

WHY SOME PEOPLE ARE LESS LIKELY TO GET COVID? STUDY FINDS POSSIBLE CAUSE

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Researchers found higher levels of T cells against certain colds in people who didn't develop Covid while living with someone who had the disease, according to a study released Monday by the U.K.'s Imperial College London. The prior illnesses were caused by other coronaviruses related to SARS-CoV-2.

The findings, published in the journal Nature Communications, provide further evidence of the protective effects of T cells, an arm of the immune system that's gaining attention as the pandemic stretches into its third year and new variants like omicron erode vaccine protection.

"Being exposed to the SARS-CoV-2 virus doesn't always result in infection, and we've been keen to understand why," said Rhia Kundu, the study's lead author and a researcher at Imperial's National Heart and Lung Institute. "We found that high levels of pre-existing T cells, created by the body when infected with other human coronaviruses like the common cold, can protect."

The U.K. scientists analyzed blood samples from 52 people who lived with someone who had tested positive for Covid, of which half didn't become infected. Their conclusions show the protective role of T cells induced by other coronaviruses for the first time, they said.

Compared with antibodies, T cells tend to survive longer in the body and can kill infected cells, preventing serious illness. They also tend to attack a wider range of related pathogens than antibodies, which allows for a greater degree of cross-protection across different viruses or strains, Peter English, former chair of the British Medical Association's public health medicine committee, said in remarks published by the U.K.'s Science Media Centre.

Universal vaccine

Antibodies elicited by Covid vaccines block the spike protein, which the virus uses to enter cells. Those shots tend to lose effectiveness when the spike undergoes significant mutations, as it has in the omicron variant.

But T cells that were made in response to other coronaviruses target internal proteins within SARS-CoV-2, the scientists said. A similar approach could help with development of a universal vaccine that could prevent infection from current and future variants, the authors said.

"The internal proteins targeted by the protective T cells we identified mutate much less," Imperial's Kundu said. "New vaccines that include these conserved, internal proteins would therefore induce broadly protective T cell responses that should protect against current and future" variants.

There are caveats to the findings. The study was small and 88% of the participants were of white European ethnicity, according to the statement. The best way for people to protect themselves against Covid is still to be fully vaccinated, including getting a booster dose, Kundu said.

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