

COVID-19 VACCINE

A GUIDE FOR CHILDREN'S HEALTH CARE PATIENTS AND FAMILIES

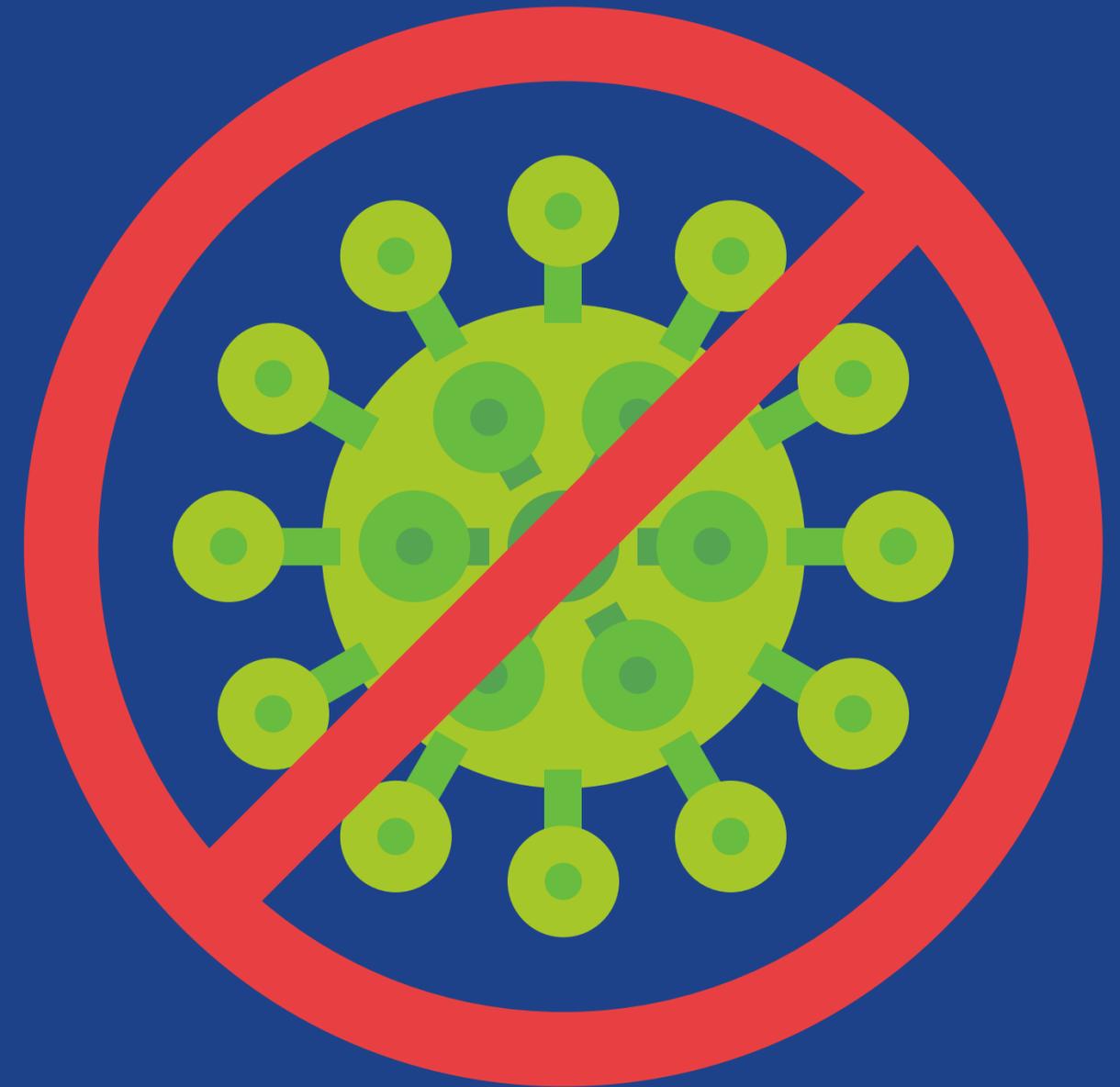
CHC FAMILIES

COVID-19 vaccination Phase 1 has started and while it is not approved in children under the age of 16, we are getting lots of questions about the vaccine. Here we will talk about:

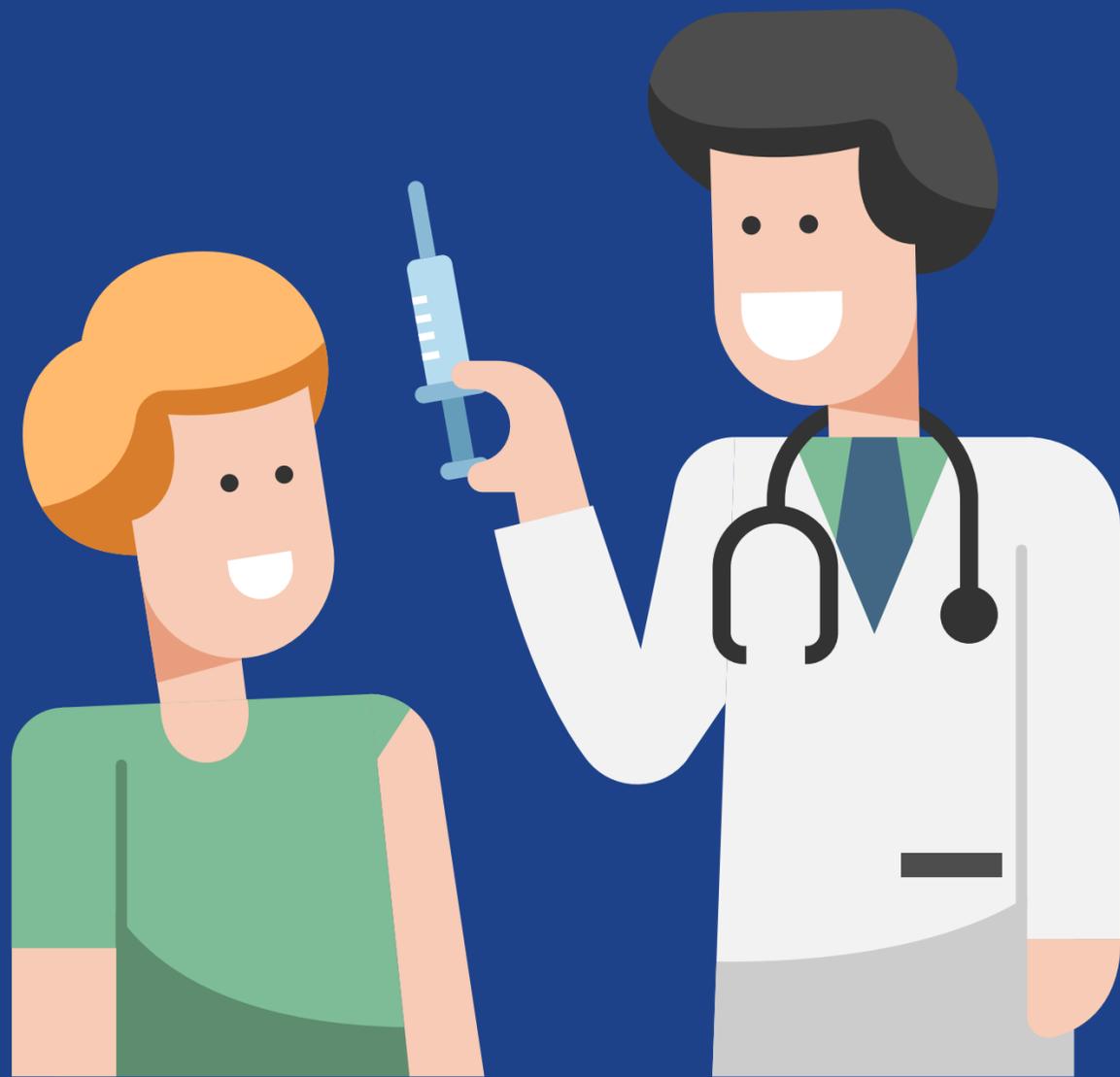
What is a vaccine?

How is the COVID-19 vaccine different?

Various concerns about the vaccine



****This is a very brief, simplified explanation of vaccines, mRNA, and your immune system.



What is a vaccine?

Scientific explanation

A vaccine is defined as "a substance used to stimulate the production of antibodies and provide immunity against one or several diseases."

Vaccines use a weakened version of the disease, a part of the disease, a product of the disease such as a toxin, or the synthetic substituted for the disease to act as an antigen (a term used for a foreign substance).

But what does that mean?



In easy to understand terms...

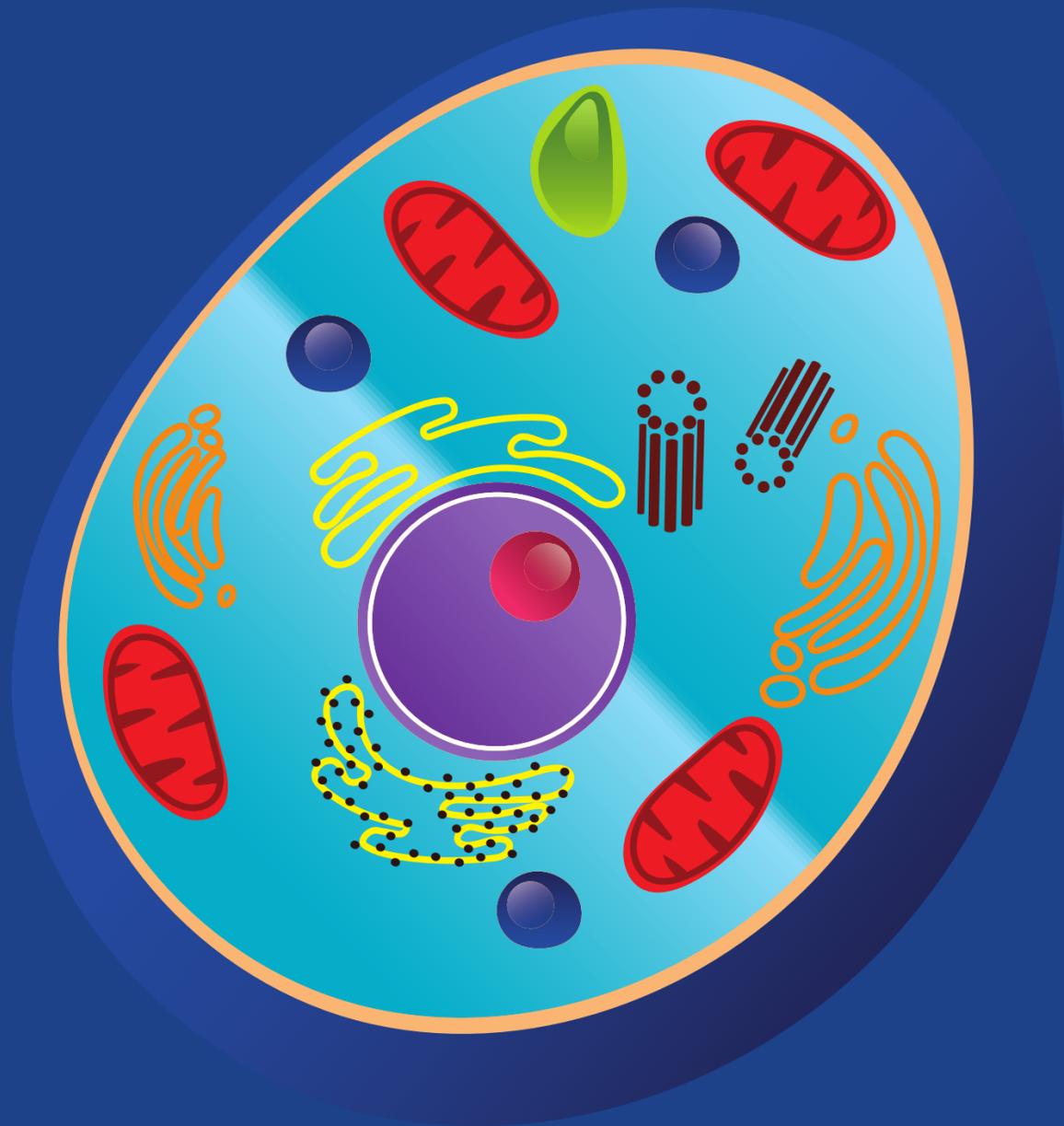
In this example, your body is a football team playing a game. If you play well and win you do not get sick (this is your immune system fighting off the virus). If you lose the game you get sick. But you remember this team and their plays, so next time its an easy win.

A vaccine is like having the other teams play book before you ever play them. If you know every play they are going to make, you are much more likely to win the game

How is the COVID-19 vaccine different?

Scientific explanation

mRNA vaccines teach our cells how to make a protein or part of a protein that triggers an immune response. The mRNA enters your cells and then uses your own cells to make a portion of the COVID-19 cell (the spike). Your body recognizes this spiky protein as foreign and gets rid of it. Your body makes cells that remember those proteins so that next time it sees those funny spikes, it can react immediately. Once your body makes the protein the mRNA is broken down and your body gets rid of it.



Isn't mRNA a new science?



Scientists have been working on mRNA based treatments for cancer treatments and vaccines for over 30 years! They spent this time learning about mRNA and viruses. They have been able to develop mRNA vaccines that are more effective than other vaccines.

There are many other mRNA vaccines in development for things such as influenza and HIV. Because of the pandemic and the severity of illness, all attention was switched to developing a COVID-19 vaccine.

Within weeks of the virus being identified, they were able to get the mRNA sequence to start making the vaccine. Because of the work scientist did in the past 30 years, they were able to develop a safe and effective vaccine in an expedited manner. And because of the severity COVID-19, the approval was able to move through the "red tape" faster but it had no less attention paid to the research and data than any other vaccine or medication.

Can it change my DNA?

Scientific explanation

DNA is the blueprint in your body that makes anything your body needs. It is inside the nucleus of each cell. Every cell in your body has ALL the DNA. But your body doesn't need to make every protein. An eye cell doesn't need what a kidney cell does. Your DNA therefore sends a message for the cell to only make the needed proteins. This message is the mRNA. Once your body makes the protein, the mRNA breaks down. mRNA cannot enter the nucleus, change or edit DNA or become a part of your DNA.

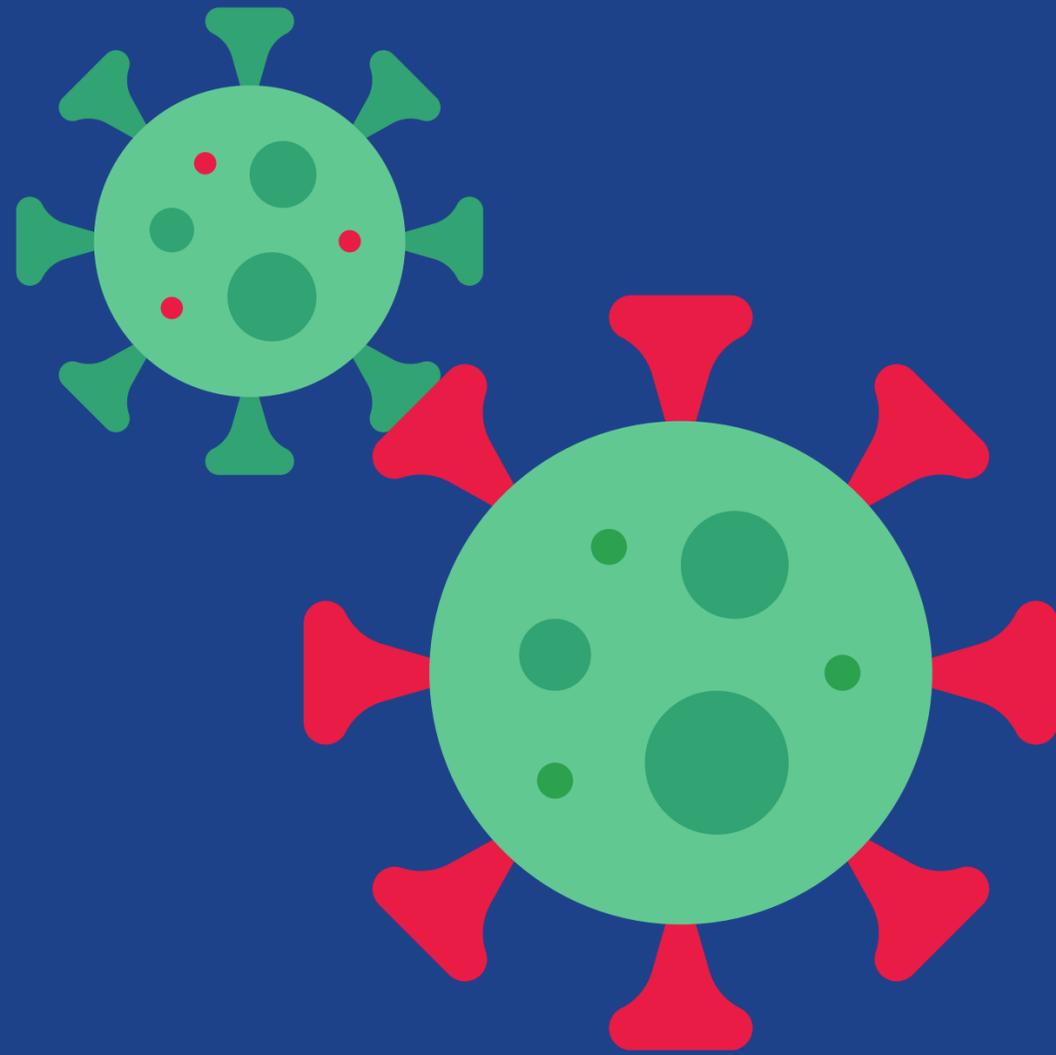


Easier to understand terms

If you go to Ikea, you don't need instructions and tools for ALL the furniture. You only want instructions and tools for the furniture you purchased and are building. And once you build it, you throw out the directions and that little allen wrench because you no longer need them. But if you brought Ikea your own allen wrench, they can't add it to the already made instruction books and tool sets.



What about the new variants?

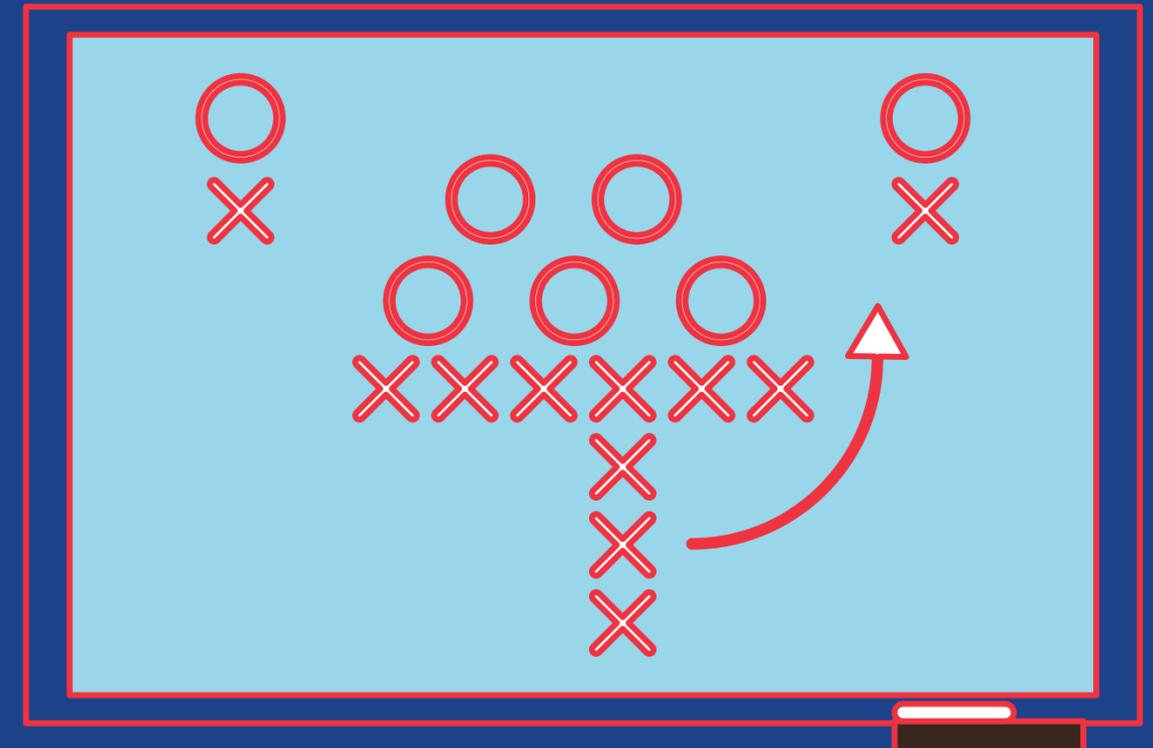


We believe that the vaccine's effectiveness will not be affected by the current variants but they are still continuing to research this. The vaccine mRNA codes for the "spike" part of the COVID-19 cell. As long as that spike is still recognizable to your body, your immune system will be able to fight it off.

Easier to understand terms

Back to the football team. If the opposing team changes 1 or 2 plays but all the rest are the same as the playbook you were given, you are more likely to win.

But if they have a whole new playbook, you are more likely to lose.



Why do I get symptoms after a vaccine?

A vaccine causes a reaction in your body. That is the goal! We want your immune system to mount enough of a reaction that it makes antibodies that are ready and waiting if presented with the actual disease.

Sometimes we notice our immune system working after a vaccine. You may feel achy, under the weather, or develop a fever. This is NOT you becoming ill. These are all signs your immune system is working and doing its job!

mRNA vaccines have been shown to show a BETTER immune response than traditional vaccines. The mRNA vaccines help you develop antibodies AND triggers immune fighting cells. Therefore, you are more likely to develop some symptoms after the vaccine.



The vaccine came out so fast! Is it safe?



mRNA therapies have been in development for 30 years. Because of the global pandemic, scientists worked together to develop these vaccines. They also were able to hold larger clinical trials. Most vaccine trials have 3000-4000 participants. The COVID-19 vaccine trials had over 60,000! That means we have a lot of good data about side effects and adverse reactions. And they continue to collect data on people who have received the vaccine.

Do I need to continue to wear a mask?

Yes! We need to continue to all the pandemic precautions we are taking right now. We need to wear masks, wash hands frequently, use hand sanitizer, and stay social distanced from people outside of our household.

The vaccine is 90-95% effective at preventing you from getting COVID-19. This means your body responds to the virus and you do not become sick or severely sick. We do not know if you are exposed and have virus in your system, if you can spread it to others.

This is currently being studied and we should know more in a few months.



WE DO NOT HAVE COVID-19 VACCINE IN OUR OFFICE. WE CURRENTLY DO NOT KNOW WHEN WE WILL RECEIVE DOSES OF THE VACCINE. THE PFIZER VACCINE IS APPROVED FOR CHILDREN 16-18 AND ADULTS. THE MODERNA VACCINE IS ONLY APPROVED FOR ADULTS. CLINICAL TRIALS ARE BEING DONE WITH CHILDREN AGE 12-18 YEARS OF AGE. WE DO NOT KNOW WHEN IT WILL BE APPROVED FOR USE IN CHILDREN.

WE DO NOT PLAN ON STARTING A LIST OF PATIENTS WHO WANT THE VACCINE. WE WILL MAKE ANNOUNCEMENTS WHEN WE RECEIVE OUR DOSES AND WILL BE FOLLOWING THE PHASED GUIDELINES FOR ADMINISTRATION.

If you have any questions, please do not hesitate to ask or visit www.cdc.gov for more information about COVID-19 and the vaccine.

Disclaimer: this health information is for educational purposes only. You, the reader, assume full responsibility for how you choose to use it.