The Johnson & Johnson Vaccine for COVID-19

Johnson & Johnson has developed a vaccine that works differently than the Pfizer and Moderna vaccines and is highly effective for preventing moderate to severe COVID-19.

What Is the Johnson & Johnson Vaccine?

The COVID-19 vaccine from Johnson & Johnson uses existing technology that involves a virus called **adenovirus**, a common cause of respiratory infections. The DNA in the adenovirus is modified so that it produces a key part of the SARS-CoV-2 virus particle to which the body then develops an immune response. The adenovirus that delivers the SARS-CoV-2 DNA particle cannot multiply, so it does not cause infection. Because this system is based on stable DNA molecules, it does not require ultracold storage, making it easier to distribute.

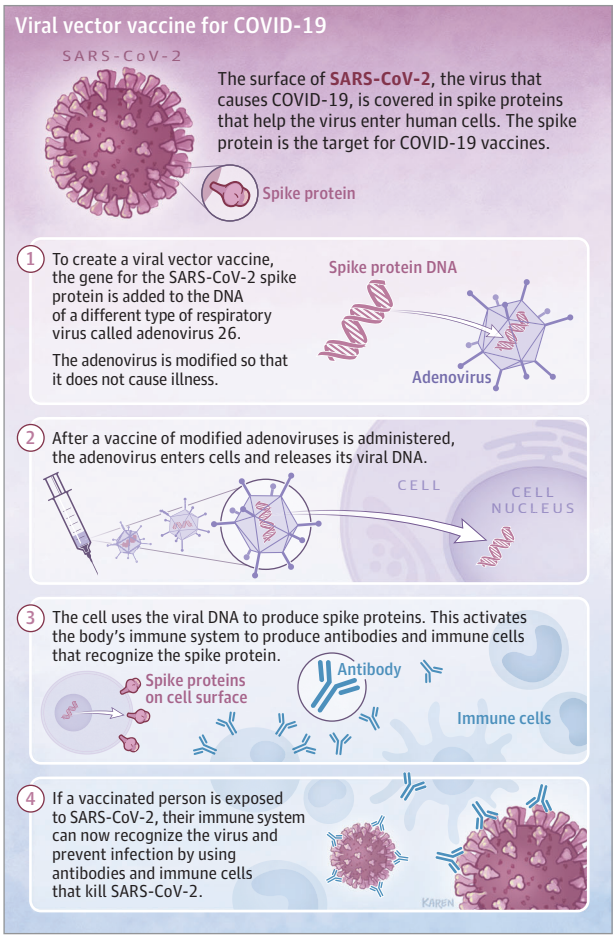
How Does the Johnson & Johnson Vaccine Differ From Other Available COVID-19 Vaccines?

The Pfizer and Moderna COVID-19 vaccine technology uses genetic material (mRNA) that code for parts of the SARS-CoV-2 virus protein. This mRNA is protected by lipid nanoparticles (fat bubbles) that, when injected, cause a person's own cells to make pieces of viral particles to which the body develops immunity. Because the genetic material is broken down quickly, it stays in a person's cells for only a short period of time. For this reason, these vaccines must be kept in very cold environments until they are ready to be given.

How Safe and Effective Is the Johnson & Johnson Vaccine?

Initially, the Johnson & Johnson vaccine was shown to produce antibodies against SARS-CoV-2 in 90% of people who received it after the first dose. The amount of antibodies was greater for those who received 2 doses of the vaccine. Data released by Johnson & Johnson suggest that 1 dose of vaccine was 66% effective in preventing moderate to severe COVID-19 and 100% effective in preventing COVID-19–related hospitalization and death. These data are being reviewed by the US Food and Drug Administration to consider whether to grant an Emergency Use Authorization (EUA) to allow use of this vaccine.

In the studies of this vaccine, no one developed a severe allergic reaction, and side effects of the vaccine were similar to those of other vaccines, including fever experienced by 9% of volunteers. The vaccine did not appear to cause any excess serious complications.



FOR MORE INFORMATION

- US National Library of Medicine
  https://medlineplus.gov/covid19vaccines.html
- COVID-19 vaccination (Centers for Disease Control and Prevention)
  https://www.cdc.gov/vaccines/covid-19/index.html
- Adenoviruses (Centers for Disease Control and Prevention)
  https://www.cdc.gov/adenovirus/index.html

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Published Online: March 1, 2021. doi:10.1001/jama.2021.2927

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Conflict of Interest Disclosures: Dr Creech reported receipt of personal fees from Altimmune, Horizon, Karius, Adaptive, Premier, and Astellas; receipt of grants from Merck, and serving as an investigator in the phase 3 clinical trials of the Moderna and Johnson & Johnson vaccines. No other disclosures were reported.

Source: Johnson & Johnson announces single-shot Janssen COVID-19 vaccine candidate met primary endpoints in interim analysis of its phase 3 ENSEMBLE trial. https://www.jnj.com/johnson-johnson-announces-single-shot-janssen-covid-19-vaccine-candidate-met-primary-endpoints-in-interim-analysis-of-its-phase-3-ensemble-trial

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