

Pfizer and Moderna vaccine recipients may not need booster shots for years — if COVID variants don't evolve too much beyond the virus' original form

[\[A recent\] study](#) bolsters growing evidence that most people immunized with the mRNA vaccines may not need booster shots, with one key caveat: That the virus and its variants don't evolve too much beyond the virus' original form.

"It's a good sign for how durable our immunity is from this vaccine," Ali Ellebedy, an immunologist at Washington University in St. Louis, who led the study, told The New York Times.

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After an infection or a vaccination, a specialized structure called the germinal center forms in lymph nodes, the researchers explained. This structure is where [antibody-producing] B-cells are trained. After infection with the coronavirus, the germinal center forms in the lungs. But after vaccination, the cells' education takes place in lymph nodes in the armpits, within reach of researchers.

Ellebedy's team found that 15 weeks after the first dose of vaccine, the germinal center was still highly active in all 14 study participants, and that the number of memory cells that recognized the coronavirus had not dropped.

"The fact that the reactions continued for almost four months after vaccination — that's a very, very good sign," Ellebedy told the Times, because terminal centers typically peak one to two weeks after immunization, and then wane.

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