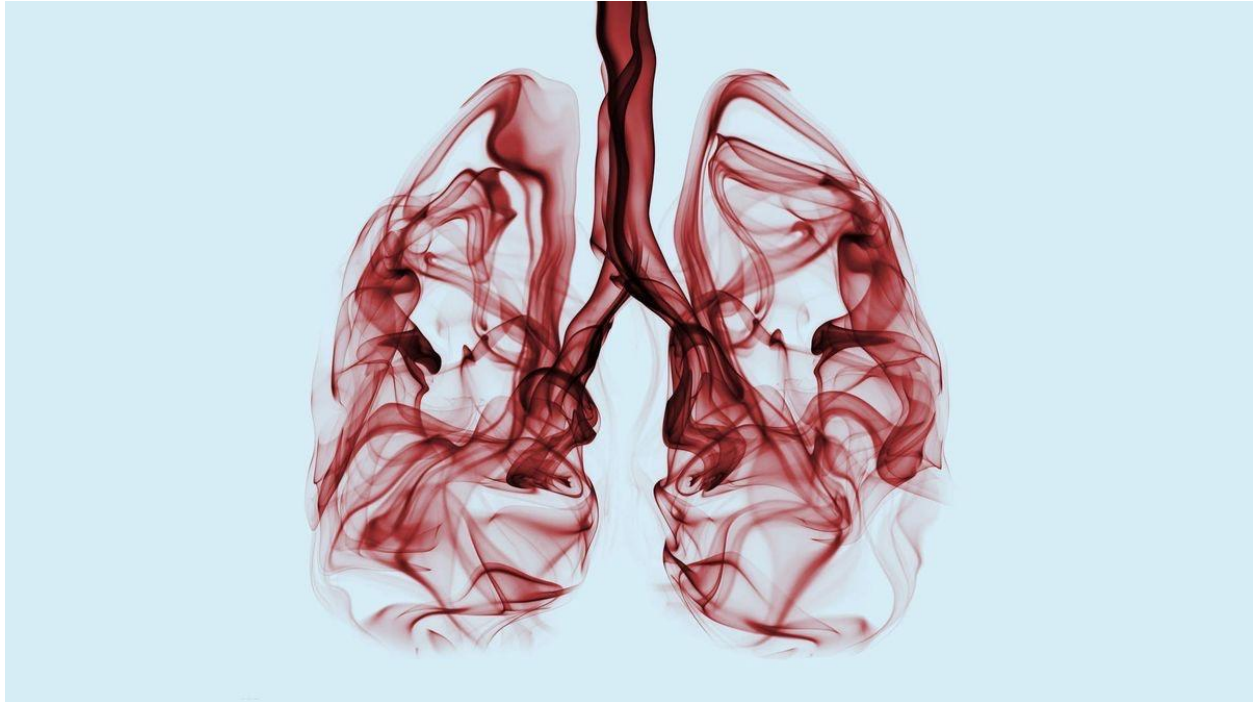


# Lung Disease Report

Katie Russell



## Cystic fibrosis

What is Cystic Fibrosis?

Cystic fibrosis is a genetically inherited disorder that attacks various organ systems, including; digestive system, reproductive system and the respiratory system. It alters the cell's ability to transport electrolytes amongst each other, results in the over absorption of water and sodium. Cystic fibrosis affects the cells in bodily fluids such as mucus, digestive juices and sweat, these substances should be thin and slick to allow smooth transport and secretion, however when an individual has Cystic fibrosis they become viscous and thick which clog up the tubes, ducts and airways in their body.

What are the causes of Cystic Fibrosis?

Cystic fibrosis is a genetic disorder passed down via family history. Cystic fibrosis develops due to a mutation in the cystic fibrosis transmembrane conductance regulator gene, which possesses instructions for the proteins in this gene. This specific protein is found in organs that produce mucus, the mutations in the proteins prevent them from functioning correctly, thus resulting in the production of thick mucus.

What are the symptoms of Cystic Fibrosis?

*Respiratory symptoms:*

- Thick sticky mucus plugging up airways preventing efficient gas exchange.
- Strong cough due to lack of oxygen.
- Wheezing.
- Exercise intolerance as breathing becomes a difficulty.
- Frequent lung infections.
- Congested nasal cavities.

#### What are the Treatments for Cystic Fibrosis?

There is no cure for cystic fibrosis, however measures are taken to prevent any severing difficulties and to assist in improving an individual's lifestyle. An individual living with cystic fibrosis, will be supported by a healthcare team and a self tailored treatment plan, at a medical center specialising in cystic fibrosis research and treatment, to ensure they are provided with the essential and suitable attention. Some medications that an individual with cystic fibrosis may utilise is antibiotics to deal with lung infections, steroid medications to treat nasal complications, such as polyps, an invacaftor that helps with the reduction of mucus build up, although this is only fitting for 4% of people living with cystic fibrosis. Furthermore an Afflovest is a tool that is worn by an individual and it reduces the phlegm build up, by loosening the mucus, so it then can be coughed out, allowing clearer respiratory passages. Additionally having a balanced diet that is nutrient and vitamin and mineral rich, is extremely vital, to maintain a stable health.

## Pneumonia

#### What is Pneumonia?

Pneumonia inflames alveoli in the lungs and is a severe infection that negatively impacts respiratory capabilities. It causes phlegm in the respiratory system and induces difficulties with breathing.

#### What are the Causes of Pneumonia?

Pneumonia forms from an invasive infection and growth of bacteria in the lungs. It can be triggered by influenza (cold or flu) and or Covid 19 and the pathogens carried in these viruses can overpower and attack the immune system. The type of pneumonia is specific to the type of pathogens. Community acquired pneumonia is the most common type of pneumonia and is contracted away from healthcare facilities such as doctor surgeries and hospitals. This type of pneumonia can be a result of an individual inhaling significant amounts of organic matter such as organisms (common in individuals suffering from severe prior health conditions and or with a weak immune system). An additional cause is bacteria like organisms, this a less intense version of pneumonia and doesn't require as much rest in order to recover from it, hence the informal name of "walking pneumonia."

#### What are the Symptoms of Pneumonia?

The symptoms of the case of pneumonia may vary due to the type the individual has contracted as the germs have differing effects.

- Chest
- Disorientation and mental distress (in adults age 65 and older)
- Cough, and possible production of phlegm
- Fatigue
- Fever, sweating and chills
- Lower than normal body temperature (in adults older than age 65 and people with weak immune systems)
- Nausea, vomiting or diarrhea
- Shortness of breath and wheezing

What are the Treatments of Pneumonia?

To diagnose pneumonia you can take multiple tests and inspections, such as blood tests to verify an infection, an X-ray to locate where the infection is, sputum test, that clarifies and confirms the cause of the infection with utilising fluid from the lungs. These tests can assist in finding the best treatments for the infections. Treatments for Pneumonia include antibiotics which is specific to a bacterial infection, anti fungal medication can help with fungal pneumonia, cough and cold and flu medications can assist with the congestion, sore throat and cough and other fever and pain reducing medication can also help subside and neutralize infection and symptoms. In some cases symptoms worsen and the individual may be hospitalised and further measures need to be taken, such as ventilators to assist with breathing.