

Study suggests sleep disorders linked with more severe outcomes from COVID-19

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A new Cleveland Clinic study found that people with certain sleep disorders have more severe outcomes from COVID-19, including a 31 percent higher rate of hospitalization and mortality.

The research team, led by Reena Mehra, M.D., analyzed retrospective data from 5,400 Cleveland Clinic patients. The findings, published in *JAMA Network Open*, showed that while patients with sleep-disordered breathing and sleep-related hypoxia do not have increased risk of developing COVID-19, they have a worse clinical prognosis from the

disease.

"As the COVID-19 pandemic continues and the disease remains highly variable from patient to patient, it is critical to improve our ability to predict who will have more [severe illness](#) so that we can appropriately allocate resources," said Dr. Mehra, director of Sleep Disorder Research at Cleveland Clinic. "This study improved our understanding of the association between [sleep disorders](#) and the risk for adverse COVID-19 outcomes. It suggests biomarkers of inflammation may mediate this relationship."

Researchers used Cleveland Clinic's COVID-19 research registry, which includes data from nearly 360,000 patients tested for COVID-19 at Cleveland Clinic, of which 5,400 had an available sleep study record. Sleep study findings and COVID-19 positivity were assessed along with disease severity. The team also accounted for co-morbidities such as obesity, heart and [lung disease](#), cancer and smoking.

The findings set the stage for additional studies to identify whether early effective treatments such as PAP (positive airway pressure) or oxygen administration can improve COVID-19 outcomes.

"Our findings have significant implications as decreased hospitalizations and mortality could reduce the strain on healthcare systems," said first author of the study Cinthya Pena Orbea, M.D, of Cleveland Clinic's Sleep Disorders Center. "If indeed sleep-related hypoxia translates to worse COVID-19 outcomes, risk stratification strategies should be implemented to prioritize early allocation of COVID-19 therapy to this subgroup of patients."

More information: Association of Sleep-Related Hypoxia With Risk of COVID-19 Hospitalizations and Mortality in a Large Integrated Health System, *JAMA Network Open* (2021). [DOI:](#)

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