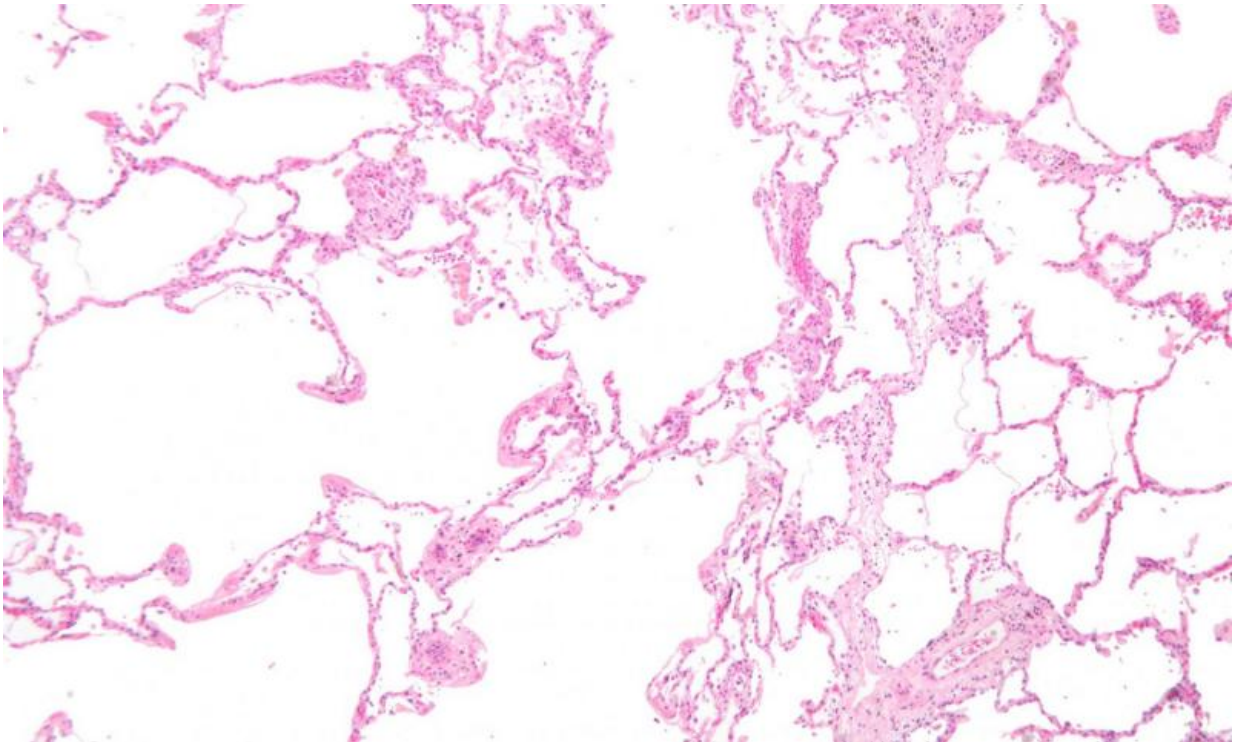


Overweight COPD patients may be at greater risk from COVID-19

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Micrograph showing emphysema (left – large empty spaces) and lung tissue with relative preservation of the alveoli (right). Credit: Wikipedia, CC-BY-SA 3.0

A University of Manchester study has linked being overweight with an increased risk of getting COVID-19 in patients with one the UK's most common lung diseases.

The team examined the [lung tissue](#) of 37 patients and found higher levels of a receptor called ACE2 is more common in [overweight patients](#) with Chronic Obstructive Pulmonary Disease.

Angiotensin converting enzyme 2 is the receptor for the virus on the [cell surface](#) which allows SARS-CoV-2—the cause of COVID-19—to gain entry into the body.

Dr. Andrew Higham, lead author of the study said: "Overweight COPD patients have more of the receptor, or entry point, required for coronavirus infection, in their lungs. This means these patients may be at a greater risk of developing COVID-19 due to increased opportunities for infection."

Professor Dave Singh, senior author of the study said: "Many COPD patients suffer with frequent viral infections, so they also have a high risk for developing COVID-19. Our findings suggest that the risk is further increased in COPD patients who are also overweight."

The findings—published in the journal *Obesity*—are essential information for the 1.2 million people living with COPD, the most common lung disease in the UK, after asthma.

It is a chronic life-limiting disorder which causes inflammation in the lungs, damaging tissue and narrowing the airways, making breathing increasingly difficult.

Many people living with COPD are thought to be overweight –as having a body mass index of over 25.

Around 2% of the UK—and 4.5% of people aged over 40—live with diagnosed COPD according to the British Lung foundation.

The team examined the gene expression levels of ACE2 in bronchial epithelial cells obtained by bronchoscopy on historical samples.

Dr. Higham added: "There is evidence that mortality from COVID-19 is higher in patients with medical conditions including COPD. Our observations suggest being overweight and having COPD puts people at an even greater risk of catching the virus.

"If you do have COPD and are overweight, then we think that it is extremely important to follow the guidance and continue to use shielding strategies to keep yourself safe from COVID-19," said Professor Singh.

Provided by University of Manchester

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