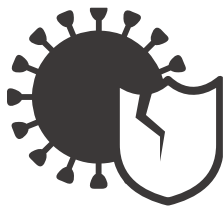


# How Long do COVID-19 Vaccines Protect Against Omicron?



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

## Key Facts

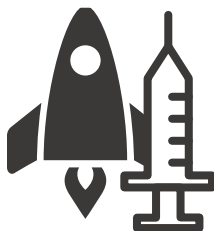


**COVID-19 vaccines are less effective against Omicron than other variants**



**After the primary vaccination series:**

- Protection against severe disease, like hospitalization and ICU admission, declines some over 6 months
- Protection against symptomatic disease drops quickly



**After a booster shot:**

- Protection against severe disease improves substantially but declines some over 6 months
- Protection against symptomatic disease improves substantially but then drops quickly

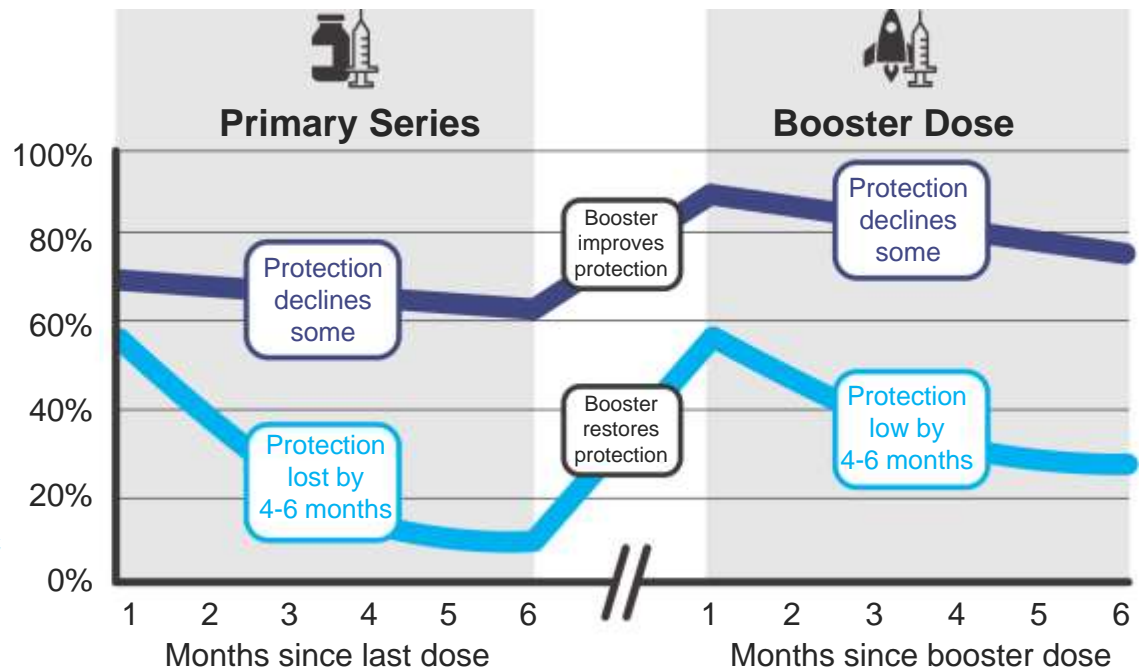
## How Does Vaccine Effectiveness Against Omicron Change Over Time?

### 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



### Vaccine Effectiveness against SEVERE DISEASE:

#### Protection DECLINES SOME over time

- After the primary series, vaccine effectiveness against severe disease across all vaccines and all ages decreased on average by 8 percentage points over 6 months.
- After the booster dose, vaccine effectiveness improved to ~88% on average initially and then declined to ~75% over 6 months.

### Vaccine Effectiveness against SYMPTOMATIC DISEASE:

#### Protection WANES rapidly

- After the primary series, vaccine effectiveness against symptomatic disease declined on average by 49 percentage points over 6 months.
- After the booster dose, vaccine effectiveness was restored back to peak levels initially, but then declined at a substantial, though somewhat slower, rate than after the primary series.

## Vaccines Studied

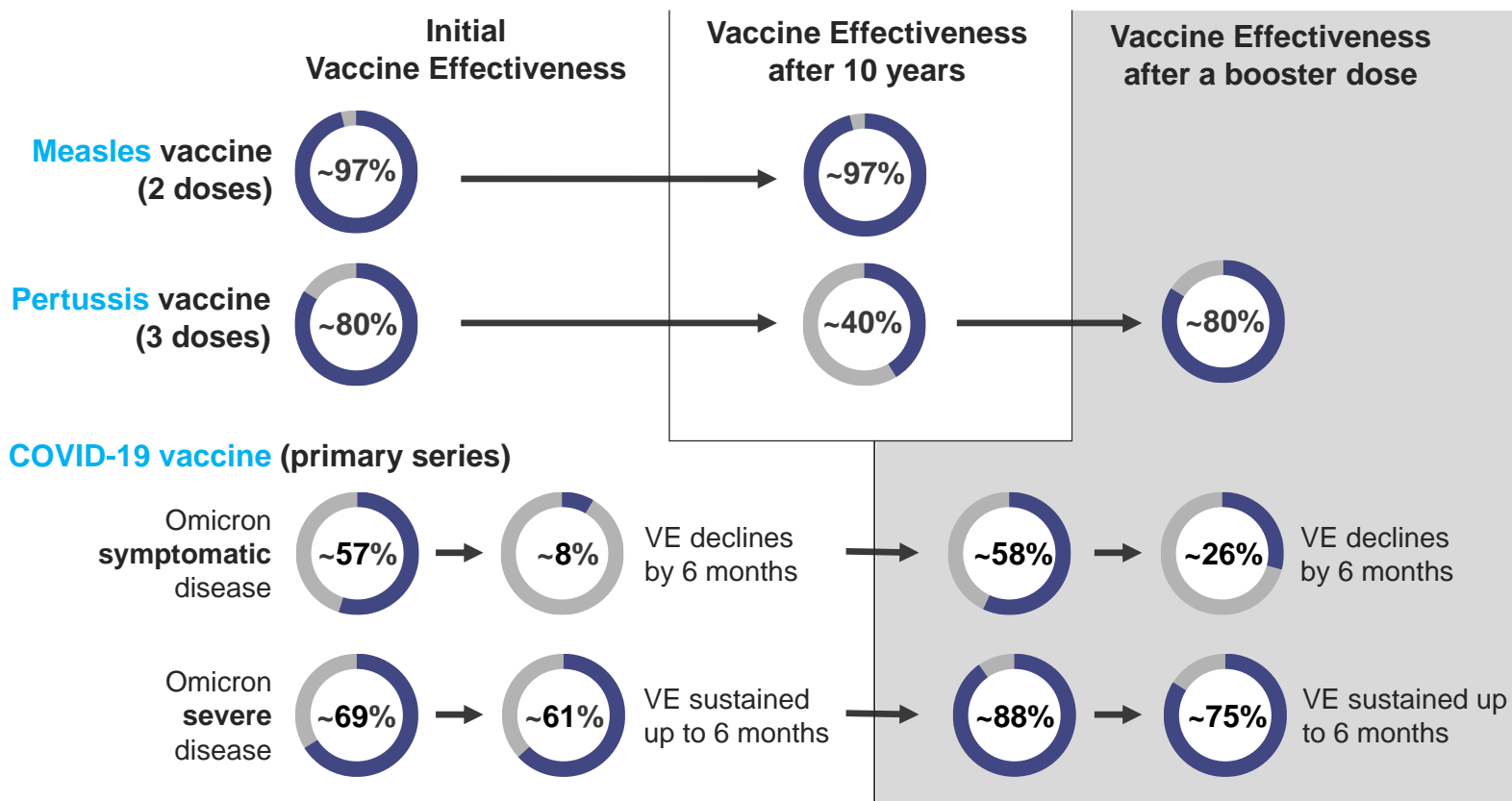
Results are based on thirty studies that assessed the following COVID-19 vaccines: Comirnaty (Pfizer BioNTech), Spikevax (Moderna), Ad26.CoV2.S (Janssen), Vaxzevria (AstraZeneca), and CoronaVac (Sinovac). Study details and methods are available [here](#). See also the [publication in The Lancet Infectious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

## 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 5 months, we're not sure how long boosters protect against Omicron.

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

**OLDER ADULTS:** Only 2 of the studies analyzed, both of severe disease, evaluated protection in older adults but both showed similar protection and duration of protection as the general population.