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Future of Health

T-cells from common colds can provide protection against COVID-19 - study

By Alistair Smout



2 minute read





A woman blows her nose in Dalston as the spread of the coronavirus disease (COVID-19) continues, London, Britain, April 14, 2020. REUTERS/Hannah McKay



Study included 52 people exposed to COVID at home

Those not infected had fought off common colds

Authors suggest new vaccines could mimic this protection

LONDON, Jan 10 (Reuters) - High levels of T-cells from common cold coronaviruses can provide **protection against COVID-19**, an Imperial College London study published on Monday has found, which could **inform approaches for second-generation vaccines**.

Immunity against COVID-19 is a complex picture, and while there is evidence of waning antibody levels six months after vaccination, T-cells are also believed to **play a vital role** in providing protection.

The study, which began in September 2020, looked at levels of cross-reactive T-cells generated by previous common colds in 52 household contacts of positive COVID-19 cases shortly after exposure, to see if they went on to develop infection.

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It found that the 26 who did not develop infection had significantly higher levels of those T-cells than people who did get infected. Imperial did not say how long protection from the T-cells would last.

"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 against COVID-19 infection,"

study author Dr Rhia Kundu said.

The authors of the study, published in Nature Communications, said that the internal proteins of the SARS-CoV-2 virus which are targeted by the T-cells could offer an alternative target for vaccine makers.

Current COVID-19 vaccines target the spike protein, which mutates regularly, creating variants such as Omicron which lessen the efficacy of vaccines against symptomatic infection.

"In contrast, the internal proteins targeted by the protective T-cells we identified mutate much less," Professor Ajit Lalvani, co-author of the study, said.

"Consequently, they are highly conserved between the various SARS-CoV-2 variants, including Omicron. New vaccines that include these conserved, internal proteins would therefore induce broadly protective T cell responses that should protect against current and future SARS-CoV-2 variants."

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