

- Variation (Biology) / Virus

Omicron lives longer on plastic, skin

Variant found infectious for the longest time on surfaces compared with earlier forms of the COVID-19 virus

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The Omicron variant can survive longer than earlier versions of the COVID-19 virus, or SARS-CoV-2, on plastic surfaces and human skin, Japanese researchers found in laboratory tests.

Its high “environmental stability” — its ability to remain infectious — might have helped Omicron replace Delta as the dominant variant and spread rapidly, they said.

On plastic surfaces, average survival times of the original strain and the Alpha, Beta, Gamma and Delta variants were 56 hours, 191.3 hours, 156.6 hours, 59.3 hours, and 114.0 hours, respectively. That compared to 193.5 hours for Omicron, the researchers reported on bioRxiv ahead of peer review.

On skin samples from cadavers, average virus survival times were 8.6 hours for the original version, 19.6 hours for Alpha, 19.1 hours for Beta, 11.0 hours Gamma, 16.8 hours for Delta and 21.1 hours for Omicron.

Alcohol

On skin, all of the variants were completely inactivated by 15 seconds of exposure to alcohol-based hand sanitizers. “Therefore,” the researchers conclude, “it is highly recommended that current infection control (hand hygiene) practices use disinfectants ... as proposed by the World Health Organization.”

Meanwhile, a booster dose of a COVID-19 vaccine made by AstraZeneca, Pfizer-BioNTech or Johnson & Johnson increases antibody levels significantly in those who had received two doses of Sinovac’s CoronaVac shot, a study has found.

The study found that CoronaVac received the strongest boost from a viral vector or RNA shot, including against the Delta and Omicron coronavirus variants, researchers from Brazil and Oxford University said on Monday.

China-based Sinovac’s vaccine uses an inactivated version of a coronavirus strain that was isolated from a patient in China.

It is currently approved in more than 50 countries including Brazil, China, Argentina, South Africa, Oman, Malaysia, Indonesia and Turkey.

Options

“This study provides important options for policymakers in the many countries where inactivated vaccines ... have been used,” said Andrew Pollard, director of the Oxford Vaccine Group and study lead.

However, another study in December found that Sinovac’s two-dose shot followed by a booster dose of Pfizer-BioNTech’s vaccine showed a lower immune response against the Omicron variant compared with other strains.

Viral vector vaccines such as the ones developed by AstraZeneca-Oxford and J&J use a weakened version of another virus to deliver genetic instructions for making proteins from the virus against which protection is sought.