

PICOV-VAC study shows difference in quantity and quality of antibodies in vaccinated people

Is there a difference in antibodies after vaccination between people who have already been infected with the corona virus and people who have not yet had a corona infection?

10-06-21



Dit is de omschrijving

The opening of the national vaccination campaign gave rise to a particular question: “Do antibodies after vaccination differ between people who have already been infected with the coronavirus and people who have not?” A PICOV-VAC study shows that people who had previously been infected reacted more strongly after one shot of the BNT/Pfizer vaccine than those who had no previous infection. The study was led by Sciensano in cooperation with laboratories at the ULB and the Institute of Tropical Medicine (ITM) in Antwerp.

The PICOV-VAC study was preceded by the PIVOC study. This study looked at the extent to which residents and staff of residential care facilities who had previously tested positive for COVID-19, were protected against new infections. The second study looked at the differences in antibodies after vaccination between people who had previously been infected with the corona virus and people who had not. Both studies were performed at the ULB and ITM laboratories.

Researchers took blood samples at different times in three residential care centres. "We processed some of the blood samples and all tests to determine the neutralising capacity or 'quality' of the antibodies against different variants of the virus," Explains Kevin Ariën, professor and head of the Unit of Virology, explained.

All participants, both young and old, developed antibodies after two doses of the BNT/Pfizer vaccine. The researchers did, however, see a clear difference in the quantity and quality of the antibodies. People who had already been infected with COVID-19 had the highest amounts and best quality of antibodies. Residents who had not been infected before their vaccination developed the smallest amount of antibodies with the weakest quality after two doses of the vaccine. People who had not yet experienced COVID-19-infection and still showed a weak antibody response after a full vaccination, may benefit from a third dose.

The study also shows that the antibodies induced by the vaccine neutralise the South African variant significantly less effectively than do those in people who were already infected before receiving the vaccine. Whether a third dose can offer the necessary protection against emerging variants will require further research.

In order to provide maximum protection to vulnerable groups, it is essential that the vaccination coverage among the general population is as high as possible. This is the only way to strive for group immunity in order to keep the virus circulation as limited as possible.