

# Under-20s half as likely to contract coronavirus: study

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This scanning electron microscope image shows SARS-CoV-2 (yellow)—also known as 2019-nCoV, the virus that causes COVID-19—isolated from a patient, emerging from the surface of cells (blue/pink) cultured in the lab. Credit: NIAID-RML

People under the age of 20 are half as likely to contract COVID-19 than

the rest of the population, according to new modeling released on Tuesday that suggests four out of five infected young people show no symptoms.

The research, published in the *Nature Medicine* Journal, could help inform the next moves of governments under pressure to reopen schools and colleges shuttered since the start of the pandemic.

Experts from the London School of Hygiene and Tropical Medicine developed age-based COVID-19 transmission models based on data from six countries—China, Italy, Japan, Singapore, Canada and South Korea.

They also factored in previous research on estimated [infection rates](#) and severity of symptoms.

The team estimated that under-20s are at half the risk of COVID-19 infection than over-20s.

They also found a wide variation in symptomatic cases linked to age: only 21 percent of those aged 10 to 19 were likely to show symptoms compared with 69 percent of over-70s.

The researchers then simulated COVID-19 outbreaks in 146 capital cities around the world to see what effect school closures had on the spread of the disease.

Unlike with influenza outbreaks, where transmission was modeled to be sharply curtailed if schools were closed, the authors found the measure had little effect on stopping the novel coronavirus spreading.

"Whether to reopen schools or not is a complicated question," said study co-author Rosalind Eggo.

"We've provided some evidence showing an indication of decreased (COVID-19) susceptibility in children."

Numerous studies have shown that COVID-19 symptoms are likely to be more severe the older the patient is.

There have been relatively few confirmed cases in children, though whether or not this is down to fewer [young people](#) catching the virus or proportionally fewer showing symptoms when they do is not clear.

A variety of explanations has been offered, including that children are more frequently exposed to coronaviruses and therefore better equipped to fight off COVID-19 infection.

Nicholas Davies, who co-authored the research said the study did look at a variety of scenarios in which children may be carrying the virus unwittingly.

"We were not able to estimate exactly how infectious asymptomatic cases more generally are compared to [symptomatic cases](#)," said Nicholas Davies.

"But there is some limited evidence that asymptomatic individuals are less infectious than fully symptomatic individuals and there's certainly a fair amount of evidence suggesting that both asymptomatic and pre-symptomatic individuals are definitely potentially infectious," he said.

The authors said their modeling could "have implications for the likely effectiveness of [school](#) closures" in tackling COVID-19, which "might be less effective than for other respiratory infections".

**More information:** undefined undefined et al. Age-dependent effects in the transmission and control of COVID-19 epidemics, *Nature*

*Medicine* (2020). [DOI: 10.1038/s41591-020-0962-9](https://doi.org/10.1038/s41591-020-0962-9)

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