

# Questions and Answers

## about the **COVID-19 Vaccine** at



**Redstone Presbyterian**  
*SeniorCare*

### **What kind of vaccine will we receive at Redstone?**

It is likely that employees and residents at Redstone will receive the Pfizer or Moderna vaccines, since the Pfizer vaccine has already been approved and it is anticipated that the Moderna will be approved shortly.

### **What kind of vaccines are the Pfizer and Moderna vaccines?**

There are THREE general types of vaccines.

- Live Vaccines that use a weak form of an actual virus to kick start your body into fighting a full strength virus.
- Inactive Vaccines that use a killed version of a virus to create an immune response in your body, but cannot cause infection.
- Genetically Engineered Vaccines that contain genetic copies of a protein and do not contain a live or killed (inactive) virus.

The COVID vaccines being developed by Pfizer and Moderna are genetically engineered vaccines. Both are called an mRNA vaccine, short for Messenger Ribonucleic Acid. There is no COVID virus in the vaccines. These vaccines are comprised of a laboratory created strand of mRNA, suspended in laboratory created lipids. The vaccines are very similar to each other.



### **How do these mRNA vaccines work?**

An mRNA vaccine is like a teacher. The messenger RNA is injected into your body, and teaches your own cells to produce spike proteins. After its work is done, the mRNA quickly disintegrates. When your cells produce these spike proteins, your body's immune system realizes these proteins are invaders, and starts attacking them with your own antibodies and T-Cells. Your antibodies and T-Cells defeat the spike proteins. If COVID invades your body, your immune system recognizes it because it has seen this spike protein before, and your antibodies and T-Cells once again spring into action to defeat the virus.

### **How was this new type of a vaccine developed so quickly?**

Actually, it wasn't. The science of using the messenger RNA has been developed for over a decade, as a method of delivering vaccines or treatments. Once the genetic code for COVID-19 was

identified, scientists quickly were able to attach this code to mRNA to create the vaccine. While this will be the first broad use of mRNA in a vaccine, we will be seeing more and more applications in the treatment of diseases. There are currently studies underway using mRNA to deliver messages to tell diseased hearts to regenerate, and for treating those with genetic diseases like cystic fibrosis or sickle cell anemia. Many scientists believe that mRNA will change the future of medicine.

### **How many people took part in the Clinical Trials and what were the results?**

The similar Pfizer and Moderna vaccines undertook clinical trials with record setting numbers of study participants. The Phase 3 clinical trial for the Pfizer vaccine enrolled 43,000 participants including adults of varying age, gender, race, and ethnicity. Half of the participants received the vaccines, and half received placebo (saline.) Primary analysis demonstrates the Pfizer vaccine to be 95% effective against COVID-19 beginning 28 days after the first dose. There were 170 confirmed cases of COVID-19 in study participants, with 162 observed in the placebo group versus 8 in the vaccine group. Data demonstrate the vaccine was well tolerated across all populations with no serious safety concerns observed; the only adverse events seen in more than 2% of participants were fatigue and headache.



Likewise, the Moderna vaccine is 94.5% effective in early results and is also well tolerated. Moderna included 30,000 participants in its Phase 3 trial, also with half receiving the vaccine and half the placebo. 95 of these participants were confirmed with COVID-19 illness. The independent National Institutes of Health-appointed Data Safety Monitoring Board found that 90 of the positive COVID-19 cases were in patients who received a placebo, compared to five patients who received the vaccine, which means the vaccine is 94.5% effective. Eleven cases of severe COVID-19 all occurred in the placebo group. As with the Pfizer vaccine, most after effects were mild to moderate and short-lived, and included injection site pain, fatigue, muscle and joint pain, and headache. Now, the Clinical Trials are turning their attention to evaluating the vaccine use in children (under the age of 16) and pregnant and lactating women. Pregnant and lactating women are not advised to receive the vaccine until further research data is available.



### **What do we know about safety and effectiveness?**

In all of the clinical trials for the mRNA vaccines, there have been no serious safety events. A serious safety event would include a reaction that requires hospitalization, seizures, respiratory distress, etc. The mild effects seen most frequently resolve relatively quickly with Ibuprofen or Tylenol. These symptoms are not to be confused with the disease of COVID-19. The vaccine cannot give you COVID-19. The symptoms are your body being taught to fight against the spike protein.

Also encouraging, of those who received the mRNA vaccines during the clinical trials, all who became seriously ill with COVID-19 were part of the control group who had received saline injections instead of the vaccine. Both the Pfizer and Moderna vaccines showed approximately a 95% effectiveness in preventing illness from COVID-19 in those who were vaccinated.

In early distribution in the United Kingdom, there have been very limited reports of more serious allergic reactions in those who have had serious allergic reactions to past vaccines. Those who have had serious reactions to previous vaccines (anaphylactic shock, seizures, etc.) should discuss the vaccine with their personal physician.

## **Will this mRNA vaccine be my only option for a vaccine?**

There are other vaccines for COVID being developed which use live or inactive virus to create an immune response. These vaccines are not as far along in the safety and development process. Vaccines that use actual viruses are likely to have more side effects and be problematic for those who have experienced allergies and reactions to vaccines in the past.

## **Is this vaccine more risky for those with autoimmune diseases?**

There is no evidence of that. In fact, it may prove to be safer because there is no virus being injected into the body that would set off an autoimmune response. Likewise, the allergens that are sometimes present in virus based vaccines (like eggs) are not present in the mRNA vaccines.

## **Does the vaccine change my DNA?**

No. The mRNA is a teacher that teaches your own cells to react to the spike protein of COVID-19, thus creating an immune response that obliterates the virus. The DNA that makes you, YOU, remains completely unchanged by the vaccine. The mRNA from the vaccine never enters the nucleus of the cell and does not affect or interact with a person's DNA.

## **I've heard that the vaccine contains tissue from aborted fetuses, or chips that can be used to track and monitor our movements for the rest of our lives? Is this true?**

Some of the COVID-19 vaccines being studied in clinical trials used cells originally isolated from fetal tissue (often referred to as fetal cells) in various stages of vaccine development and manufacturing. The mRNA COVID-19 vaccines produced by Pfizer and Moderna do not require the use of any fetal cell cultures in order to produce the vaccine. Catholic Bishops in the US have spoken in support of the vaccine and have addressed this concern about fetal tissue.

A video shared over 27,100 times on Facebook implies that the COVID-19 vaccine will contain a tracking microchip that will be injected in the individuals that receive the vaccine. This is false. According to Reuter's Fact Check Team, COVID-19 vaccine syringes could contain microchips on labels, so that doses can be tracked; but this information wouldn't be 'injected' into the individual that receives the vaccine. The video containing these claims features altered and out of context footage.

## **Do I have to pay for the vaccine?**

Vaccine doses purchased with U.S. taxpayer dollars will be given to the American people at no cost. Vaccination providers, however, will be able to charge an administration fee for giving 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.

## **How many injections will there be?**

Both the Pfizer and Moderna vaccines are two part vaccines. The first shot primes the immune system, helping it recognize the virus, and the second shot strengthens the immune response. Researchers have noticed that after the second dose – study participants produced even more antibodies. It is important to receive the second vaccine for this reason. Like other vaccines, it is possible that an additional "booster" shot will be needed down the road.

## I've already had COVID-19 and I have antibodies. Why do I need to be vaccinated?

The level of immunity from natural infection is really variable, so some people get a very strong immune response, and some people get quite a weak immune response. If natural immunity recedes over time, the vaccine would top up your immune response, and provide protection for longer. In early studies, those who received the vaccine have much higher levels of antibodies than those who have recovered from COVID. Even here at Redstone, we have seen people becoming sick with COVID-19 for a second time. The vaccine will provide an additional boost of protection whether or not you have previously tested positive for COVID-19.



## When can we get the vaccine at Redstone?

Unfortunately, we have no control over who is able to get the vaccine, and when. There are three phases for receiving the vaccine. Health care personnel and long term care residents are in the phase 1a and will be early receivers. While our staff and our nursing home and personal care residents are in phase 1a, we do not know exactly when our opportunity to receive the vaccine will be. We also hope that our Independent Living residents will be included in this first phase of vaccine administration, but we are not sure of that at this point. We will lobby for our IL residents to receive the vaccine as soon as possible. Employees, residents, (or their legal representatives), will receive a consent form to be signed prior to administration of the vaccine.

## How will the vaccine change my life? Is it worth it?

At first, the vaccine will not change our lives very much. Within a week or so of your first vaccine, you will have some personal protection against COVID-19. About 10 days after your second vaccine, you should have good protection. You can feel safer knowing that it is unlikely that you will become sick with COVID-19. But the COVID-19 vaccine is a GROUP project. Once about 65 – 70% of the population has been vaccinated, we will emerge from the COVID crisis. Only then will we be able to lose the masks, hug our friends, go to concerts, etc. Until then we will still need to wear masks and social distance. Even vaccinated, a small number of people may still become sick with COVID-19. All of us, will still be able to carry COVID-19 in our nasal passages, and even though it may not make us sick, we can infect others. Masks will continue to protect all of us until we achieve herd immunity with a majority of the population vaccinated.

## I'm still nervous about getting the vaccine? How do I decide?

It is human nature to be anxious about new technologies and the unknown. Even though the FDA, CDC, and independent review boards are very excited about the safety and effectiveness of the COVID-19 vaccines, some level of anxiety is normal. COVID-19 has derailed so much of what we enjoy about living. The burden of being afraid that we carry COVID-19 to Redstone is very heavy for all of us. Life is always about taking the information that we have, and making an informed decision about risks vs. benefits. We encourage you to do your own research, and seek out reliable and non-biased sources for information. At Redstone, we believe that the vaccine is the path forward for us to emerge from this season of COVID, and return to a life that is lived joyfully and in community with one another. We hope that you will join us.

