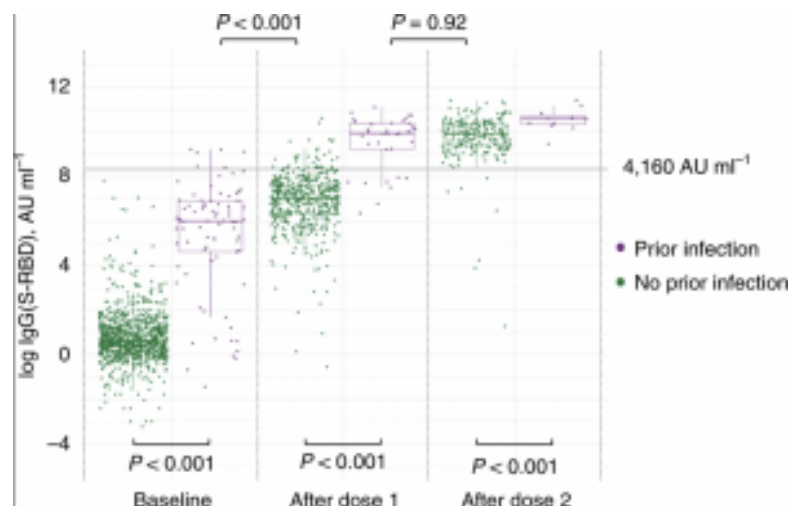
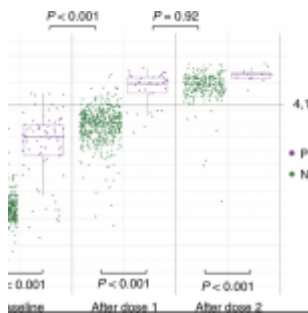


Antibody response to vaccination post-COVID-19 infection



IgG antibody response to mRNA SARS-CoV-2 vaccination in individuals with (purple) and without (green) prior SARS-CoV-2 infection. (Source: Ebinger et al, 2021)

The global roll-out of vaccines against SARS-CoV-2 presents hope of ending the COVID-19 pandemic. Questions however remain about the efficacy of these vaccines in persons with prior COVID-19 infection. Two recent studies have suggested that such individuals develop a strong immune response from just one dose of a vaccine.

Researchers at the Cedars-Sinai Medical Center in Southern

California found that a single dose of the BNT162b2 (Pfizer-BioNtech) vaccine elicited a strong anti-spike-IgG antibody response in participants with previous infection, comparable to the response observed after two doses in infection-naïve individuals. In a second smaller study in Israel, single-dose vaccination with the BNT162b2 in six previously infected healthcare workers induced neutralizing antibodies not only to the original SARS-CoV-2 virus but also to the B.1.1.7 (United Kingdom), P.1 (Brazil), and B.1.351 (South Africa) variants. In both studies, the vaccine was well tolerated by both previously infected and infection naïve groups.

These findings suggest that a single dose of BNT162b2 offered to people with prior infection confers the same benefit as two doses given to those without previous infection; this may be crucial for the design of vaccine distribution programs as a single shot could be sufficient in previously infected people. They also emphasize the importance of vaccination even in previously infected individuals due to the benefit of a heightened antibody response.

Journal Articles:

- Ebinger et al, 2021. [Antibody responses to the BNT162b2 mRNA vaccine in individuals previously infected with SARS-CoV-2.](#) Nature Medicine
- Lustig et al, 2021. [Neutralizing Response against Variants after SARS-CoV-2 Infection and One Dose of BNT162b2.](#) NEJM

Summary by Kenneth Omollo