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More Studies Show Why Omicron is Mild and Spreads Fast; Early Reports Suggest Immunity From Prior Infection Effective Against Variant

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More studies are coming out supporting earlier data showing that while the Omicron variant of Covid-19 spreads really fast, it is much less virulent than the strains before it, including the Alpha and Delta strains.

The laboratory studies suggest that Omicron's mild nature is tied to its tendency to flourish in upper respiratory tract cells rather than the lungs, where the coronavirus can lead to potentially deadly breathing problems.

“It spreads very, very fast, but it doesn’t appear to have the virulence or machismo to really pack as much of a wallop as the Alpha or Delta variants,” said James Musser (via the Wall Street

Journal), chairman of Houston Methodist Hospital's pathology and genomic medicine department and the leader of a new study of Omicron infections.

The variant also has a high vaccination breakthrough rate, infecting more inoculated individuals than variants before it. "Omicron very rapidly increased in only three weeks to cause 90 percent of all new Covid-19 cases," reads [a summary on the study](#). It says the virus had "significantly increased vaccine breakthrough rates," and those infected were "significantly less likely to be hospitalized."

"Omicron patients required less intense respiratory support and had a shorter length of hospital stay, consistent with decreased disease severity. Although the number of Omicron patients we studied is relatively small, in the aggregate the data document the unusually rapid spread and increased occurrence of Covid-19 caused by the Omicron variant in metropolitan Houston, and provide information about disease character," reads the summary.

Another recent study from the University of Cambridge and the University of Hong Kong provided results showing Omicron prefers infecting cells in the bronchi — tubes connecting the windpipe to the lungs. The Delta variant, however, infects and multiplies in the lung tissue.

"Lower-airway replication is a pathway or a reason for severe disease, and we may have a situation where a virus is taking us towards a less severe disease outcome," said Ravindra Gupta (via [WSJ](#)), a University of Cambridge virologist who was involved in the research.

A research whose study was [published online on Dec. 29](#) ahead of the study's peer review, showed that animals infected with Omicron had less severe virus outcomes than those infected with earlier variants.

The new findings support earlier studies performed in South Africa, where the variant was first detected late November; in the United Kingdom, where it has spread rapidly, and in Scotland.

Yet even with the trove of data, scientist have yet to answer some important questions about Omicron, including how it defers in symptomatic vaccinated and unvaccinated patients, and in those who received immunity from prior infection. According to WSJ, early reports suggest that infection caused by Omicron in those who received immunity from prior infection was milder.

According to recent studies of clinical data by Dr. Musser and other researchers, people infected with Omicron are less likely to need hospitalization or intensive care compared those who have the Delta variant.

"A case of Omicron compared to a case of Delta in a comparable person, comparable vaccination status, comparable age and risk factors is on the order of 60% or 70% less severe," said Robert Wachter, chairman of the department of medicine at the University of California, San Francisco.