What sets apart Novavax option from other COVID-19 vaccines

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About 20% of adults in the U.S. still have not received their primary series of COVID-19 vaccine. But with a fourth COVID-19 vaccine now available, experts anticipate at least some of these people will roll up their sleeves for a more traditional option: a protein-based vaccine called Novavax.

The Centers for Disease Control and Prevention (CDC) accepted the recommendation of the Advisory Committee on Immunization Practices for the use of the two-dose Novavax COVID-19 vaccine, administered three to eight weeks apart, for people 18 or older.

This comes after the Food and Drug Administration (FDA) Vaccines and Related Biological Products Advisory Committee voted to recommend emergency use authorization (EUA) of Novavax in June, based on the determination that the benefits of the SARS-CoV-2 vaccine outweighed the risks in this population. The FDA authorized Novavax July 13. This delay in authorization was to allow the agency to investigate the company’s manufacturing processes for Novavax.

“The Novavax vaccine—a traditional protein-based vaccine—offers an additional option for adults who remain unvaccinated against COVID-19,” said Sandra Adamson Fryhofer, MD, chair of the AMA Board of Trustees. “About 26–37 million U.S. adults have not yet received a single dose of a COVID-19 vaccine and would benefit from starting a primary series.

“Data suggests that some people who have remained unvaccinated against COVID-19 have been waiting for authorization of a traditional protein-based vaccine before getting vaccinated,” Dr. Fryhofer added.

When physicians are counseling patients, explore these four reasons why Novavax could be a game changer in the quest to get more people vaccinated against COVID-19.

**It’s a widely used vaccine technology**
Novavax is a different type of COVID-19 vaccine than what has been previously approved or authorized in the U.S. The Pfizer-BioNTech and Moderna COVID-19 vaccines use a newer mechanism in which messenger RNA is used to lead cells to create a protein on the virus’ surface that the immune system can recognize. Johnson & Johnson’s vaccine is a viral vector vaccine that uses a harmless cold virus to deliver spike-making instructions.

The Novavax vaccine is protein-based, which is a type of vaccine that has been widely used for decades. Some more familiar protein-based vaccines include those that protect against human papillomavirus, hepatitis B and shingles. The vaccine contains a synthetic SARS-CoV-2 spike protein and Matrix-M adjuvant, which is an ingredient used to create a stronger immune response of the vaccinated person. The spike protein in this vaccine is produced in insect cells while the Matrix-M adjuvant contains saponin extracts from the bark of the soapbark tree that is native to Chile.

And unlike other COVID-19 vaccines, Novavax can be stored in standard refrigeration, enhancing access.

**An additional vaccine option**

Since Novavax’s COVID-19 vaccine uses more traditional technology, officials at the FDA, CDC and other health experts have noted that this is an additional option for the millions in the U.S. who have been skeptical of mRNA vaccines. Health professionals hope this additional option will help sway the decision of those who’ve remained unvaccinated against COVID-19.

Additionally, the Novavax COVID-19 vaccine offers an option to people who may have an allergic reaction to mRNA vaccines.

**Efficacy is promising**

Novavax was found to be 90.4% effective in preventing mild, moderate or severe COVID-19, according to the FDA. In a subgroup of trial participants 65 or older, the vaccine was 78.6% effective in preventing mild, moderate or severe COVID-19.

However, the clinical trial was conducted before the emergence of Delta and Omicron variants. In ongoing trials, Novavax noted its vaccine prompted broad immune responses against all COVID-19 variants, including the BA.5 Omicron subvariant, and the company plans to seek authorization for a booster dose in the U.S. Novavax’s vaccine has been approved as both a primary series vaccine and a booster in the European Union, Australia and Japan. However, it is not currently authorized for a booster dose in the U.S.
Side effects are the same

The most reported side effects from Novavax vaccination included pain, tenderness, redness and swelling at the injection site. The FDA says clinical trial participants also experienced muscle pain, headache, joint pain, nausea or vomiting, and fever.

There is also a small possibility that Novavax can cause a severe allergic reaction, which would typically occur within a few minutes to one hour after getting a dose of the vaccine. Myocarditis and pericarditis have also occurred in some people who have received the Novavax vaccine, but the chance of having this occur appears to be very low. The risk of getting myocarditis from a vaccine is also much smaller than the risk after having a SARS-CoV-2 infection.

“We continue to strongly urge everyone who has not yet been vaccinated against COVID-19 and is eligible, including pregnant people, to get vaccinated as soon as possible, and when eligible to get a booster dose, to protect themselves and their loved ones,” said Dr. Fryhofer. “Anyone with questions about the vaccines should speak with their physician and review trusted resources, including getvaccineanswers.org.”

Learn more from the FDA’s fact sheet for patients and caregivers (PDF), as well as a fact sheet for physicians and other health professionals (PDF).

To stay informed on the latest COVID-19 news on vaccines, treatments and guidance, visit the AMA COVID-19 resource center for physicians.

The AMA has also developed frequently-asked-questions documents on COVID-19 vaccination covering safety, allocation and distribution, administration and more. There are two FAQs, one designed to answer patients’ questions (PDF), and another to address physicians’ COVID-19 vaccine questions (PDF).