

Vaccine Breakthrough – What it is and Why it's Expected

According to the Centers for Disease Control and Prevention (CDC), [more than 37%](#) of American adults are fully vaccinated against COVID-19. As more people roll up their sleeves to help end the pandemic, the CDC is continuing to study [vaccine effectiveness](#), to ensure COVID-19 vaccines are working as expected.

One of the things under the CDC's microscope is vaccine breakthrough. Douglas Kasper, M.D., is the section head of infectious disease at the University of Illinois College of Medicine Peoria and a leader in the OSF HealthCare response to COVID-19. He defines vaccine breakthrough in this case as someone contracting COVID-19 and needing medical care, despite receiving the full course of the vaccine.

He says for a case to be considered vaccine breakthrough, however, timing between vaccination and infection is the key.

“What’s important to go over in that topic is that a sufficient amount of time has passed from when they received the vaccine,” explains Dr. Kasper. “So if somebody receives the vaccine on a Monday and contracts COVID the following day, that does not count as a vaccine breakthrough. There has not been sufficient time for the body to create the protective immune response that we know will occur as usually two to four weeks pass after vaccine.”

While the CDC is investigating thousands of reported vaccine breakthrough cases, it is still a very small percentage of those who have received the full dose.

According to Dr. Kasper, breakthrough cases are expected for any vaccine, because each person is unique, and will respond to the virus and the vaccine in different ways.

“Vaccine or any immune response is not uniform. How all of us interact with a virus will be different. So because of that, vaccines or natural immunity are not 100% protective. We strive for 100%, but what we understand is that some number of people, even when they receive the vaccine, may become ill with the virus. What we know is that people who receive the vaccine, even if they become ill, tend to become more mild cases of disease than those who have not received the vaccine,” he says.

For Dr. Kasper the existence of COVID-19 vaccine breakthrough cases is not a reason for anyone to avoid the vaccine. He says the opposite is true. Continuing research shows the benefits of the shot far outweigh the risk of infection.

“The take-home remains: vaccine effectiveness remains well above 90% in real world reporting about adverse effects, which allows us to continually safely deliver vaccine products to those within our community.”

Currently, anyone 16 and older is eligible to receive the COVID-19 vaccine, and can now self-schedule a COVID-19 vaccination at osfhealthcare.org/vaccine.

Dr. Kasper and others urge everyone to continue following public health guidelines to [slow the spread of COVID-19](#) whether or not you have received a vaccine by diligently practicing sensible day-to-day habits. The best form of prevention is to avoid exposure to the virus.