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It is 1,000 more likely that people will contract Covid-19 from the airborne viral particles they breathe, than from surfaces they come in contact with, a new study has revealed.

[The study](#), published last week in the Journal of Exposure Science & Environmental Epidemiology, examined air and surface samples during an environmental surveillance programme from August 2020 until April 2021 at the University of Michigan (U-M) in the US.

The researchers looked at public spaces, including classrooms, rehearsal rooms, cafeterias, buses, gyms, student activity buildings, and ventilation and air ducts.

As the study was conducted during lockdowns in a college campus, no samples were collected in spaces with large gatherings of people and some samples were only collected when few people were present.

For air samples, they used wetted wall cyclone bioaerosol samplers, which suck in large volumes of air using a pump and capture any virus particles in the air.

For surfaces, researchers used swab kits. Overall, between August 2020 and April 2021, the researchers collected 256 air samples and 517 surface samples.

After the analysis, they found that the probability for infection was about 1 per 100 exposures to SARS-CoV-2 aerosols through inhalation and as high as 1 in 100,000 from contaminated surfaces in simulated scenarios.

"The risk of surface transmission was 1,000 times lower than airborne transmission," concluded Chuanwu Xi, a professor at U-M's School of Public Health.

"We also found that the total case number of campus was significantly higher in weeks with positive environmental samples than in non-positive weeks," Xi added.

Rick Neitzel, a professor at U-M's School of Public Health, said that the results of the study can help people prepare for future outbreaks of respiratory diseases with similar transmission mechanisms.

"This is another layer of sophistication to evaluate major routes of transmission and to identify physical spaces where risks are higher and control measures in such space are essential and more effective to reduce the spread of the virus," said Neitzel.

Coronavirus is airborne

This comes a day after a study by the Centre for Cellular and Molecular Biology (CCMB), Hyderabad and IMTech, Chandigarh confirmed the airborne transmission of SARS-CoV-2.

It concurred with previous studies that suggest that the concentration of the virus RNA is higher

in indoor air as compared in outdoor spaces.

The conclusion was reached after the scientists analysed the coronavirus' genome content from air samples collected from different areas occupied by Covid-19 patients, including hospitals, closed rooms in which only coronavirus patients spent a short period of time, and houses of home-quarantined Covid-19 patients.

The scientists found that the virus could be frequently detected in air around Covid-19 patients and the positivity rate increased with the number of patients present in the premise.

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