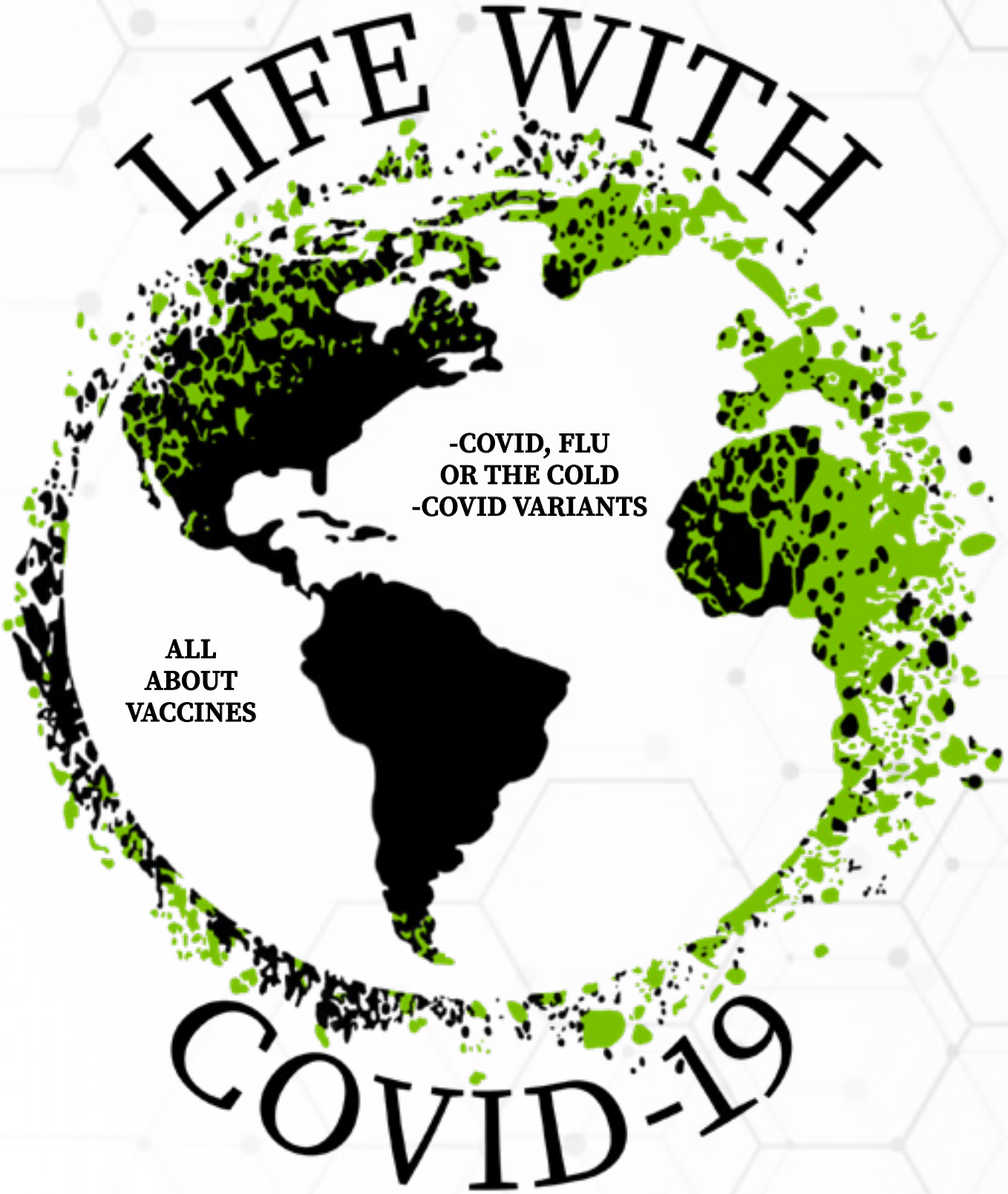
WORLD HEALTH TODAY

MAY 2022 VOLUME 1 ISSUE 1



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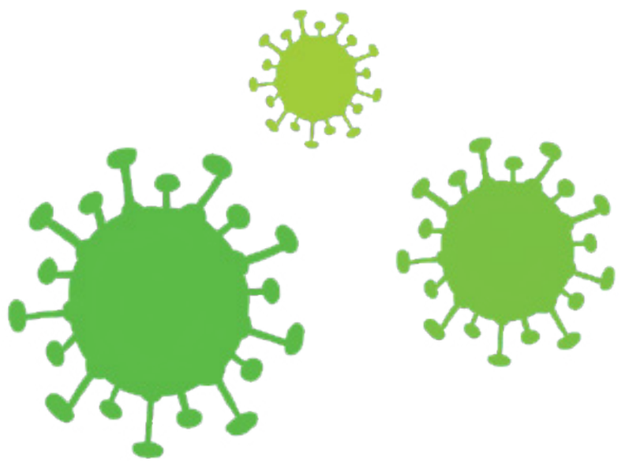

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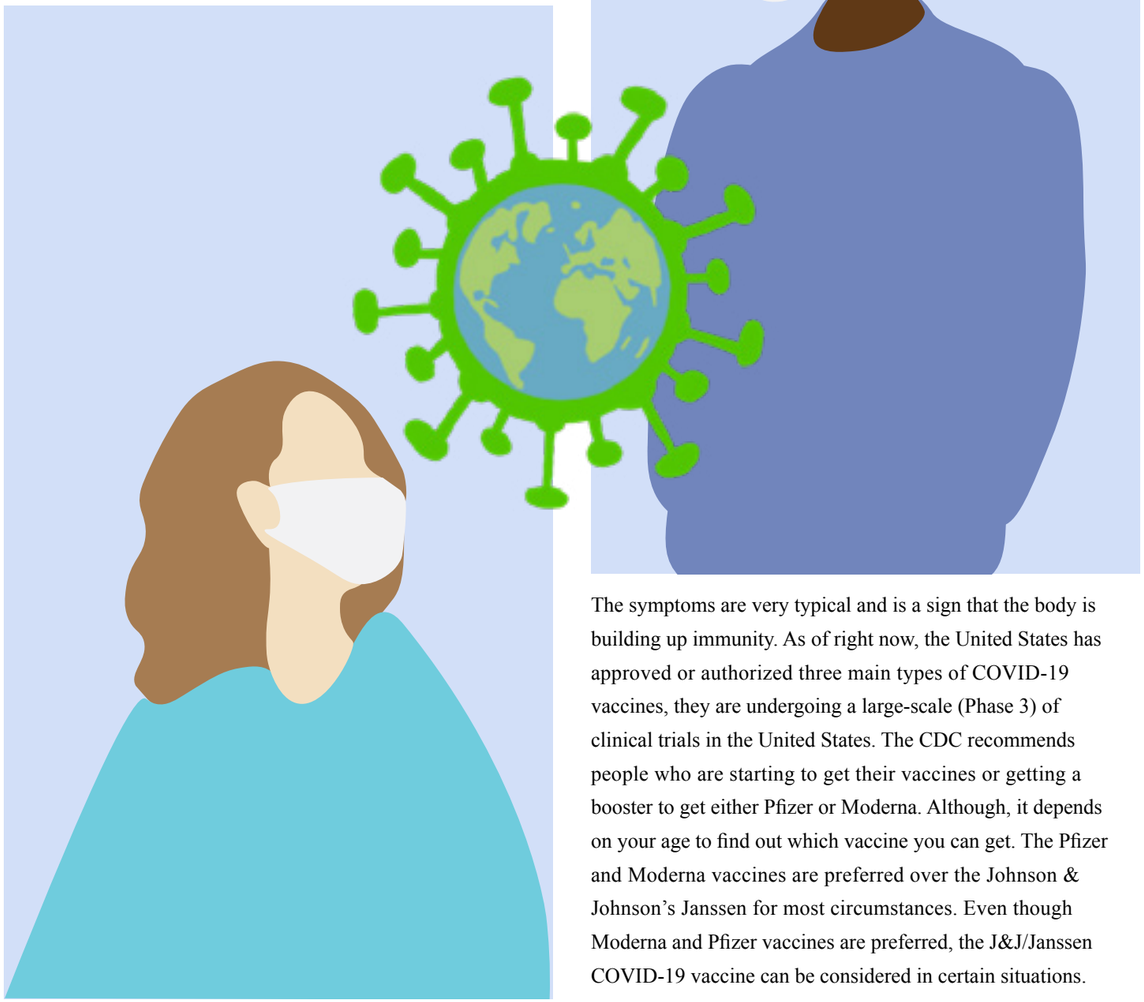
ALL ABOUT VACCINES

By: Julia Bockius

As the world takes covid by storm, life has changed so much in the matter of three years. It was scary in the beginning because really the only option was stay home or if you had to go out, to wear your mask. Cases were rising by the second, death rates were going up, places getting shut down. At this point it was only healthcare workers and those considered essential that were working throughout this pandemic. They did their absolute best to help those in need while attempting to not get themselves or their own families sick. As soon as they got home they changed out of their work clothes and immediately showered all the germs off. But after three years, times have greatly changed. Most people do not need to do these things anymore, or as much really. Places have finally opened back up, mask mandates were lifted, covid cases were going down… for now at least. However, this is because of the medical options we have available for people who want to protect themselves and others from covid. There are many vaccines and medications available to fight off COVID-19 or make it less severe if caught. Now, there are even pills available that fights off while you have the virus.

HOW DO THEY WORK?

First let's go into how the vaccines work. There are many different types of vaccines, therefore, they work differently to offer protection to us. According to the CDC, with all the types of vaccines, our body is left with a "supply of "memory" T-lymphocytes as well as B-lymphocytes that will remember how to fight that virus in the future." Typically, it takes a few weeks after getting vaccinated for the body to produce these T-lymphocytes and B-lymphocytes. As most people know, this means it is possible that a person can be infected with the virus before or after vaccination and get sick. This is because the vaccine did not have enough time to provide that protection. Another phenomenon people have experienced is after getting vaccinated, it caused different symptoms such as fever. This is just the process of the human body when building immunity.



The symptoms are very typical and is a sign that the body is building up immunity. As of right now, the United States has approved or authorized three main types of COVID-19 vaccines, they are undergoing a large-scale (Phase 3) of clinical trials in the United States. The CDC recommends people who are starting to get their vaccines or getting a booster to get either Pfizer or Moderna. Although, it depends on your age to find out which vaccine you can get. The Pfizer and Moderna vaccines are preferred over the Johnson & Johnson's Janssen for most circumstances. Even though Moderna and Pfizer vaccines are preferred, the J&J/Janssen COVID-19 vaccine can be considered in certain situations.

PROTEIN SUBUNIT VACCINES

Next, there are protein subunit vaccines. These are vaccines under development. This includes harmless protein pieces of the virus that causes COVID-19 instead of the complete germ. Once vaccinated, as stated before, our bodies recognize that the protein should not be there and will build T-lymphocytes and antibodies. Then it will remember how to fight off COVID-19 if we ever catch the virus later on. Then we have vector vaccines.Which is the Johnson & Johnson's Janssen vaccine. They contain a refined version of a different virus than the one that causes COVID-19.

If scientists take a look inside of the refined virus, there is a material from the virus that causes COVID-19.This is called a "viral vector." Once the viral vector is inside our cells, the genetic material gives cells the order to make a protein that is distinctive to the virus that causes COVID-19. Using these orders, our copies of this protein. Which once again, prompts our bodies to build T-lymphocytes and B-lymphocytes that will understand how to fight off COVID-19 if we ever become contaminated.

Fact or Fiction?

It is not worth getting vaccinated if I have already had COVID-19.

This is fiction. If you've gotten sick with COVID-19 in the past, you can still benefit from vaccination because reinfection with COVID-19 is possible.

COVID-19 vaccines will give you COVID-19.

The answer to this is fiction. The vaccine won't give you COVID-19 because the COVID-19 vaccines don't contain the live virus. The vaccine for COVID-19 helps our immune systems how to recognize and fight the virus.

Getting vaccinated will help protect myself and others from getting the virus.

Fact! Studies have shown that after two weeks of being fully vaccinated, it works effectively to prevent any severe illness, hospitalization, and death from COVID-19.

BOOSTER SHOTS

Another option is getting a booster shot after getting the two doses you received previously. This just gives better protection, especially to those who might be at a higher risk of getting COVID-19. Simply because they might have not built enough or any protection from the primary vaccine series they got. The booster shots enhance or restore protection against the virus, since it can decrease over time. Everyone twelve years and older who has gotten both doses of their COVID-19 vaccine primary series should get a booster according to the CDC.

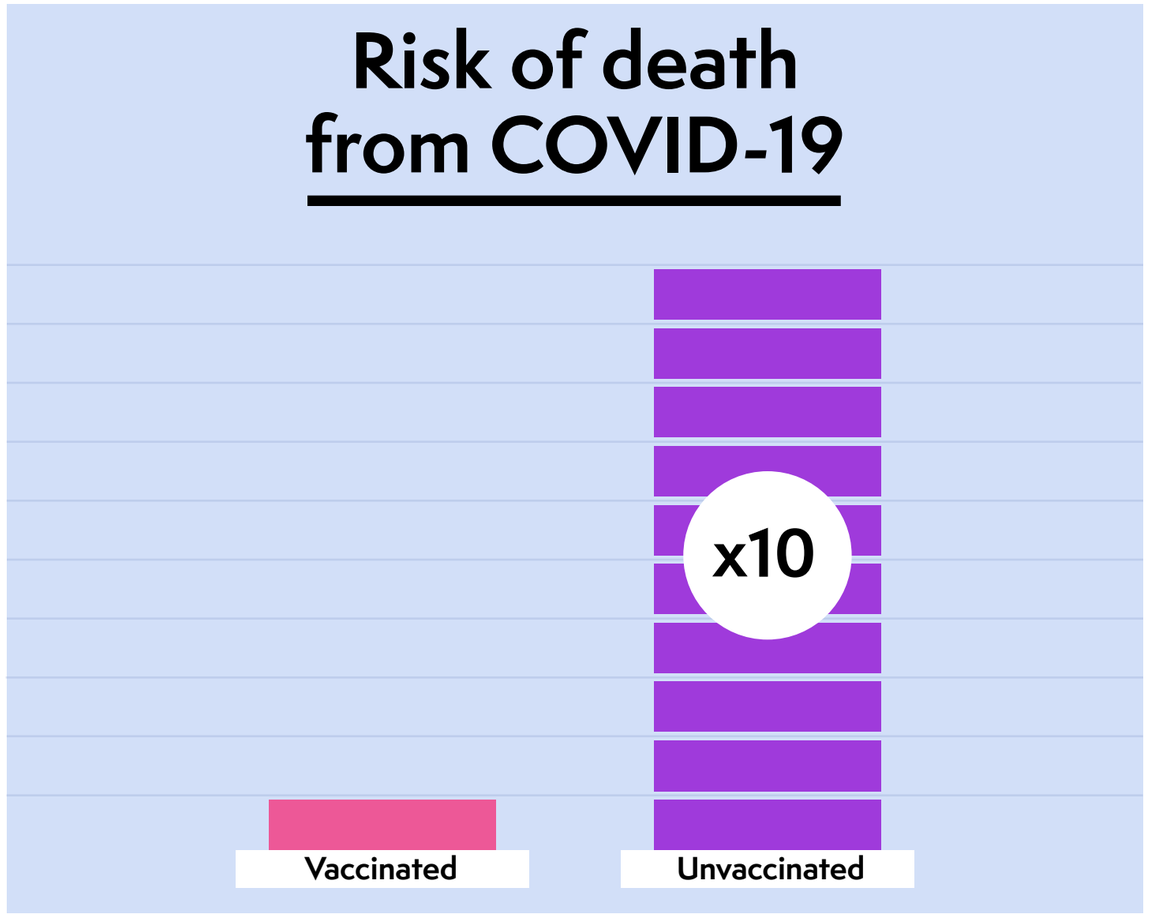
BENEFITS OF VACCINATION

Many people are against getting the vaccine for many reasons, some say it was made "too" quickly, or that it is "unsafe". While others are against vaccinations altogether or might not even be eligible to receive the vaccine. However, getting vaccinated can lower your risk and others such as your family from getting and spreading COVID-19. The vaccines can also help prevent significant illness and death. There were many steps and precautions made in order to ensure the safety of anyone five years and older who gets the vaccine. If you already had COVID-19, getting the vaccine is highly recommended as it is added protection to the virus. When you are up to date on vaccinations, people can resume many activities with proper precautions (e.g., wearing a mask in indoor public spaces if required). Even if you did happen to get COVID-19, the vaccination will help protect you and create an antibody response without you having to experience any sickness. If someone gets sick with COVID-19, it can cause severe illness or death, even in children, and research says we can't reliably predict who will have a mild or severe case when it comes to COVID-19. Of course anyone has the option to either get vaccinated or not get vaccinated. But the safer choice according to many organizations is to get your vaccine and then to get a booster shot. One reason for this is that you may have long-term health issues after becoming infected. People who do not have symptoms when they are initially infected can also have these ongoing health problems. Although, the vaccine can definitely help with preventing that, but it can still happen to anyone.

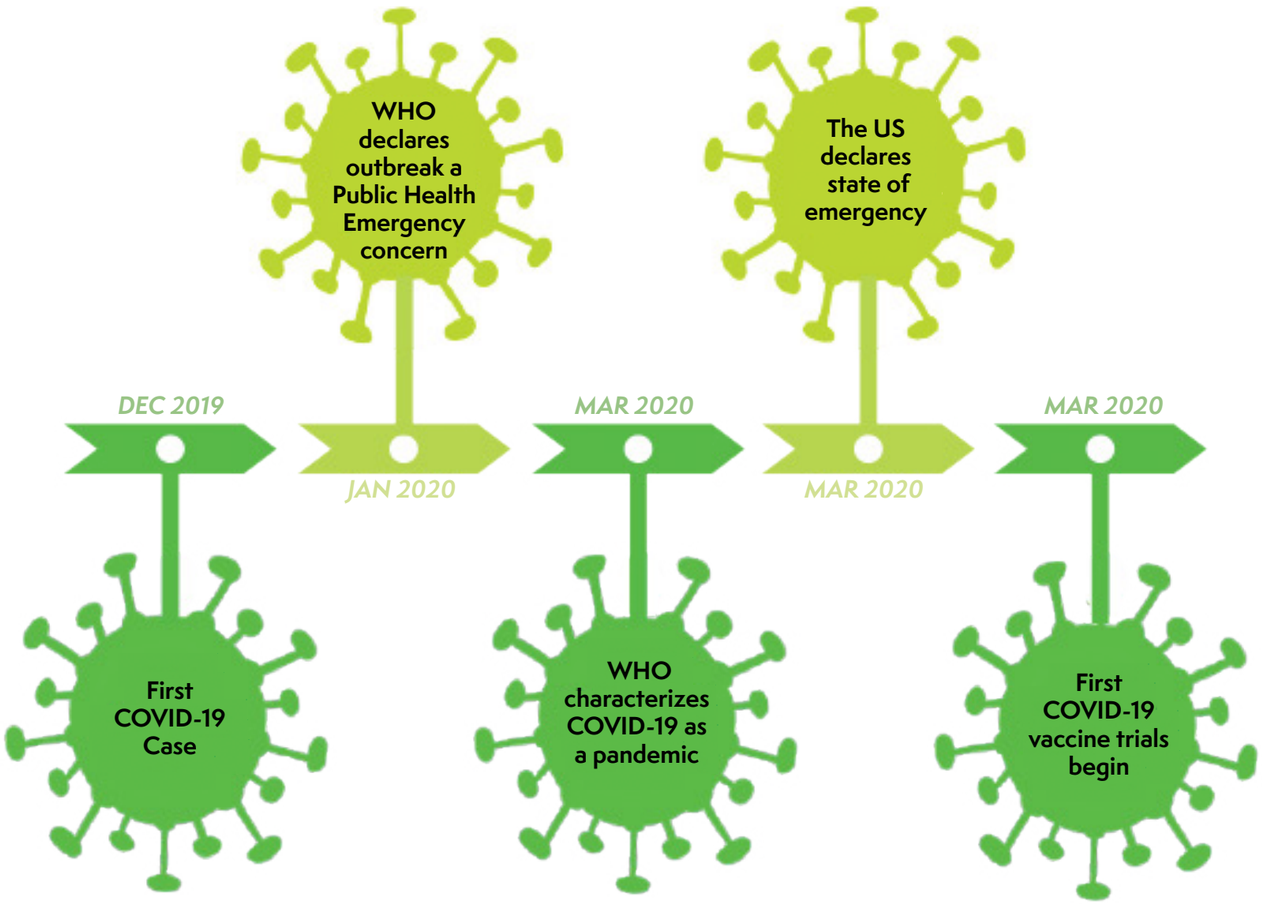
THE EVIDENCE

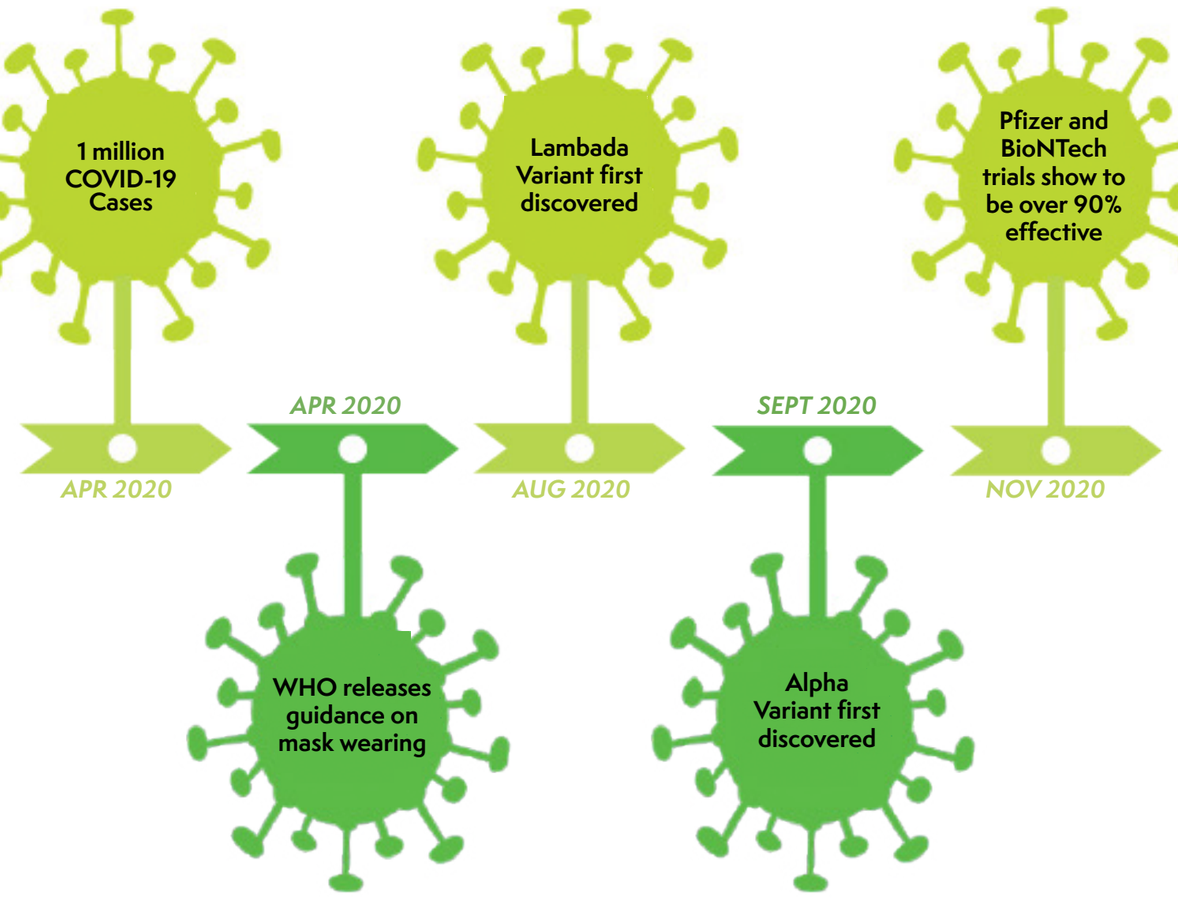
There is many pieces of evidence that show that the benefits of being vaccinated outweigh the known and possible risks. The CDC recommends getting an mRNA COVID-19 vaccine; These would once again be Pfizer-BioNTech or Moderna. They recommend these vaccines in most circumstances based on an updated risk-benefit analysis. Also, there were many tests and trials conducted by scientists who had thousands of children and adults and found no serious safety concerns. There are benefits for children and teens when getting the COVID-19 vaccination. Everyone who receives a vaccine can participate in safety monitoring. People can enroll themselves and their children ages five years and older in v-safe and complete health check-ins after their COVID-19 vaccination.

Overall, there are many options when it comes to getting vaccinated. Even for those who might be unsure of the vaccine, there are some options for you as well. The recommended vaccines are Pfizer and Moderna but there is the J&J vaccine as well. We have been living in this world with this virus for far too long and there has been so much change. We have had ups and downs. Many of us were stuck inside for months. Others had to go out as they were considered essential; risking themselves and their families of getting exposed. Mask mandates have been back and forth with being lifted then required again. Many people have already been vaccinated, are you going to be next?



HISTORY OF COVID-19





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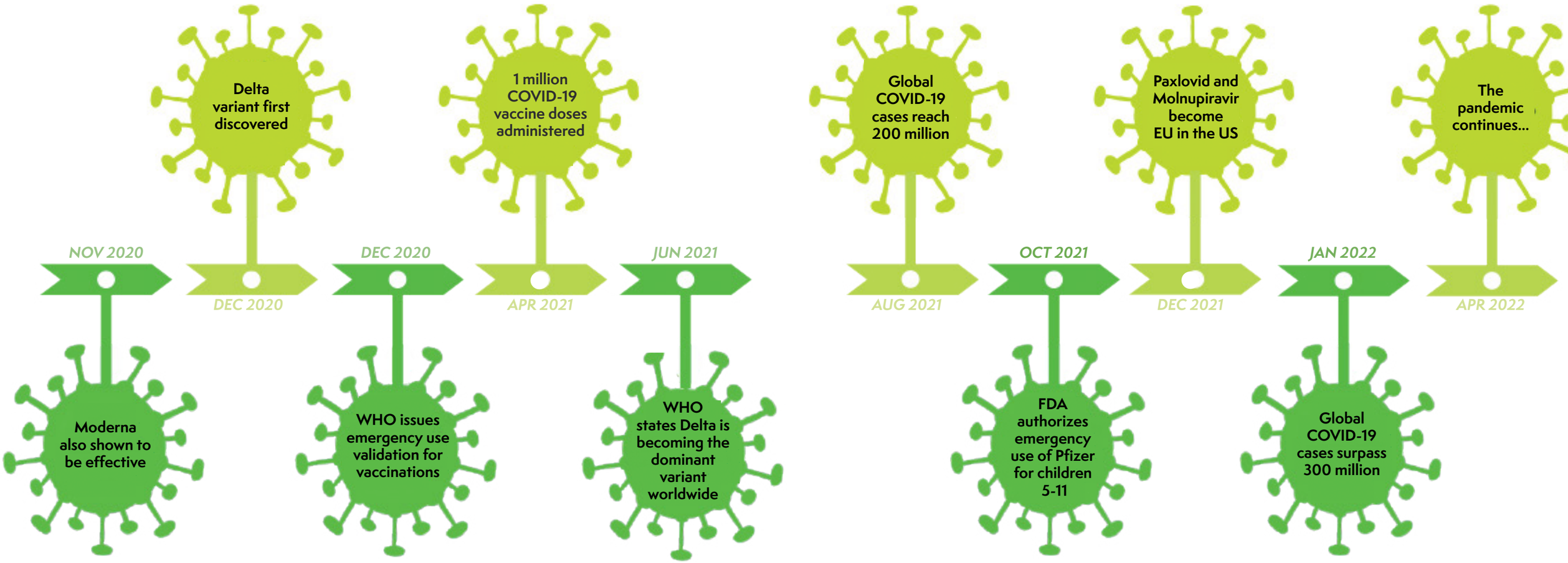


COVID, FLU OR THE COLD

By: Julia Bockius

COVID

COMMON COVID SYMPTOMS

Cough	Usually (dry)
Muscle aches	Usually
Tiredness	Usually
Sneezing	Rarely
Sore throat	Usually
Runny or stuffy nose	Usually
Fever	Usually
Diarrhea	Sometimes
Nausea or vomiting	Sometimes
New loss of taste or smell	Usually
Shortness of breath or difficulty breathing	Usually

If you have signs or symptoms of the coronavirus disease, it is very important that you contact your doctor or clinic right away for medical advice. But COVID-19, the common cold and the flu can cause similar symptoms. So how can you tell if you have COVID-19? Understand the differences of each symptoms that these illnesses cause, as well as how these illnesses can spread, how they are treated and how we can prevent them.

Remdesivir is the only drug that is approved by the Food and Drug Administration (FDA) for the treatment of the COVID-19 virus. Ritonavir-boosted nirmatrelvir (Paxlovid), molnupiravir, and certain anti-SARS-CoV-2 monoclonal antibodies (mAbs) have also received the Emergency Use Authorizations from the FDA for treatment as well.

FLU

COMMON FLU SYMPTOMS

Cough	Usually
Muscle aches	Usually
Tiredness	Usually
Sore throat	Usually
Runny or stuffy nose	Usually
Fever	Usually
Diarrhea	Sometimes
Nausea or vomiting	Sometimes
New loss of taste or smell	Rarely
Shortness of breath or difficulty breathing	Usually

COVID-19 and the flu are both contagious respiratory diseases caused by viruses. COVID-19 is caused by the SARS-CoV-2 virus, while the flu is caused by influenza A and B viruses. Both viruses spread in similar ways. COVID-19 and the flu cause similar symptoms. The diseases could also cause no symptoms at all to severe symptoms. Because of the similarities, it can be hard to diagnose based on symptoms alone. Testing can be done to see if you have COVID-19 or the flu.

There are several antiviral drugs that can be used in order to treat the flu. Also, you can get an annual flu vaccine to help reduce your risk of the flu. The flu vaccine can also reduce the severity of the flu and the risk of serious complications. The vaccine can be given as a shot or as a nasal spray.

COLD

COMMON COLD SYMPTOMS

Cough	Usually
Muscle aches	Sometimes
Tiredness	Sometimes
Sneezing	Sometimes
Sore throat	Usually
Runny or stuffy nose	Usually
Fever	Sometimes
Diarrhea	Never
Nausea or vomiting	Never
New loss of taste or smell	Sometimes

Both COVID-19 and the common cold are caused by viruses. COVID-19 is caused by the SARS-CoV-2 virus. However for the common cold, it is most often caused by rhinoviruses. These type of viruses spread in very similar ways and cause many of the same signs and symptoms. However, there are a few differences. You can clearly see them when comparing the COVID-19 chart to the cold chart.

There's no cure for the common cold. Treatment may include pain relievers and over-the-counter cold remedies, such as decongestants. Unlike COVID-19, a cold is usually harmless. Most people recover from a common cold in three to 10 days, although some colds may last as long as two or three weeks.

HOW TO HELP PREVENT THE SPREAD OF GERMS WITH HAND WASHING IN 4 EASY STEPS

WET

Use cold or warm running water.

LATHER & SCRUB

Wash hands for at least 20 seconds.

RINSE

Use cold or warm water.

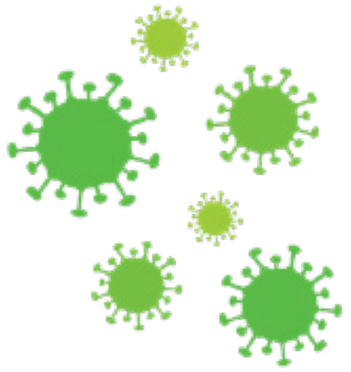
DRY

Use a clean towel or air dry.

COVID VARIANTS OF CONCERN

What are variants and why should we be concerned?

Variants are mutations of the main strain of a disease. It has been observed to be more infectious, and is more likely to cause breakthrough infections to reinfections in those who are vaccinated or have been previously infected. The variants are more likely to cause severe disease, evade diagnostic tests, or resist antiviral treatment. Even though we are all susceptible to getting a COVID-19 variant, it is important that everyone gets vaccinated and boosted to help relieve any symptoms if infected.



What are the different variants?

ALPHA

Lineage: B.1.1.7
Emerged in U.K. in December 2020
Key mutations in spike protein: N501Y, P681H, Y144/145 deletion
Source of most new cases in the U.S.

BETA

Lineage: B.1.351
Identified in South Africa in December 2020
Key mutations in tip of the spike protein: N501Y, K417N, E484K
Detected in 68 countries and 35 U.S. states

DELTA

Lineage: B.1.617.2
First appeared in October 2020
Key mutations: E484Q and L452R
Fastest evolving mutant is B.1.617.1, aka Kappa

GAMMA

Lineage: P.1.
First identified in Brazil in late 2020
Key mutations in the spike protein: N501Y, K417T, E484K
Spread to 37 countries and 29 U.S, states

OMICRON

Lineage: B.1.1.529
Found in multiple countries
Key mutations in the spike protein: K417N, S477N, Q498R, N501Y and more
Was the fastest spreading variant so far

"AN INSIDE LOOK INTO COVID-19"

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