## Let's get the Conversation Started...

### How do you feel about the Covid-19 Vaccine?

It is important to start talking about the vaccine. A vaccine is anticipated to be available in the coming weeks/months. We have enrolled for a vaccine clinic to be offered to all residents that live at La Maison Acadienne. Although, nothing is guaranteed, we need to be proactive and plan in advance. According to the Maine CDC our property is considered a "congregate living facility" and we would be part of the Phase 1 Part B stage of vaccine administrations.

Because these vaccines are temperature sensitive and must be administered within a certain time frame, it is very important to get an accurate head count of who wants the vaccine and who does not. Please start talking with your family, friends, and primary care doctor about this vaccine!

It is also very important to make sure that you get information about the Covid-19 vaccine that is accurate, factual, and from a reliable source.

The CDC website is where I have found this information; I know it's a lot of info all at once... I don't need your decision today, I will pass a survey around next week to see where everyone stands and as the time gets closer to having a clinic, we will require you to make the difficult choice of "I WILL get the vaccine at the clinic" or "I WILL NOT get the vaccine at the clinic". Very tough choices!

### Understanding How COVID-19 Vaccines Work

In the United States, there is not yet an authorized or approved vaccine to prevent coronavirus disease 2019 (COVID-19). Once available, COVID-19 vaccines will help prevent a disease that can be dangerous, or even deadly. While experts do not know yet exactly how well COVID-19 vaccines will work, they know that authorized or approved vaccines will help reduce the risk of disease by working with the body's natural defenses to safely develop protection (immunity) to disease. This fact sheet explains how the body fights infection and how COVID-19 vaccines work to protect people by producing immunity.

#### The Immune System—The Body's Defense Against Infection

To understand how COVID-19 vaccines work, it helps to first look at how our bodies fight illness. When germs, such as the virus that causes COVID-19,

invade our bodies, they attack and multiply. This invasion, called an infection, is what causes illness. Our immune system uses several tools to fight infection. Blood contains red cells, which carry oxygen to tissues and organs, and white or immune cells, which fight infection. Different types of white blood cells fight infection in different ways:

- **Macrophages** are white blood cells that swallow up and digest germs and dead or dying cells. The macrophages leave behind parts of the invading germs called antigens. The body identifies antigens as dangerous and stimulates antibodies to attack them.
- **B-lymphocytes** are defensive white blood cells. They produce antibodies that attack the pieces of the virus left behind by the macrophages.
- **T-lymphocytes** are another type of defensive white blood cell. They attack cells in the body that have already been infected.

The first time a person is infected with the virus that causes COVID-19, it can take several days or weeks for their body to make and use all the germ-fighting tools needed to get over the infection. After the infection, the person's immune system remembers what it learned about how to protect the body against that disease.

The body keeps a few T-lymphocytes, called memory cells, that go into action quickly if the body encounters the same virus again. When the familiar antigens are detected, B-lymphocytes produce antibodies to attack them. Experts are still learning how long these memory cells protect a person against the virus that causes COVID-19.

#### How COVID-19 Vaccines Work

COVID-19 vaccines help our bodies develop immunity to the virus that causes COVID-19 without us having to get the illness. Different types of vaccines work in different ways to offer protection, but with all types of vaccines, the 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.

It typically takes a few weeks for the body to produce T-lymphocytes and Blymphocytes after vaccination. Therefore, it is possible that a person could be infected with the virus that causes COVID-19 just before or just after vaccination and then get sick because the vaccine did not have enough time to provide protection. Sometimes after vaccination, the process of building immunity can cause symptoms, such as fever. These symptoms are normal and are a sign that the body is building immunity.

#### Types of Vaccines

Currently, there are three main types of COVID-19 vaccines that are or soon will be undergoing large-scale (Phase 3) clinical trials in the United States. Below is a description of how each type of vaccine prompts our bodies to recognize and protect us from the virus that causes COVID-19. None of these vaccines can give you COVID-19.

- **mRNA vaccines** contain material from the virus that causes COVID-19 that gives our cells instructions for how to make a harmless protein that is unique to the virus. After our cells make copies of the protein, they destroy the genetic material from the vaccine. Our bodies recognize that the protein should not be there and build T-lymphocytes and B-lymphocytes that will remember how to fight the virus that causes COVID-19 if we are infected in the future.
- **Protein subunit vaccines** include harmless pieces (proteins) of the virus that cause COVID-19 instead of the entire germ. Once vaccinated, our immune system recognizes that the proteins don't belong in the body and begins making T-lymphocytes and antibodies. If we are ever infected in the future, memory cells will recognize and fight the virus.
- Vector vaccines contain a weakened version of a live virus—a different virus than the one that causes COVID-19—that has genetic material from the virus that causes COVID-19 inserted in it (this is called a viral vector). Once the viral vector is inside our cells, the genetic material gives cells instructions to make a protein that is unique to the virus that causes COVID-19. Using these instructions, our cells make copies of the protein. This prompts our bodies to build T-lymphocytes and B-lymphocytes that will remember how to fight that virus if we are infected in the future.

#### Most COVID-19 Vaccines Require More Than One Shot

All but one of the COVID-19 vaccines that are currently in Phase 3 clinical trials in the United States use two shots. The first shot starts building protection. A second shot a few weeks later is needed to get the most protection the vaccine has to offer. One vaccine in Phase 3 clinical trials only needs one shot.

#### The Bottom Line

Getting vaccinated is one of many steps you can take to protect yourself and others from COVID-19. Protection from COVID-19 is critically important because for some people, it can cause severe illness or death.

Stopping a pandemic requires using all the tools available. Vaccines work with your immune system so your body will be ready to fight the virus if you are exposed. Other steps, like masks and social distancing, help reduce your chance of being exposed to the virus or spreading it to others. Together, COVID-19 vaccination and following CDC's recommendations to protect yourself and others will offer the best protection from COVID-19.

Content source: National Center for Immunization and Respiratory Diseases (NCIRD), Division of Viral Diseases

#### FACT: COVID-19 vaccines will not give you COVID-19

None of the COVID-19 vaccines currently in development in the United States use the live virus that causes COVID-19. There are several different types of vaccines in development. However, the goal for each of them is to teach our immune systems how to recognize and fight the virus that causes COVID-19. Sometimes this process can cause symptoms, such as fever. These symptoms are normal and are a sign that the body is building immunity.

It typically takes a few weeks for the body to build immunity after vaccination. That means it's possible a person could be infected with the virus that causes COVID-19 just before or just after vaccination and get sick. This is because the vaccine has not had enough time to provide protection.

# FACT: COVID-19 vaccines will not cause you to test positive on COVID-19 viral tests

Vaccines currently in clinical trials in the United States won't cause you to test positive on viral tests, which are used to see if you have a **current infection**.

If your body develops an immune response, which is the goal of vaccination, there is a possibility you may test positive on some antibody tests. Antibody tests indicate you had a **previous infection** and that you may have some level of protection against the virus. Experts are currently looking at how COVID-19 vaccination may affect antibody testing results.

#### FACT: People who have gotten sick with COVID-19 may still benefit from getting vaccinated

Due to the severe health risks associated with COVID-19 and the fact that reinfection with COVID-19 is possible; people may be advised to get a COVID-19 vaccine even if they have been sick with COVID-19 before.

At this time, experts do not know how long someone is protected from getting sick again after recovering from COVID-19. The immunity someone gains from having an infection, called natural immunity, varies from person to person. Some early evidence suggests natural immunity may not last very long.

We won't know how long immunity produced by vaccination lasts until we have a vaccine and more data on how well it works.

Both natural immunity and vaccine-induced immunity are important aspects of COVID-19 that experts are trying to learn more about, and CDC will keep the public informed as new evidence becomes available.

# FACT: Getting vaccinated can help prevent getting sick with COVID-19

While many people with COVID-19 have only a mild illness, others may get a severe illness or they may even die. There is no way to know how COVID-19 will affect you, even if you are not at increased risk of severe complications. If you get sick, you also may spread the disease to friends, family, and others around you while you are sick. COVID-19 vaccination helps protect you by creating an antibody response without having to experience sickness.

#### FACT: Receiving an mRNA vaccine will not alter your DNA

mRNA stands for messenger ribonucleic acid and can most easily be described as instructions for how to make a protein or even just a piece of a protein. mRNA is not able to alter or modify a person's genetic makeup (DNA). The mRNA from a COVID-19 vaccine never enter the nucleus of the cell, which is where our DNA are kept. This means the mRNA does not affect or interact with our DNA in any way. Instead, COVID-19 vaccines that use mRNA work with the body's natural defenses to safely develop protection (immunity) to disease.