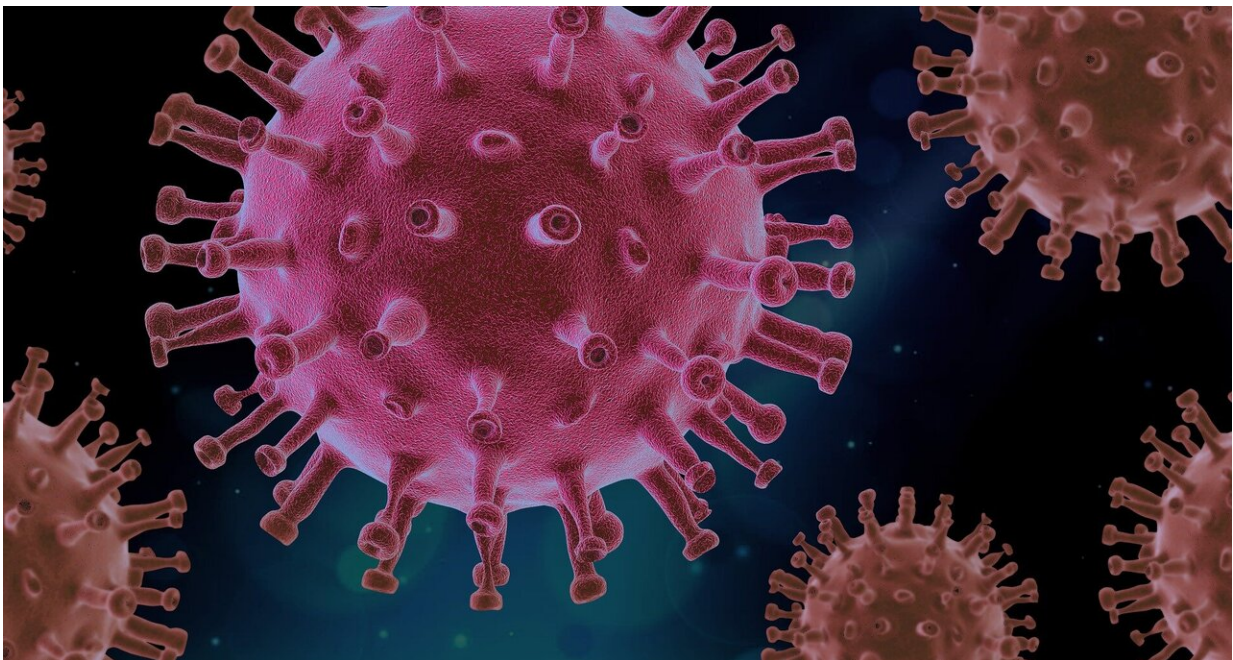


COVID infections may give more potent immunity than vaccines – but that doesn't mean you should try to catch it

September 6 2021, by Charlotte Thålin



Credit: Pixabay/CC0 Public Domain

Israel was [way ahead](#) of the rest of the world when it came to COVID vaccination, so it's not surprising that data from this corner of the Mediterranean causes a lot of excitement—it's a glimpse into the future.

Indeed, this happened recently when researchers at Maccabi Healthcare

Services in Tel Aviv released a [preprint](#) (a study that is yet to be reviewed by other experts) suggesting people who had been infected with COVID had greater protection than vaccinated people against becoming reinfected with the delta variant. Unfortunately, some took this to mean that getting COVID is [a better idea](#) than getting vaccinated.

First, the possibility that a COVID [infection](#) leads to longer-lived immunity than vaccination is not far-fetched. Infection exposes our [immune system](#) to [several viral proteins](#), whereas the most commonly used COVID vaccines introduce a single antigen: the spike protein. This results in a more directed but also a more restricted immune response than after infection.

Although people who have had COVID can get reinfected, naturally acquired immunity [continues to evolve](#) over time and antibodies [remain detectable](#) for longer than was first anticipated. New evidence suggests that immunity following both severe and mild infection protects against both [symptomatic and asymptomatic reinfection](#).

However, apart from the danger of drawing conclusions from data that other scientists have not yet reviewed, it is also crucial to put the data in the right context. Although [the study](#) draws attention to the potency of naturally acquired immunity, it does not consider the risks involved in achieving natural immunity through infection. Nor does it cast a shadow on [vaccine](#)-generated immunity.

In fact, the benefit of vaccination is not even addressed in the study since [unvaccinated people](#) without prior infection were not included for comparison. The low rate of COVID-related hospitalisations among vaccinated participants (eight out of 16,000) would probably be strikingly lower than among non-vaccinated people without prior infection, but this group was not included in the analyses.

A common reason to remain unvaccinated is the misconception that waiting for natural immunity by choosing infection over vaccination is an option. But infection-acquired immunity may come at a heavy cost.

Indeed, apart from the overt risks of severe illness or death, several recent studies show that otherwise healthy people who have recovered from COVID have a substantially increased risk of longer-term serious health problems, including [myocarditis](#) (inflammation of the heart muscle), [blood clots and stroke](#), compared to vaccinated people. And the most rigorous safety monitoring in US history has shown that COVID vaccines are [safe and effective](#).

With [cases surging globally](#) and deaths driven by the delta variant, waiting for infection—and risking long-term health problems, severe illness and death—to achieve immunity to the very same infection is as fruitless as it is dangerous.

Hybrid immunity

The Israeli preprint does, however, shed light on our increasing understanding of the potent immunity induced by getting the vaccine after having COVID—so-called hybrid immunity. [Several studies](#) show a substantial boost in both antibody and T-cell responses to vaccine in people with previous COVID infection.

A [recent report](#) from the US Centers for Disease Control and Prevention showed that people who'd recovered from COVID and were later vaccinated had half the risk of reinfection compared with unvaccinated people who'd previously had COVID. So it's still worth getting the vaccine, even if you have previously had COVID.

The effective immune booster following the combination of natural immunity and a single subsequent vaccine jab also raises the question of

whether one dose is enough for people who have had COVID. Several studies report that immune responses to a single dose of either the [Pfizer](#) or [AstraZeneca](#) vaccine exceed those after two doses in people without prior infection.

Several countries, such as France, Italy and Germany, therefore now recommend [a single dose](#) for people with a previous COVID infection. And infection without vaccination is recognised as immunity for the current [Israeli green pass rules](#).

Although directing boosters to people who have not been infected may make the most of limited vaccine supplies, personalised schedules and exemptions from vaccine mandates may be logistically tricky in the midst of a pandemic. Antibody screening before vaccination is time-consuming and expensive, and it introduces practical challenges in identifying those who have or haven't previously had COVID. These exemptions could slow vaccine rollout rather than speed it up.

As unprecedented research efforts deliver knowledge about our immune responses to COVID infection and vaccination on a daily basis, we must critically view the data together with all the facts that relate to it. We are far from bringing the pandemic to an end, and the potential risks of being infected are unquestionable. Our priority should be to slow transmission and get vaccines to those who remain unvaccinated and need them the most. To avoid vaccination, wait for infection and hope for natural immunity makes little sense.

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