

# COPD and smoking associated with higher COVID-19 mortality: study

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Current smokers and people with chronic obstructive pulmonary disease (COPD) have an increased risk of severe complications and higher mortality with COVID-19 infection, according to a new study published May 11, 2020 in the open-access journal *PLOS ONE* by Jaber Alqahtani

of University College London, UK, and colleagues.

COPD is a common, persistent dysfunction of the lung associated with a limitation in airflow. An estimated 251 million people worldwide are affected by COPD. Given the effects of the SARS-CoV-2 [coronavirus](#) on respiratory function, the authors of the present study sought to understand the prevalence and the effects of COPD in COVID-19 patients.

In the new study, researchers systematically searched databases of scientific literature to find existing publications on the epidemiological, clinical characteristics and features of COVID-19 and the prevalence of COPD in COVID-19 patients. 123 potentially relevant papers were narrowed to 15 that met all quality and inclusion guidelines. The included studies had a total of 2473 confirmed COVID-19 patients. 58 (2.3%) of those patients also had COPD while 221 (9%) were smokers.

Critically ill COVID-19 patients with COPD had a 63% risk of severe disease and a 60% risk of mortality while critically ill patients without COPD had only a 33.4% risk of severe disease (RR 1.88, 95% CI 1.4-2.4) and 55% risk of mortality (RR 1.1, 95% CI 0.6-1.8). In addition, current smokers were 1.45 times more likely to have severe complications compared to former and never smokers (95% CI 1.03-2.04). The study was not able to examine whether there was an association between the frequency of COPD exacerbations, or severity of COPD, with COVID-19 outcomes or complications. The results are limited by the fact that few studies were available to review, as well as the diverse locations, settings, and designs of the included studies.

The authors add: "Despite the low prevalence of COPD and smoking in COVID-19 cases, COPD and current [smokers](#) were associated with greater COVID-19 severity and [mortality](#)."

**More information:** Jaber S. Alqahtani et al, Prevalence, Severity and Mortality associated with COPD and Smoking in patients with COVID-19: A Rapid Systematic Review and Meta-Analysis, *PLOS ONE* (2020). [DOI: 10.1371/journal.pone.0233147](https://doi.org/10.1371/journal.pone.0233147)

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