

COVID-19 VACCINE FAQs and ANSWERS

From York Hospital's Infectious Disease Physicians Dr. Evangeline Thibodeau & Dr. Gretchen Volpe

Q: WHY GET VACCINATED?

A: Vaccines are our most important tools for protecting individuals and communities from infectious diseases. Now that COVID-19 is our most pressing public health threat, getting vaccinated against COVID-19 is the best way for people to keep themselves and others safe from this illness. Vaccines not only prevent individuals from getting sick but also prevent others around them from getting sick. Since people with weakened immune systems (such as babies, the elderly, and those with immune suppressed conditions or receiving immune suppressive drugs) may not respond as robustly to vaccines, it is important for everybody to get vaccinated to decrease the amount of circulating pathogens (virus, bacteria or other microorganism) in the community. This is the best way to reach herd immunity during a novel pandemic.

Q: HOW DO VACCINES WORK?

A: Vaccines help your body fight infections more quickly and more effectively than your body can do on its own. Vaccines prepare your immune system to fight against a certain infection or pathogen – in this case, the virus that causes COVID-19 – by causing the body to make antibodies. These antibodies can then fight the pathogen if you are infected with it in the future, making you less likely to get sick and preventing you from becoming seriously sick. Vaccines may contain a weakened or inactivated form of the pathogen, a piece of the pathogen (such as a certain protein), or a weak toxin made by the pathogen. Some vaccines also contain other ingredients such as adjuvants or stabilizers that enhance the vaccine's protection against pathogens. Vaccines don't pass on the pathogen, but they show the body a sample of the pathogen so the body can be prepared to react quickly if it encounters the pathogen.

Q: HOW DO COVID-19 VACCINES WORK?

A: COVID-19 vaccines have been provided to the public at a faster rate than vaccines have been previously because of the public health need. They have still gone through the same phases of development and regulatory steps needed to ensure safety, but they have done this in overlapping periods of time rather than in step-by-step fashion. Several of these vaccines, from Pfizer and Moderna companies, for example, use mRNA technology. This means that they deliver a piece of genetic code to our cells, which then allows our cells to produce one of the COVID-19 viruses

proteins. The body then can make antibodies to that protein. There are no adjuvants in these vaccines. Other COVID-19 vaccines, such as Johnson & Johnson's /Janssen's, use a common cold-causing virus to deliver the genetic code to our cells.

Q: WHAT ARE SOME COMMON SIDE EFFECTS OF THE COVID-19 VACCINES?

A: Allergic reactions can occur with any vaccination and most commonly include local reactions with pain, redness, or swelling at the site of injection. Less commonly people can experience fever or more systemic reactions. Reactions to COVID-19 vaccines do occur and most commonly include mild local reactions. The Moderna vaccine—currently the only vaccine offered at York Hospital—can cause an arm rash in 10% of people. Both mRNA vaccines (Moderna and Pfizer) can cause more systemic reactions that are more common after the second dose, including fever, chills, body aches and headaches. Fortunately, these symptoms are short-lived and usually resolve in 48 hours. Respiratory symptoms are UNCOMMON after these vaccines and should prompt medical attention. Both vaccines also can cause severe allergic reactions called anaphylaxis that is life threatening, however quite rare. You should speak with your healthcare provider if you have a history of anaphylaxis prior to receiving either vaccine as it is still possible you may be offered vaccination.

Q: WILL A VACCINE END THE PANDEMIC?

A: Although vaccines are a very important part of stopping the pandemic, they will not be able to do so alone. The effectiveness of the vaccine is not 100% especially in those with compromised immune systems. In addition, the delivery of the vaccine worldwide will never be 100% and it is possible that repeat vaccinations will need to occur (so-called booster shots). That is why symptom monitoring, testing, contact tracing, social distancing, hand washing, and possibly masking will continue to be important for some time.

Thank you to Dr. Evangeline Thibodeau and Dr. Gretchen Volpe, Infectious Disease specialists at York Hospital, for providing this information. Additional resources and information may be found by visiting the [Centers for Disease Control and Prevention \(CDC\) website](https://www.cdc.gov). For more information about York Hospital and COVID-19 vaccines, please contact Community Relations at (207) 351-2385 or info@yorkhospital.com.