

COVID-19 -Lung Infection

COVID-19 primarily affects lungs, the lung is an organ which is most commonly affected by COVID-19 and can result in spectrum of adverse effects. However, the SARS-CoV-2 virus can cause devastating effects on your other organs, including the heart and blood vessels, brain, kidney, liver, immune system, stomach and intestines.

In case of pneumonia the infection causes initial damage (inflammation) to the small air sacs present in the lungs and makes the lungs to be filled with fluid or puss, making it hard for the patients to breathe. If large percentage of the lung is affected, people struggle to absorb enough oxygen and are admitted to hospital with severe difficulty in breathing.

COVID-19 has long-term effects on the lungs:

While the lungs can recover from severe COVID-19 disease, they can sustain long term damage by leaving a scar behind

The SARS-CoV-2 virus enters the cells of the airway through angiotensin-converting enzyme reporter, a molecule that connects the inside of our cells to the outside via the cell membrane. When this happens, an intense immune response, known as cytokine storm occurs, along with increased blood clotting, all of which leads to damage of lung cells.

The body replaces the cells damaged by the virus with scar tissue, which is thick and rigid. This can result in a condition called 'pulmonary fibrosis', which is mostly seen in people diagnosed with COVID-19. This condition is probably more likely to develop if the lungs are severely affected by the infection. The condition can make people experience breathlessness while doing routine activities.

Anyone can have mild to severe symptoms from COVID-19. There are some individuals who are at higher risk for severe illness. Based on current information:

- Risk increases as you age so the older you are, the higher your risk.
- People of all ages with underlying medical conditions, including:
 - People with chronic obstructive pulmonary disease (COPD).
 - People who are immunocompromised from solid organ transplantation.
- People with severe obesity (Body Mass Index of 30 or higher)
- Other medical conditions including serious heart conditions, type 2 diabetes, Sickle cell disease and people with chronic kidney disease

As of June 25, 2020, the CDC lists people with chronic health conditions that might be at an increased risk of severe illness. Some of the conditions include: moderate-to-severe asthma, pulmonary fibrosis, smoking or being in an immunocompromised state from use of corticosteroids or other immune weakening medicines.