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Question: Convid-19 is the ongoing viral pandemic in the world and the reason you are at home. Discuss the anatomical implication of this virus on the respiratory system of human

SARS-CoV-2 is the virus that causes COVID-19 which is a part of the [coronavirus family](https://www.webmd.com/lung/coronavirus-history). When the virus gains entry into the body, it gets into contact with the mucous membrane that lines the nose, the mouth and the eyes. The virus enters a healthy cell and makes use of the cell to make new virus parts; it then multiplies and infects cells close to it. The virus can infect the upper or lower part of the respiratory tract. It travels down the airways and the lining then becomes irritated and inflamed. The infection can reach all the way down into the alveoli. Inflammation causes the membrane between the air sacs and blood vessels to be more permeable, which can flood the lungs with fluid and affect their ability to oxygenate blood.

As the infection travels the respiratory tract, the [immune system](https://www.webmd.com/cold-and-flu/immune-system-function) fights back making lungs and airways swell and become inflamed. This can start in one part of the lung and spread. The virus infects and kills cilia cells, causing the airways to be filled with debris and fluids. Studies on the virus have shown that many patients develop pneumonia in both lungs, accompanied by symptoms like shortness of breath.

The presence of the virus causes the body to fight the disease by filling the lungs with immune cells to stop the damage and repair the lung tissue. When the immune system is functioning well, this process is tightly regulated and confined to the infected areas. But sometimes the immune system is too active and the cells that filled the lungs kill anything in their way, including healthy tissue. This causes more damage and more debris clogs the lungs and pneumonia worsens.

The virus punches holes in the lungs, giving them a honeycomb-like appearance. These holes are also likely to be created by the immune system’s hyperactive response that causes scars that protects and stiffens the lungs. As a result of this people with the virus would have to be put on ventilator to assist their breathing.