COVID-19 VACCINE FAQs AT DEACONESS

September–October 2021

Below is a Q&A of the most commonly-asked questions about the COVID-19 vaccines that doctors have been hearing from patients here at Deaconess. These answers were provided/reviewed by Dr. Majed Koleilat, Deaconess Clinic allergist and immunologist, and Deaconess clinical pharmacists.

IF THE DELTA VARIANT IS "BREAKING THROUGH" VACCINATION, WHY SHOULD I STILL GET THE VACCINE?

While it's true that the Delta variant of SARS-CoV-2 (the virus that causes COVID-19) is more contagious, the vaccine is still highly effective at preventing serious illness and hospitalizations. No vaccine is 100% effective in preventing infection. Right now, more than 87% of our hospitalized patients at Deaconess are unvaccinated, and the overwhelming majority of ICU patients and those on ventilators are unvaccinated.

Vaccination significantly reduces the likelihood of becoming infected, as well as spreading COVID to others. Those who do get infected with the Delta variant after vaccination aren't as contagious for as long as those who are not vaccinated. Additionally, as more people become vaccinated—making their bodies an unhospitable host to the SARS-CoV-2 virus—the more we can reduce the risk of future variants. Every time a virus replicates, there is the risk of a new variant forming.

Vaccines are the fastest, safest and best way out of this pandemic. Allowing the virus to spread without adequate controls will lead to large numbers of people becoming very ill, with many of them dying or becoming disabled due to permanent lung damage and other persistent "long COVID" symptoms.

HOW DO WE KNOW THESE VACCINES WON'T HAVE LONG-TERM SIDE EFFECTS?

In the history of vaccines, serious side effects became apparent within six to eight weeks of the person receiving the vaccine. There is currently no known mechanism in vaccines for something to "show up years later." mRNA vaccines have been in studies and clinical trials for nearly 20 years, including for influenza, Zika and rabies viruses. Some cancer research has successfully used mRNA to teach the immune system to target specific cancer cells.

People often think of "long-term side effects" in relationship to medications. But vaccines and maintenance medications are two very different types of drugs. Vaccines are given to prompt the body's immune system to create antibodies (just like with other vaccines and infections) and then the vaccine ingredients are quickly eliminated from the body. Medications, which are often taken for months, years or even decades, are far more known for delayed or "long-term" side effects due to the continuous exposure of the drug over long periods of time; this is why people taking certain medications to manage chronic conditions are carefully monitored for side effects.

COVID-19 itself frequently leads to long-term side effects. Studies show that at least 1 in 10 infected adults have developed some form of "long COVID," and that number rises to as high as 1 in 4 in patients who are hospitalized. This can lead to everything from a reduction in quality of life all the way to severe permanent disability.

IF I'VE ALREADY HAD COVID, WHY SHOULD I GET VACCINATED?

A more comprehensive blog article on this topic has been published at www.deaconess.com/your-health, but here are some of the key points from it:

- **Natural immunity wanes.** Natural immunity results from the antibodies made by a person's immune system when they're infected with a particular pathogen. When someone is infected

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with COVID-19, they do develop antibodies to the SAR-CoV-2 virus (the virus that causes the COVID-19 infection). But over time, those antibodies begin to decrease in number. This process is different from person to person and impossible to predict. Additionally, the only way to maintain antibodies against the virus long-term is to get vaccinated or to become infected again.

- **Natural immunity may not adequately protect against variants.** The genetic makeup of viruses changes and evolves over time. (For example, the flu changes each year, requiring a somewhat different shot every fall.) SARS-CoV-2 is doing the same thing, and prior infection from earlier variants of the virus may not offer the same protection for new variants. Immunity from vaccination, however, offers broader coverage because it creates antibodies to the protein on the outside of the virus, which is remaining more consistent. According to a recent study among Kentucky residents, those who were previously infected with an earlier form of the SARS-CoV-2 virus who are unvaccinated are more than twice as likely to be infected as someone who was previously infected but is also vaccinated.

WHY DO I HAVE TO WEAR A MASK IF I'VE BEEN VACCINATED?

Those who are vaccinated can still become infected enough to spread the virus to others, although this appears to be at a lower rate and for a shorter period of time. Again, NO vaccine is 100% effective in preventing infection. Vaccines work because if enough people get vaccinated, viruses run out of humans to whom they can spread. This is called herd immunity, and we are nowhere near herd immunity here in our region.

Masking is also imperfect, but masks reduce the number of airborne droplets that are released from your mouth and nose, keeping the viral load in the air lower. Lower viral loads can help reduce the likelihood of infecting others, as well as severity of illness if they do become infected.

Vaccination, masking and social distancing (limiting gatherings, staying outside and spaced apart)—used all together—are going to be the best way to get past these difficult times.

WHO HAS BEEN VACCINATED? WHO HASN'T?

So far, in the US, all living US presidents have been vaccinated. All 50 state governors have been vaccinated. Nearly all of Congress has been vaccinated. Ninety-six percent of American physicians are vaccinated. About three-fourths of our military opted to be vaccinated in advance of the mandate to do so. **But nearly all people dying from COVID-19 are unvaccinated.**

For more COVID-19 vaccine information, or to schedule an appointment to be vaccinated, visit www.deaconess.com/vaccine. You can also scan the QR codes below for information from leading physician groups about COVID-19 vaccination.

American Academy of Family Physicians (AAFP)

American Academy of Pediatrics (AAP)

American College of Obstetricians and Gynecologists (ACOG)