Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

COVID-19

COVID-19 Vaccines Work

Updated Apr. 7, 2021 Print

After the U.S. Food and Drug Administration (FDA) approves a vaccine or authorizes a vaccine for emergency use, experts continue to assess vaccine effectiveness—or how a vaccine works in real-world conditions. The goal is to understand how a vaccine protects people outside of strict clinical trial settings.

What you need to know

- Vaccines currently approved for use in the United States are **effective** at preventing COVID-19.
- COVID-19 vaccination is an important tool to help stop the pandemic.
- COVID-19 vaccines help protect people who are vaccinated from getting sick or severely ill with COVID-19 and may also help protect people around them.
- CDC recommends you get a COVID-19 vaccine as soon as one is available to you.

So far, research on mRNA COVID-19 vaccine effectiveness in real-world conditions is reassuring.

- Research provides growing evidence that Pfizer-BioNTech and Moderna mRNA COVID-19 vaccines offer similar protection in real-world conditions as in clinical trial settings.
- Real-world data show that receiving only one dose of these mRNA COVID-19 vaccines provides some protection against COVID-19, at least in the short term.
- To receive the most protection, people receiving one of these mRNA COVID-19 vaccines should receive both recommended doses.
- In addition to providing protection against COVID-19, there is increasing evidence that these mRNA COVID-19 vaccines provide protection against infections that do not result in symptoms.

COVID-19 vaccines will help protect you from getting sick or severely ill with COVID-19

- Large-scale clinical trials found that COVID-19 vaccination prevented most people from getting COVID-19.
- All COVID-19 vaccines available in the United States are effective at preventing COVID-19.
- It typically takes about two weeks for the body to build protection after vaccination. That means it is possible you could still get COVID-19 soon after vaccination. This is because your body has not had enough time to build full protection.
- Some people who are fully vaccinated against COVID-19 will still get sick because the vaccines are not 100% effective. When this happens, vaccination might help keep you from getting seriously ill, based on data from clinical studies.

COVID-19 vaccines and new variants of the virus

What We Know

New forms, or variants, of the virus that causes COVID-19 have emerged. Current data suggest that COVID-19 vaccines used in the United States should work against these variants. For this reason, COVID-19 vaccines are an essential tool to protect people against COVID-19, including against new variants. CDC recommends getting vaccinated as soon as vaccine is available to you.

What We Do Not Know

Evidence is limited on how the new COVID-19 variants will affect how COVID-19 vaccines work in real-world conditions. CDC has systems in place to monitor how common these variants are and to look for the emergence of new variants. CDC will continue to monitor variants to see if they have any impact on how COVID-19 vaccines work in real-world conditions.

Learn more about COVID-19 variants

Related Pages

- World Health Organization (WHO) Vaccine Effectiveness Guidance
- COVID-19 Vaccine Effectiveness Research
- Key Things to Know about COVID-19 Vaccines
- Ensuring the Safety of COVID-19 Vaccines in the United States

Related Research

- *MMWR*: Interim Estimates of Vaccine Effectiveness of BNT162b2 and mRNA-1273 COVID-19 Vaccines in Preventing SARS-CoV-2 Infection Among Health Care Personnel, First Responders, and Other Essential and Frontline Workers — Eight U.S. Locations, December 2020–March 2021
- *MMWR*: Effectiveness of the Pfizer-BioNTech COVID-19 Vaccine Among Residents of Two Skilled Nursing Facilities Experiencing COVID-19 Outbreaks — Connecticut, December 2020–February 2021

More Information

Vaccine Effectiveness Presentation at the Oct. 22, 2020, FDA Vaccines and Related Biological Products Advisory Committee Meeting

FDA's Center for Biologics Evaluation and Research Plans for Monitoring COVID-19 Vaccine Safety and Effectiveness [399 KB, 27 pages]

Food and Drug Administration COVID-19 Vaccines

Combat COVID: Information about Clinical Trials

Last Updated Apr. 7, 2021
Content source: National Center for Immunization and Respiratory Diseases (NCIRD), Division of Viral Diseases