lung infections due to the thick, sticky mucus that accumulates in their lungs, creating an environment where germs can thrive and multiply. Recurrent lung infections can result in permanent damage to the lungs and a decline in lung function, making it essential to minimise the risk of infection for those with CF.

Germs

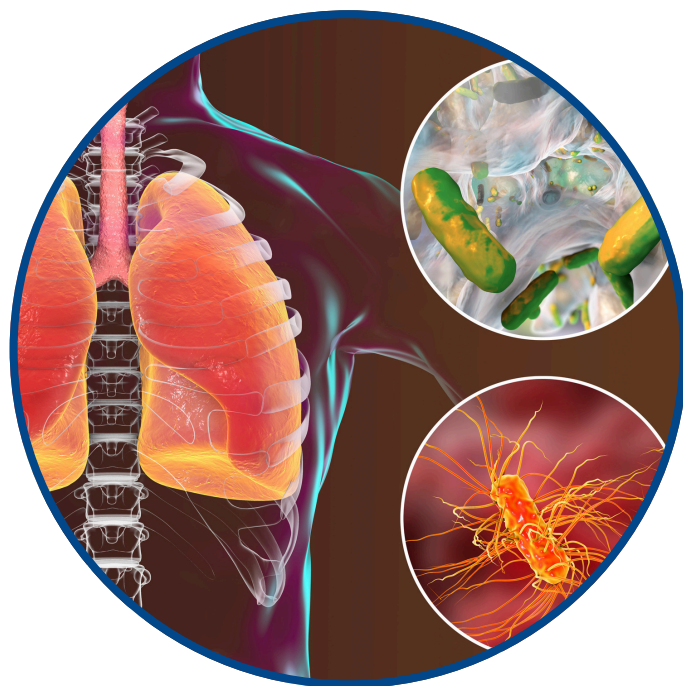
Germs are microscopic organisms that can cause infection. They are found in the air, soil and water, and on food, plants and animals. Some germs can survive on surfaces for days and others cannot survive outside the body.

Different germs live in different environments, have different ways to spread, and their own unique ways of causing infections. Some can survive in the natural environment, while others prefer living in people or animals. Some thrive in the cold, while others need warmth. There are certain germs that commonly infect people with CF.

How are infections contracted?

Bacteria, viruses and mould are examples of germs that cause infection in CF. Infections can be picked up in the environment and spread through:

- Direct contact (physical touch).
- Indirect contact (touching a surface that has been contaminated).
- Droplet route (coughing or sneezing).
- Airborne infection (inhalation of pathogens on tiny droplets, which have been ejected from an infected person following a cough or sneeze. These particles can remain suspended in air for a long time).



Common CF infections

Pseudomonas Aeruginosa: Is a common bacteria found in the lungs of people with CF. It comes in many different strains and thrives in moist environments. People with CF may share pseudomonas infections with each other, however it is usually acquired from the environment.

Staphylococcus Aureus: Is one of the most common organisms in CF lung infections. MRSA is a strain of Staphylococcus aureus that is resistant to commonly used antibiotics. MRSA can be spread person-to-person by contact transmission.

Burkholderia Cepacia: Lives in damp or wet places and is often difficult to treat once it infects the lungs. It can be spread via direct or indirect contact.

Nontuberculous Mycobacteria (NTM): Lives in soil, swamps and water sources. NTM can survive many disinfectants and severe environmental conditions. The bacteria have been found in growing numbers of people with CF and may transmit from person-to-person.

Influenza (flu): Is highly contagious, even among people who do not have CF. Although anyone can get the flu, people with CF may get sicker, potentially leading to a lung infection. The flu is usually spread by contact with infected secretions and to a lesser extent by large particle droplets.

Aspergillus: Is a fungus that lives in the environment and can be found in the airways of people with CF. It may be associated with an increase in CF symptoms and is treated with steroids and anti-fungal medications.

Antimicrobial Resistance (AMR)

AMR occurs when bacteria, viruses, fungi and parasites change over time to become resistant to the medications that treat them. Many CF 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 worldwide.

The risk of AMR can be reduced by:

- Not taking antibiotics for viral infections
- Completing courses of antibiotics as prescribed
- Observing good infection prevention practices including hand hygiene
- Following recommended vaccination schedules

Cross infection

People with CF can catch bacteria from each other, which can lead to worsening symptoms and a decline in lung function. To reduce the risk of spreading or getting germs, it is recommended that people with CF keep at least four metres away from other people with CF.

How to reduce the risk of infection

- Hand hygiene – wash hands regularly with liquid soap, warm water and dry thoroughly. Alcohol-based hand wash is just as effective when used properly.
- Follow recommended cross-infection guidelines.
- Keep up-to-date with recommended vaccinations.
- Avoid people who are unwell.
- Avoid high-risk environments, such as dirty, stagnant water, mould or damp soil where there may be exposure to environmental organisms.

Useful resources

- [Infection Prevention & Control Guidelines 2022](#) (CFWA)
- [Phage Therapy: Phage therapy a CF game changer](#) (The Kids Institute)
- [CFWA factsheets](#)