Frequently Asked Questions about the COVID 19 Vaccines

The information included in the Q & A was obtained from the Center for Disease Control, the Coronavirus, COVID 19 Vaccine, State of Michigan and the Children's Hospital of Philadelphia Vaccine Education Center. The information was reviewed and approved by the physicians on the Michigan Parkinson Foundation Board of Directors.

Policy statement from Michigan Parkinson Foundation Medical Advisory Board of Directors

Many patients with Parkinson's are older and at higher risk of poor outcomes if they contract COVID 19. The risks of the disease greatly outweigh the risks of the vaccine. People should also be encouraged do get their flu vaccines. There is a reason almost all health care workers are required to get it to protect our patients, even if we are not in high risk groups.

How do the new COVID-19 vaccines work? Vaccines work by introducing an element into the body that itself can't cause illness but is recognized as an infection by the immune system. The immune system then responds to the element, giving the body the ability to defend against the actual infection should it encounter it in the future.

In the past, vaccines were created by taking the actual pathogen and weakening it to the point that it doesn't cause illness or by taking a piece of the pathogen that itself can't cause disease. This was then injected into the body, inducing the body to create antibodies, which were protective and long lasting, and would work in the future, should the live pathogen enter.

The currently approved vaccines take a pared down approach. Instead of using a weakened COVID-19 virus or a piece of the virus, the vaccines contain a piece of the mRNA instructions *for creating* a piece of the virus. Once injected, our own cells turn these instructions into one of the COVID-19 proteins, which by itself is harmless. The protein is recognized as foreign by the body, triggering the protective immune response, which allows it to "remember" COVID-19 as foreign.

mRNA is easier to manufacture in a laboratory in large quantities than a weakened virus and using mRNA technology allowed for the rapid creation of the vaccines, which typically take many years to develop.

How do mRNA vaccines work?

People make mRNA all the time. In our cells, DNA in the nucleus is used to make mRNA, which is sent to the cytoplasm where it serves as a blueprint to make proteins. Most of the time, the proteins that are produced are needed to help our bodies function.

mRNA vaccines take advantage of this process by introducing the mRNA for an important protein from the virus that the vaccine is trying to protect against. In the case of COVID-19, the important protein is the spike protein of the SARS-CoV-2 virus. The mRNA that codes for the SARS-CoV-2 spike protein is taken up by cells called dendritic cells, which express the spike protein on the cell surface, travel to a local lymph node, and stimulate other cells of the immune system (B cells) to make antibodies. These antibodies protect us, so that if we are exposed to SARS-CoV-2 in the future, our immune system is ready, and we don't get sick.

Is the vaccine safe? We understand that some people may be concerned about getting vaccinated. Safety is the first priority. The process used to approve the COVID-19 vaccines is

the same proven process that was used to create safe and effective vaccines for the flu, polio, measles, whooping cough and more. While the COVID-19 vaccines are being developed as quickly as possible, routine processes and procedures remain in place to ensure the safety of any vaccine authorized or approved for use. More information about the safety of the COVID-19 vaccine is available at the CDC and Children's Hospital of Philadelphia (CHOP) website: • CDC Vaccine Benefits website • CDC Vaccine Safety website • CHOP website

How can a safe vaccine be made so quickly? Vaccine development typically takes many years. However, scientists had already begun research for coronavirus vaccines during previous outbreaks caused by related coronaviruses (Severe Acute Respiratory Syndrome and Middle East Respiratory Syndrome).
That earlier research provided a head start for rapid development of vaccines to protect against infection with COVID-19. No steps were skipped in the development of this vaccine but modifications to the process were made to shorten the timeline without sacrificing safety, such as:

- Overlapping phase I and phase II clinical trials. Phase I studies include a small number of people and evaluate whether the vaccine causes an immune response and is safe. Scientists looked at data from a group of people in phase I as phase II was progressing to make these evaluations.

- While completing large phase III trials, manufacturers began producing the vaccine, so that if it were shown to be safe and effective, they would have large numbers of doses ready.

- While waiting for a vaccine to be ready, many other aspects of vaccine delivery were prepared (e.g., developing plans for how to distribute the first, limited quantities available, ensuring adequate supplies for distributing and administering vaccine.) More information is available at the CHOP website.

Why COVID-19 vaccination is important? Will COVID-19 vaccination help keep me from getting COVID-19? Getting vaccinated yourself may also protect people around you, particularly people at increased risk for severe illness from COVID-19. COVID-19 can have serious, life-threatening complications, and there is no way to know how COVID-19 will affect you. And if you get sick, you could spread the disease to friends, family, and others around you. Wearing masks and social distancing help reduce your chance of being exposed to the virus or spreading it to others, but these measures are not enough. Vaccines will work with your immune system so it will be ready to fight the virus if you are exposed. Stopping the pandemic requires using all the tools we have available.

What to expect when you get vaccinated Is there a cost to get vaccinated? No fees will be charged to get vaccinated. There will be no cost sharing from insurance plans. Vaccine doses purchased with U.S. taxpayer dollars will be given to the American people at no cost. COVID-19 providers agree to administer vaccine regardless of an individual's ability to pay and regardless of their coverage status, and may not seek any reimbursement, including through balance billing, from a vaccine recipient. However, vaccine providers will be able to charge administration fees for giving or administering the shot to someone. Vaccine providers can get this fee reimbursed by the patient's public or private insurance company or, for uninsured patients, by the Health Resources and Services Administration's Provider Relief Fund.

Will more than one dose of COVID-19 vaccine be required? Yes. The current vaccines need two shots to be effective. It is very important that you receive the vaccine from the same

manufacturer both times and get the doses within the required time frame to ensure the best protection from COVID-19. If you receive the Pfizer vaccine the second dose needs to be 21 days after the first dose, and the second dose of the Moderna vaccine needs to be 28 days after the first.

How will I be reminded to get the second dose? MDHHS plans to use multiple ways to notify you of your second dose. COVID-19 vaccination record cards (reminder cards) will be provided when you receive the COVID-19 vaccine. The card provides room for a written reminder for a second-dose appointment. If you have a smartphone, consider taking a photo of your vaccination record and entering the date the next vaccine dose is due in your calendar. MDHHS is also developing text messaging reminders that will be sent prior to your second dose. In addition, the Centers for Disease Control and Prevention (CDC has the V-safe After Vaccination Health Checker" application for your phone that can send you a reminder. To ensure the best protection from COVID-19, it is very important to not skip the second dose. The second dose must be from the same vaccine manufacturer, so it will be important to ensure that where you receive your second dose has the right vaccine. If you can, it would be best to follow up with the same provider who gave you your first shot.

Can any doctor's office, clinic, or pharmacy offer the COVID-19 vaccine? Initially, the federal government will distribute a limited supply of vaccine to each state. Michigan has allocated this limited supply to hospitals and health care settings where workers have contact with patients. Long term care facilities where some of the most vulnerable people live will also receive supply, which will be distributed through pharmacies and local health departments with support from the Michigan National Guard. Doctor's offices, clinics, and pharmacies who are enrolled in the vaccination program can offer the vaccine when the vaccine becomes available to them. As supply increases, doctor's offices, clinics, and pharmacies will be able to obtain the vaccine directly, hopefully in late Spring 2021.

Will people who have already had COVID-19 be able to get vaccinated? Yes. People who have had COVID-19 can still get a vaccine. CDC recommends getting it after you have recovered. You should check with your health care provider if you have questions.

If I already had COVID-19, should I get vaccinated? Shouldn't I be immune? Yes, you should still get the COVID-19 vaccine, even if you have had COVID-19. There is not enough information currently available to say if or for how long after infection someone is protected from getting COVID-19 again; this is called natural immunity. Early evidence suggests natural immunity from COVID-19 may not last very long, but more studies are needed to better understand this.

Once I have been vaccinated against coronavirus, am I exempt from lockdown restrictions?
Everyone will still need to practice recommended public health measures for a while because it will take some time to slow or stop the spread of the virus. While the vaccines appear to be highly effective at preventing disease, it might not prevent asymptomatic infection, meaning vaccine recipients might still be able to get infected, but not have symptoms and, therefore, unwittingly spread the virus. The companies will be doing additional studies to better understand whether this is the case.

What are the side effects of the mRNA vaccine? Side effects from both mRNA vaccines are caused as part of the immune response to the vaccines. In some ways, the more vigorous the immune response, the more common the side effects.

The most common side effects from the mRNA vaccines are:

- Fatigue
- Headache
- Muscle aches

Side effects occurred during the first week after vaccination but were most likely one or two days after receipt of the vaccine. Side effects were more frequent following the second dose and more likely to be experienced by younger, rather than older, recipients. Although most people will not have significant side effects, some people may wish to schedule their vaccination, so that they will not need to call out of work the next day if they don't feel well.

Information provided by Coronavirus, COVID 19 Vaccine, State of Michigan
https://www.michigan.gov/coronavirus/0,9753,7-406-98178_103214---,00.html

Children's Hospital of Philadelphia, Vaccine Education Center
https://www.chop.edu/centers-programs/vaccine-education-center/making-vaccines/prevent-covid