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Booster shots can reduce chances of covid virus reinfection

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Dr Swapnil Mehta, consultant and head of the Department of Pulmonology, Dr LH Hiranandani Hospital, Mumbai

The nation has completed more than two years living with the COVID-19 pandemic wherein India, from January 2020 to August 2022 has witnessed 44,348,960 confirmed cases of COVID-19 with 527,368 deaths, as reported to WHO. As of 23 August 2022, a total of 2,10,31,65,703 vaccine doses have been administered in India. In this era of the pandemic, so far, three waves have been observed in the country starting with the initial virus in 2020, the second wave came in March 2021 with the delta variant which devastated the situation to another level, and then the third affecting a million of lives in December 2021 with omicron variant.

At present, the omicron variant is the fastest spreading in India which reported its first case in Karnataka on December 2, 2021. This variant is known to be highly transmissible and mutates very rapidly. It has a high proportion of reinfections, and breakthrough infections and is more prone to immune escape.

Center for Disease Control and Prevention says that, among persons with previous SARS-CoV-2 infection or COVID-19 diagnosis, receipt of a COVID-19 mRNA vaccine protected subsequent COVID-19 hospitalization. The highest level of protection was conferred by a booster vaccine dose, with similar VE during the Delta- and Omicron-predominant periods (approximately 60–70 per cent). In contrast, VE of one or two doses declined from 50–60 per cent during the Delta-predominant to approximately 35 per cent during the Omicron-predominant period. Receiving a booster dose conferred protection even if the previous infection occurred after receipt of the second vaccine dose. This indicates that infections or reinfections from COVID-19 variants and the associated hospitalisations are preventable by booters doses.

Since Omicron has been declared a variant of concern by the World Health Organisation due to its faster transmission rate, the nation must get immunity with an Omicron-specific vaccine. Recently, the Sputnik V vaccine manufacturers announced the development of the Sputnik V vaccine specifically adapted against Delta and Omicron variants of coronavirus. Throughout the pandemic, there has been a consistent study regarding the new emerging variants of SARS-CoV-2 and adapting Sputnik V to them accordingly. The new version of Sputnik V has been Delta- and Omicron-adapted as Omicron is currently the dominant variant around the globe. This new version is also addressing the L-452-R mutation in the Omicron BA5 variant which was not present in the BA1 variant.

Similarly, Pfizer and BioNTech recently unveil that from a 2/3 trial the company found that Omicron-adapted COVID-19 vaccine candidates demonstrate high immune response against Omicron hence, the company continuously seeks approval from FDA to authorize a new Covid booster shot customized against the omicron BA.4 and BA.5 subvariants. Moreover, the Serum Institute of India (SII) which manufactures the Covishield vaccine, also expecting an Omicron-specific vaccine in India in the next six months.

Although people had built good immunity from the original strain of the virus after getting COVID for the first time, after going through the Delta and now the Omicron period number of studies are suggesting that even if antibodies after getting infected remain in the body, a person needs to get vaccinated with booster shots since no one knows which COVID variant is coming next. Omicron variant has a capacity of being highly contagious so it can reinfect people who are previously vaccinated and recovered from infection. Other factors of reinfection could be the effect of initial vaccine shots, differences between the COVID-19 variants, and due to this the overall changes, that happened to a person's health. To prevent COVID-19–associated hospitalisation, all eligible persons should stay up to date with vaccination, including those with previous SARS-CoV-2 infection and reinfection.