Covid, study reveals how long the virus survives on objects

How long does the Sars-CoV-2 virus survive in an environment or on objects? Can you get infected by touching a surface, holding a tool or touching the elevator button? Some of these questions have been answered by a study by Ceinge Advanced Biotechnologies and the Experimental Zooprophylactic Institute of Southern Italy (Izsm), from which it emerged that porous surfaces are less 'infectious' than non-porous ones, which for example on plastic virus 'remains' for up to 48 hours and that the Omicron variant has a greater ability to survive on different surfaces than the original Sars-CoV-2 strain.

From the study, published in the journal 'Emerging Microbes & Infections', which analyzed the indirect transmission routes of the virus, it emerged that porous surfaces have a lower infectious capacity than non-porous ones. Scholars have demonstrated that the former absorb the virus and are therefore not good vehicles of contagion for humans, while on non-porous surfaces the virus manages to persist for longer times, thus having a greater infectious capacity over time. And again: the researchers compared the survival of two different variants of the Sars-CoV-2 virus, Wuhan and Omicron, on 10 commonly used surfaces and objects (glass, plexiglass, cardboard, aluminum etc.) used in the lives of all days.

The work carried out by around 15 experts – recalls a note – required months of experiments, through the manipulation of live strains of viruses for the contamination of surfaces in the Biosafety Level 3 (BLS3) laboratory equipped with the Izsm. The study involved the group directed by Franco Salvatore, founder of Ceinge, and the group directed by Giovanna Fusco, director of the Uoc Virology and head of the Animal Health Department of the Izsm.

"The experimental design of the study – explains Fusco – involved the contamination of various materials with the different variants of Sars-CoV-2, which circulated in the period 2020-2022 in Campania and this in order to establish the survival times of the virus in the environment The most recent variant of Sars-CoV-2 lineage BA.1, better known as Omicron, showed a greater ability to survive on different surfaces than the original Sars-CoV-2 lineage B.1 strain, proving that mutations modify the characteristics of the virus, making it better able to survive in the environment and consequently, infect a host".

"The work describes the average lifespan of the virus on different materials – explains Ceinge researcher Federica Di Maggio – On plastic, for example, it survives up to 48 hours. Let's think about how many commonly used objects, even children's toys, are plastic. We consider this research to be of great importance as in recent years there have been very few studies aimed at understanding the indirect infection of Sars-CoV-2".

“Our next objective – announces Salvatore – is not only to extend the research to other materials, including foods, but to verify the survival of other coronaviruses on them too”.

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