

Press Release

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SAFE Glen Cove Coalition: A New Study Suggests Boosters Can Provide Ongoing Prevention of Hospitalization and Death

According to the results of a new study published in the New England Journal of Medicine, vaccination offers long-lasting protection from the worst outcomes of COVID-19 and suggest that declining immunity is responsible for breakthrough infections, but vaccines maintain protection from hospitalization and severe disease 9 months after getting the first shot.

The study, which is a collaboration between the North Carolina Department of Health and Human Service and the University of North Carolina at Chapel Hill and the North Carolina Department of Health and Human Services, examined data on COVID-19 vaccination history and health outcomes for 10.6 million North Carolina residents between December 2020 and September 2021. Research outcomes were used by the Centers for Disease Control and Prevention (CDC) to [support the use of booster shots](#).

The emergence of the Delta and omicron variants has raised questions about whether breakthrough infections are caused by the more transmissible variants or waning immunity or by the more transmissible variants. The data included outcomes from cases caused by the Delta variant. However, the data were collected before the discovery of the omicron variant.

The results showed that the effectiveness of the Pfizer and Moderna mRNA vaccines in reducing the risk of COVID-19 reached a peak of approximately 95% at 2 months after the first dose and then gradually declined. At 7 months, the Pfizer vaccine dropped to approximately 67% effectiveness compared with the Moderna vaccine, which maintained approximately 80% effectiveness. Among early recipients of the 2 mRNA vaccines, effectiveness dropped dramatically from mid-June to mid-July 2021, when the delta variant was surging. Effectiveness for the Johnson and Johnson (J&J) vaccine was approximately 75% at 1 month after the injection and fell to approximately 60% after 5 months. All 3 vaccines were effective at reducing hospitalizations related to severe COVID-19.

Effectiveness of the Pfizer vaccine reached a peak of approximately 96% at 2 months and remained at approximately 90% at 7 months, while the effectiveness of the Moderna vaccine reached a peak of approximately 97% at 2 months and remained at approximately 94% at 7 months. Effectiveness of the J&J vaccine reached a peak of approximately 86% at 2 months and was higher than approximately 80% through 6 months. All 3 vaccines were also more effective at preventing death than hospitalization. Because the majority of the vaccines in the United States were administered more than 7 months ago

and only a small percentage of the population has received boosters, waning immunity is likely contributing to the breakthrough infections with the omicron variant.

Researchers maintain the primary message from the study is that unvaccinated people should get vaccinated as soon as possible and that the results of the study also underscore the importance of booster shots, especially for older adults. Unlike previous studies, researchers estimated the vaccine effectiveness in reducing the current risks of COVID-19, hospitalization and death as a function of time elapsed since the first dose. This information is critically important in determining the need for and the optimal timing of booster vaccination. Everyone aged 5 years and older is eligible for a COVID-19 vaccine.

The New England Journal of Medicine is a vital resource for Physicians, Educators, Medical Researchers and Health Care professionals and as a weekly published peer-reviewed medical journal. For more information, please visit www.nejm.org.

To learn more about the SAFE Glen Cove Coalition please follow us www.facebook.com/safeglencovecoalition or visit SAFE's website to learn more about the COVID-19 Epidemic and its correlation to increased mental illness, alcohol and substance use in youth and adults and resources to cope please visit www.safeglencove.org.