

COVID-19: How Long Does Immunity Last?

How long does immunity last after a person has had COVID-19 or receives the vaccine?

It is arguably the most important question that remains about COVID-19 and one that University of Miami Health System researchers are hoping to answer in a new study funded by the National Institutes of Health.



Dr. Michael E. Hoffer

UHealth is one of five sites nationally and the only one in the Southeast U.S. chosen to participate in a National Institute of Allergy and Infectious Diseases (NIAID). The study is looking at people who have had COVID-19 or have had a COVID-19 vaccine to examine the durability and robustness of participants' antibody and T-cell responses to the virus.

“We are just beginning to recruit for this study,” said [Michael E. Hoffer, M.D.](#), otolaryngologist and neurosurgeon at UHealth, professor at the University of Miami

Miller School of Medicine, and a member of the study's research team. "NIAID is Dr. Anthony Fauci's branch at the NIH, and this is a major U.S. NIH effort to figure out how long protection from reinfection lasts. We are not just looking at immunity conferred by B cells, but also longer-term immunity that is conferred by T cells."

Study participants include individuals who are in high-risk groups for contracting COVID-19 with a positive COVID-19 test within the last 20 days, as well as those who have been immunized with a COVID-19 vaccine. Even adults who do not know if they have had COVID-19 can participate. Researchers at the Miller School will test them for active infection of the virus as well as COVID-19 antibodies to determine which group they fall into, according to Erin Williams, clinical research coordinator at the Miller School of Medicine and biomedical engineering graduate student at the University of Miami.

"This study will give participants important health information, as well as add to the body of data we need to answer the big questions about immunity to COVID-19," Williams said.

Researchers will also track for COVID-19 recurrence and immunity durability in asymptomatic cases.

Participants will answer monthly questionnaires and come in for at least four visits, including at baseline and three follow-up visits spaced a month apart that will include a blood test for antibodies and a nasal swab to rule out active infection. Those in the study will be reimbursed for their time and travel, according to Williams.

"Immunity to the virus after being infected or having the vaccine is not well understood," Dr. Hoffer said. "For example, for those who have the vaccine, are we going to have to vaccinate people annually? Every six months? Every 18 months?"

Once in a lifetime? We don't know.

“Someone has to answer the questions and the NIH has launched this major effort to try to find this out.”

Other institutions participating in this study include University of Michigan Medical School, Washington University School of Medicine in St. Louis, Icahn School of Medicine at Mount Sinai, and The University of Chicago Pritzker School of Medicine.

The study at the University of Miami is led by local study principal investigator Savita Pahwa, M.D., professor of microbiology and immunology; Suresh Pallikkuth, Ph.D., research assistant professor of microbiology and immunology; and Dr. Hoffer. Florian Krammer, Ph.D., professor of microbiology at the Icahn School of Medicine at Mount Sinai, is the study's national P.I.

For more information about the study, contact [Erin Williams](#) or [click here](#).

Originally written by Lisette Hilton for Inventum. Adapted for UMiami Health News.

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