

COVID-19 VACCINES

We are exposed to germs such as bacteria and viruses every day. Some viruses cause the common cold, while others like COVID-19 can cause serious illness. To best fight these infections, we need to train our bodies to recognize the virus as a threat. Vaccines do this by showing our bodies a harmless piece of the virus so that our immune system can recognize the virus and fight off the infection before it can cause us to be sick. It typically takes a few weeks for the body to build immunity after getting a vaccine.

HOW DO THE COVID-19 VACCINES WORK?

Pfizer-BioNTech and Moderna

- mRNA vaccine | Two shots
- 94-95% effective against all COVID-19 infection after the second dose
- 100% effective in preventing death
- Messenger RNA (mRNA) is injected into the arm muscle and, after entering the muscle cell, uses the cell's machinery to make a harmless form of the spike protein of COVID-19.
- The COVID-19 spike protein then moves to the surface of the muscle cell and causes the immune system to kick into gear, creating both antibody and cellular immune responses.
- The mRNA vaccines cannot give you COVID-19 because they do not use the live virus.

Johnson & Johnson (Janssen)

- Viral vector vaccine | One shot
- 74% effective against all COVID-19 infection after the single dose
- 85% effective against severe disease after the single dose
- 100% effective in preventing death
- The vector (a modified version of a different, harmless virus called adenovirus) carries the mRNA for the spike protein of COVID-19, and after entering the muscle cell at the site of injection uses the cell's machinery to make a harmless form of the COVID-19 spike protein.
- The COVID-19 spike protein then moves to the surface of the muscle cell and causes the immune system to kick into gear, creating both antibody and cellular immune responses.
- The viral vector vaccine cannot give you COVID-19 because it does not use the live virus, and the vector itself cannot make new copies of itself.

Two of the COVID-19 vaccines (Moderna and J&J) are currently only authorized for patients ages 18 and older. The Pfizer vaccine is authorized for patients 16 and older.



To learn more, visit “Different COVID-19 Vaccines”
[cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines.html](https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines.html)



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