

Sheldon Jacobson: Is a second booster for COVID-19 the right choice for you?

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FULL TEXT

The Food and Drug Administration and the Centers for Disease Control and Prevention recently authorized a second booster shot of the Pfizer/BioNTech and Moderna COVID-19 vaccines for those age 50 and older. The recommendation follows a study out of Israel recently published in The New England Journal of Medicine. The Israel study reports a modest relative risk reduction in COVID-19 infections for those receiving a second booster compared to those who have gotten one booster, on the order of 1.5 times lower, with this benefit waning over the length of the study period, or around two months.

The study also reported a significant relative risk reduction in severe cases of COVID-19 following a second booster, on the order of 3.5 times lower, with this benefit enduring during the length of the study period. It is not yet known whether this benefit will persist into the future.

An additional takeaway from the study is the absolute risk reduction for severe cases.

According to the study's data, there were around 3.9 severe cases per 100,000 person-days for those who had received two vaccine doses and a booster. This measure, person-days, is difficult to gain a practical appreciation for—it assumes that the severe case rate scales in the same manner with both the size of the population and over time.

The 3.9 severe cases per 100,000 person-days corresponds with 3.9 severe cases per 1,666 people over the study period of two months, or a rate of one severe case for every 420 people who have received two doses and one booster.

Using this same rescaling approach with two boosters resulted in a rate of one severe case per 1,111 people. The takeaway from this exercise is that as a baseline, the benefit of two vaccine doses and one booster is already quite good, given that all study participants were 60 years old and older. The second booster provides an added risk reduction benefit.

The CDC has reported the benefits of two doses and one booster versus just two doses. In all cases, protection wanes over time, which is what precipitated the need for a booster and prompted the need for and discussion of a second booster.

Should you take advantage of a second booster at this time?

The Israeli study applied to those 60 and older, while the recommendation in the United States is for those 50 and older. This younger age cutoff corresponds to when hospitalizations and deaths begin their uptick in the U.S. population. So anyone in this group who is risk-averse and wishes to gain any benefit against severe COVID-19 may opt for a second booster.

On the other hand, if you are comfortable with the risk reduction benefit offered by two doses and a booster, including its waning protection with time, then you may choose to take a pass on the second booster for now and opt for a wait-and-see approach as more data becomes available.

Like all observational studies, there are limitations to the conclusions that can be drawn from the Israeli study. Moreover, the study's duration provides only a glimpse into a narrow time window of risk reduction and benefits. The impact of new variants that may emerge is also an unknown.

There are no easy answers and many difficult questions. Experts are offering the best advice available in a fog of

data uncertainty that is likely to remain stubbornly in place over the short term.

Nonetheless, it is clear that a second booster does provide some risk reduction. The question is whether that benefit is sufficient enough for a particular person to choose a second booster at this time.

Sheldon Jacobson is a professor of computer science at the University of Illinois at Urbana-Champaign.

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