

Asthmatics no higher risk dying from COVID, review of studies on 587,000 people shows

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A new study looking at how COVID-19 affects people with asthma provides reassurance that having the condition doesn't increase the risk

of severe illness or death from the virus.

George Institute for Global Health researchers in Australia analyzed data from 57 studies with an overall sample size of 587,280. Almost 350,000 people in the pool had been infected with COVID-19 from Asia, Europe, and North and South America and found they had similar proportions of asthma to the general population.

The results, published in the peer-reviewed *Journal of Asthma*, show that just over seven in every 100 people who tested positive for COVID-19 also had asthma, compared to just over eight in 100 in the general population having the condition. They also showed that people with asthma had a 14 percent [lower risk](#) of acquiring COVID-19 and were significantly less likely to be hospitalized with the virus.

There was no apparent difference in the risk of death from COVID-19 in people with asthma compared to those without.

Head of The Institute's Respiratory Program, co-author Professor Christine Jenkins said that while the reasons for these findings weren't clear, there were some possible explanations—such as some inhalers perhaps limiting the virus' ability to attach to the lungs.

"Chemical receptors in the lungs that the virus binds to are less active in people with a particular type of asthma and some studies suggest that inhaled corticosteroids—commonly used to treat asthma—can reduce their activity even further," she said.

"Also, initial uncertainty about the impact of asthma on COVID-19 may have caused anxiety among patients and caregivers leading them to be more vigilant about preventing infection."

Lead author Dr. Anthony Sunjaya added that while this study provides

some reassurance about the risks of exposure to COVID-19 in people with asthma, doctors and researchers were still learning about the effects of the virus.

"While we showed that people with asthma do not seem to have a higher risk of infection with COVID-19 compared to those without asthma and have similar outcomes, we need further research to better understand how the virus affects those with asthma," he said.

When the COVID-19 pandemic first spread across the world concerns were raised that people with asthma might be at a higher risk of becoming infected, or of becoming sicker or even dying.

Previous findings have shown that people with chronic respiratory conditions like asthma were reported to be at greater risk during the Middle East Respiratory Syndrome (MERS) outbreak, caused by a virus with a similar structure.

"Respiratory infections like those caused by coronaviruses can exacerbate asthma symptoms and corticosteroid treatment may increase susceptibility to COVID-19 infection and its severity," Dr. Sunjaya said.

However this study using the best evidence available on the risk of infection, severe illness—requiring admission to ICU and/or ventilator use—and death from COVID-19 in people with asthma finds "no significant difference" of people with asthma being at higher risk.

Funded by Asthma Australia, the review included analysis of 45 hospital-based studies, six studies in the community and six with mixed setting. 22 of the studies were carried out in North America, 19 Asia, 14 Europe, and two in South America. Four of the studies only included children, making up 211 of the participants.

The average age of the participants was roughly 52; while 52.5% were males, 11.75% were current smokers and 16.2% were former. 54% had some form of comorbidities, 21% had diabetes and approximately 8% had chronic obstructive pulmonary disease.

Thirty-six studies were peer-reviewed publications; another 17 were preprints, 3 were government reports and 1 an open dataset.

The paper's findings also show increasing age is strongly associated with an [increased risk](#) of acquiring COVID-19 among asthmatics and explained 70% of the in-between study variance in the analysis. "This is an expected finding and in line with other COVID-19 studies showing age as one of the most important predictors for vulnerability to COVID-19 and prognosis," the authors add.

This [review](#) has "rigorously adhered to the guidelines of performing systematic reviews", limitations, however are that this is the synthesis of primarily observational studies, with a short duration of follow-up, mainly self-reported [asthma](#) and variable reporting of outcomes which may introduce bias in the pooled effect.

More information: Anthony P Sunjaya et al, Asthma and risk of infection, hospitalisation, ICU admission and mortality from COVID-19: Systematic review and meta-analysis, *Journal of Asthma* (2021). [DOI: 10.1080/02770903.2021.1888116](#)

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