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## Low risk of catching Covid in public toilets, study finds

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Covid-19 has seen many plans go down the toilet, but an Australian-led study shows public loos pose little risk of catching the virus.

Led by Australian National University Professor Sotiris Vardoulakis, researchers found no evidence of airborne transmission for pathogens such as Covid-19 in public toilets.

The peer-reviewed study, published in *Science of Total Environment*, analysed 38 studies from 13 countries published from 2000 to 2020 to determine public toilets' risk of viral and bacterial transmission.

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It looked at several possible transmission modes in public washrooms including inhalation, surface contact and faecal-oral.

There was some risk of aerosolisation from toilet flushing and the use of hand drying systems in public toilets, the authors said, but the chances of transmission were deemed low as long as good hand and bathroom hygiene were maintained.

"We realise people are worried about using public washrooms during the pandemic," Vardoulakis said in a statement on Thursday.

"But if you minimise your time in the bathroom, wash and dry your hands properly, and don't use your mobile phone, eat or drink, then bathroom use should remain low risk."

Sewage surveillance testing has been used by health authorities across Australia as a guide to where the virus may be circulating undetected.

The peer-reviewed study notes Covid patients with or without symptoms seem to shed the virus through their faeces, making it a potential transmission source.

While aerosol particles are now widely considered a known route of Covid-19 transmission, Vardoulakis said there was no evidence of that occurring in public toilets in studies published during the first year of the pandemic.

"There are a number of reasons it is low risk in public toilets – people don't spend a long time in bathrooms and don't interact with others," he said.

"Importantly, the aerosols you may inhale when you flush the toilet come from your own human waste. The risk of cross-contamination is not very high."

Environmental samples from toilets in Covid hospital wards in Singapore, China, England and Italy picked up the presence of Sars-CoV-2, the virus that causes the disease.

However, Vardoulakis pointed out contamination was different from transmission.

The study makes 25 recommendations to reduce public toilet contamination and transmission risks, including electric doors or doorless entryways, closing the toilet lid before flushing and non-touch flush buttons.