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Study in Hong Kong shows robust antibody generation post-vaccination as compared to natural infection

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Vaccinated individuals develop more robust and broadly reactive antibody responses against SARS-CoV-2 variants than the unvaccinated after an Omicron infection



A recent study jointly conducted by the LKS Faculty of Medicine, The University of Hong Kong (HKUMed) and the Faculty of Medicine, The Chinese University of Hong Kong (CU Medicine) shows that vaccinated individuals can develop more robust and broadly reactive antibody responses against SARS-CoV-2 variants than unvaccinated individuals after an Omicron infection. This highlights the need for COVID-19 vaccination for unvaccinated people even after an SARS-CoV-2 infection.

The findings show that an Omicron infection in unvaccinated people can only induce very weak antibody responses, which react with Omicron only. In contrast, a breakthrough infection caused by Omicron in fully vaccinated individuals leads to a more potent antibody response, which is six times higher than those of unvaccinated COVID-19 patients. More importantly, such an antibody response found in vaccinated individuals is broadly reactive and it can react with other Variants of Concern (VOCs), such as Beta and Delta.

‘Vaccination can help do more other than preventing severe COVID-19 outcomes. Those who had been fully vaccinated with either BNT162b2 or CoronaVac and then got breakthrough infection have very strong and very broad immunity against many variants including BA.2, BA.1 and others. Thus, for vaccinated individuals, the infection can help to train your body to better prepare for a re-infection caused by another SARS-CoV-2 variants in future,’ said the researchers.