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Review [J Med Virol](#). 2022 Jul;94(7):2969-2976. doi: 10.1002/jmv.27697. Epub 2022 Mar 14.

Current evidence on efficacy of COVID-19 booster dose vaccination against the Omicron variant: A systematic review

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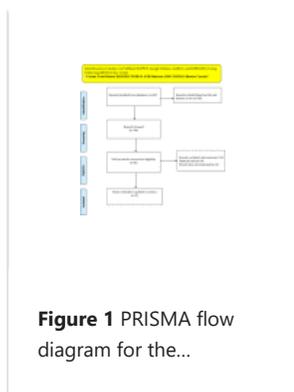
Abstract

Coronavirus disease 2019 (COVID-19) is an ongoing pandemic, which affected around 45 million confirmed cases of COVID-19, including more than 6 million deaths. However, on November 24, 2021, the World Health Organization announced a new severe acute respiratory syndrome coronavirus 2 variant designated as the B.1.1.529, a variant of concern (VOC), and the variant has been named as "Omicron." Available preliminary evidence suggests that, as compared with previous VOCs, it has an increased risk of infectivity. Studies have shown that protection from various vaccines effectiveness against hospitalization and death from severe COVID-19 disease is decreasing slowly after a two-dose schedule of COVID-19 vaccines. In response to experiencing a new COVID-19 variant and ongoing resurgence of cases, the importance of COVID-19 vaccine booster dose and durability of the effect of the third dose of vaccine against COVID-19 Omicron variant is controversial yet. To address this, we conducted a systematic literature survey on effectiveness of the third or booster dose of COVID-19 vaccine against the Omicron variant. We have performed a systematic search in PubMed (Medline), Google Scholar, and MedRxiv database, from inception to January 2022 using the MeSH terms and keywords "Corona Virus Disease-2019 OR COVID-19 AND Omicron AND COVID-19 Booster Vaccine." We have identified a total of 27 published studies. We have reviewed all the eligible available studies on the effectiveness of the COVID-19 vaccine booster shots against the Omicron variant. This review may be helpful in accelerating the COVID-19 booster dose vaccination.

Keywords: COVID-19; COVID-19 vaccine; Omicron; SARS CoV-2; booster dose.

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