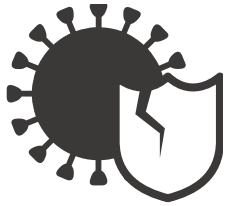


How Long do COVID-19 Vaccines Protect Against Omicron?



Vaccine effectiveness is how well the vaccine works in the real world

Key Facts

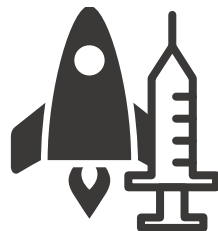


COVID-19 vaccines are less effective against Omicron than other variants



After the primary vaccination series:

- Protection against symptomatic disease drops quickly
- Protection against severe disease, like hospitalization and ICU admission, is better and durable for many months



After a booster shot:

- Protection against symptomatic disease improves substantially **BUT THEN** drops quickly
- Protection against severe disease improves substantially and lasts for many months

How Does Vaccine Effectiveness (VE) Against Omicron Change Over Time?

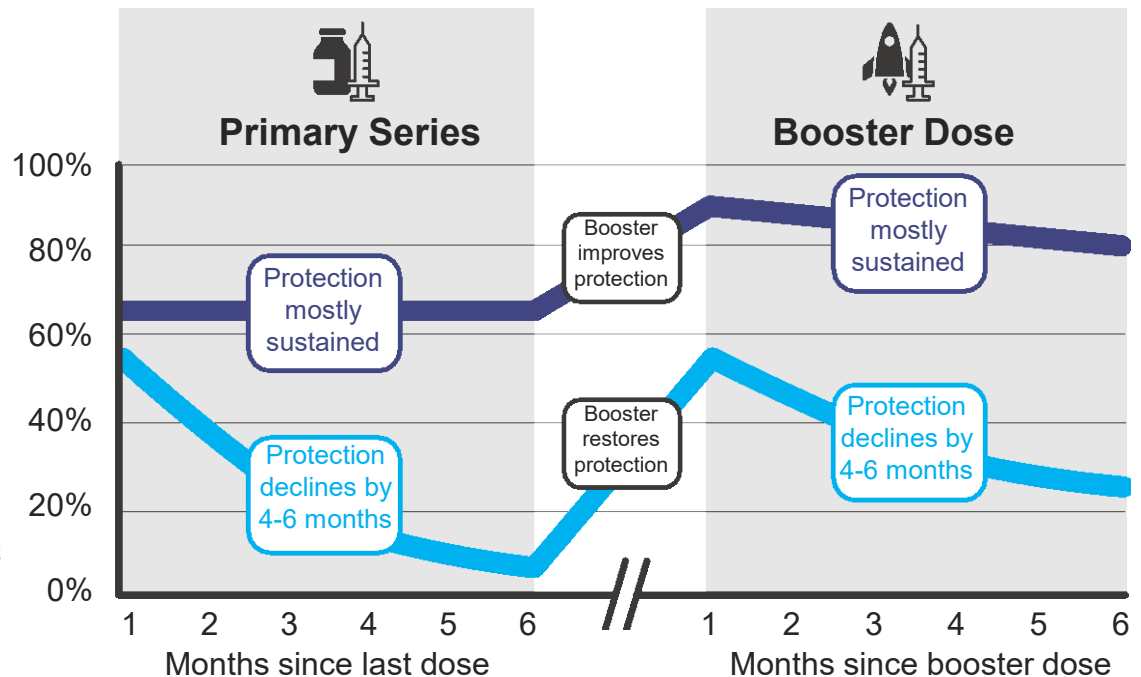
Summary of Vaccine Effectiveness of 5 widely used vaccines

Vaccine effectiveness is how well the vaccine works in the real world

Average Vaccine Effectiveness

Across 5 widely used vaccines

Severe Disease
Symptomatic Disease



Vaccine Effectiveness against SEVERE DISEASE:

protection is PRESERVED over time

- **After the primary series**, VE against severe disease across all vaccines and all ages decreased on average by 1 percentage point over 6 months.
- **After the booster dose**, VE improved by 24 percentage points initially and declined minimally over 6 months.

Vaccine Effectiveness against SYMPTOMATIC DISEASE and ANY INFECTION:

protection WANES rapidly

- **After the primary series**, VE declined on average by 42 and 27 percentage points for symptomatic disease and any infection, respectively, over 6 months.
- **After the booster dose**, VE was restored back to peak levels initially, but then declined at a substantial, though somewhat slower, rate than after the primary series.

Vaccines Studied

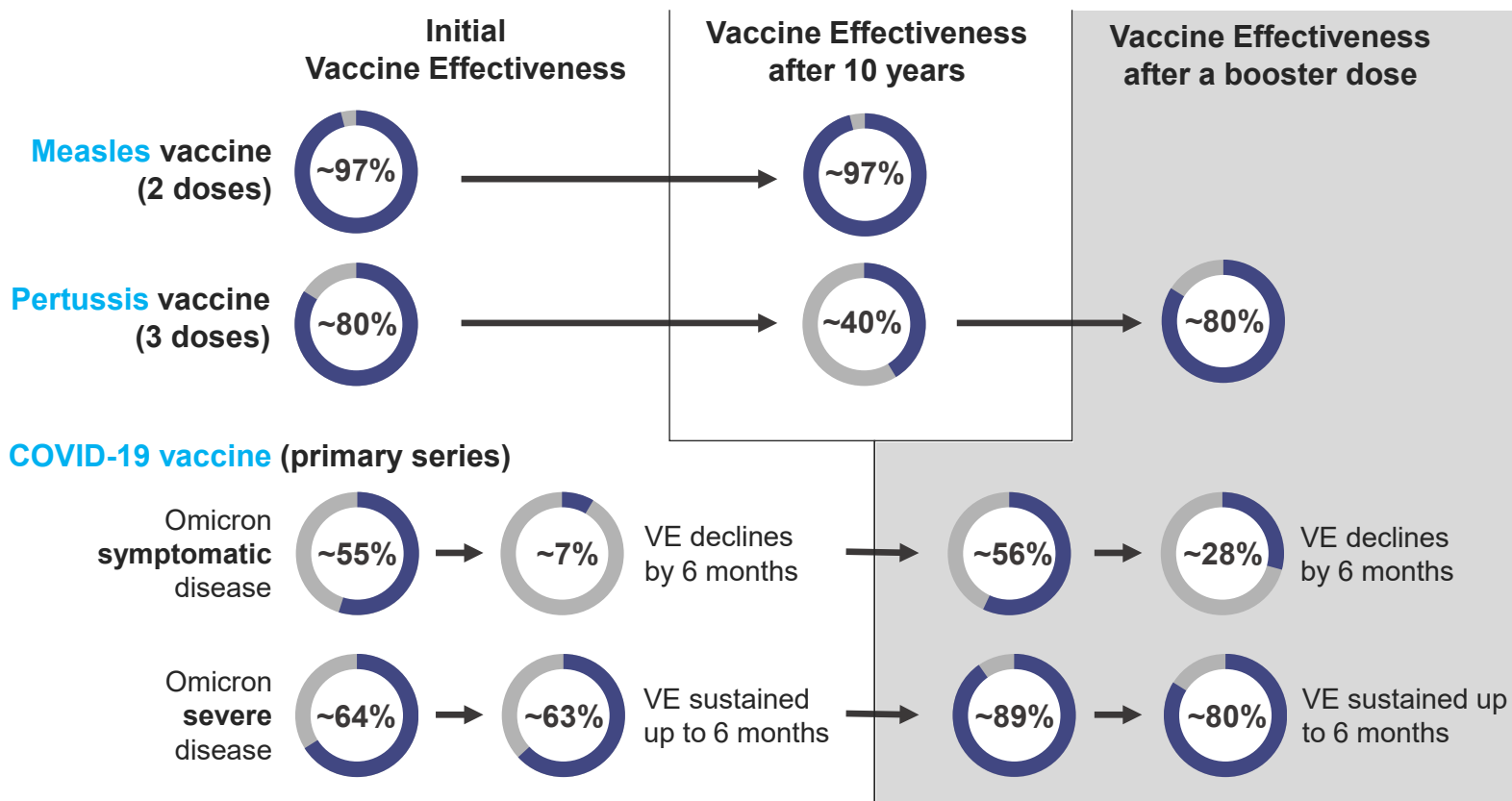
Eighteen studies included assessments of the following COVID-19 vaccines: Comirnaty (Pfizer BioNTech), Spikevax (Moderna), Ad26.CoV2.S (Janssen), Vaxzevria (AstraZeneca), and CoronaVac (Sinovac). Study details, methods available [here](#). See also the [publication](#) in The Lancet Infectious Diseases for additional details on the analysis.

How Long do COVID-19 Vaccines Protect Against Omicron?

How good is the duration of protection from COVID-19 vaccination against Omicron compared to earlier strains of COVID-19 and compared to other commonly used vaccines?

PRE-OMICRON COVID-19 vaccines were, on average, more effective against earlier strains of the virus and the speed of decline in effectiveness was generally less pronounced (a [study in *The Lancet*](#) provides a good summary of the duration of protection after vaccination pre-Omicron).

COMPARED TO MEASLES AND PERTUSSIS VACCINES COVID-19 vaccine protection against symptomatic disease and infection declines quickly compared to measles and pertussis vaccines, which provide protection over many years. But, it has yet to be seen how long protection against severe disease is maintained.



What we don't know about the duration of protection from COVID-19 vaccines

SPECIFIC VACCINES: Limited or no data are available on the duration of protection for inactivated and protein subunit vaccines. Particularly, no data are available for BBIBP-CorV (Sinopharm) and Covaxin (Bharat BioTech).

BOOSTER DOSE: Beyond 4-5 months, we're not sure how long boosters provide protection against Omicron.

PAST INFECTION: Having COVID-19 with or without COVID-19 vaccination provides some protection against infection and symptomatic disease and better protection against severe disease, but we're not sure how long this protection lasts.

OLDER ADULTS: Only 2 included studies, both of severe disease, show vaccine protection and duration of protection appear to be similar in older adults as the general population.