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NEWS

CAN I STILL GET COVID-19 AFTER BEING VACCINATED?

INFECTION IS STILL POSSIBLE UNDER CERTAIN CIRCUMSTANCES, BUT UNLIKELY: EXPERTS

VERONICA APPIA
vappia@toronto.com

Getting COVID-19 after being immunized against the virus, while possible, is highly unlikely.

In fact, according to experts, this possibility of post-vaccine infection is not exclusive to COVID-19 — it has always existed for other viruses and diseases.

To understand the ways in which a vaccinated person can still get infected with the COVID-19 virus, it is first important to understand how the vaccines work and the amount of time it takes for immunity to take effect.

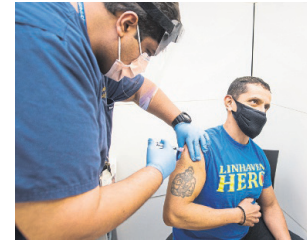
HERE'S WHAT YOU NEED TO KNOW

One dose is not enough—Both the Pfizer-BioNTech and Moderna vaccines require two doses to be effective, which means a person is still highly susceptible to contracting the virus after the first dose.

Bryan Heit, associate professor of microbiology and immunology at Western University, said, as a general rule, it usually takes at least 10 days after the first vaccine dose for the body to develop a reasonable immune response.

"There's essentially a week-and-a-half period after you get your first vaccination where you're still completely open to infection," he said.

While the data for the COVID-19 vaccine is still being assessed, Heit said it ap-



Julie Jocsak/Metroland

Both the Pfizer and Moderna vaccines have about a 95 per cent efficacy rate, which means it will be ineffective five per cent of the time.

pears that after that period, about 50 per cent of people will be protected from getting "noticeable disease."

The second shot then boosts the immune response further, he added.

Reggie Lo, professor emeritus in the department of molecular and cellular biology at the University of Guelph, said it will take about two to three weeks after the second dose for immunity to reach the 95 per cent efficacy rate that was demonstrated in clinical trials. Science is not perfect.

Both the Pfizer and Moderna vaccines have about a 95 per cent efficacy rate, which means it will be ineffective five per cent of the time. This means that yes, people that fall in that five-per-cent range can get the virus after getting vaccinated, but this is the case with other vaccines as well, Heit said.

"As vaccines go, 95-per-cent efficacy is actually really good," he said. "Usually you want better than 90 or 95 per cent for a vaccine to really consider it a good public health tool. We are on par with what you would hope to see when you bring in a new vaccine."

Lo added that when it comes to immune response, nothing is 100 per cent.

"In science, you cannot

say anything is perfect," he said. "That is because we do not know how everybody's immune system works ... you are always going to have individuals who do not respond properly."

Lo said factors such as age, diet and lifestyle can all play a role in a person's immune response to a vaccine. Protected people may still infect others Heit said research is still determining whether a vaccinated person can get infected with the virus and subsequently transfer it, but what is known for certain is that vaccine-protected people do not get any symptoms.

"If they were to be infected, it is theoretically possible that they could spread the disease to someone who wasn't vaccinated, but the likelihood of that is probably fairly low," he said.

Lo said this is because when an unvaccinated individual inhales a highly infectious dose, the immune system will be overwhelmed. This leads to clinical illness and becoming infectious as the virus replicates in the body.

"After the individual has been vaccinated and immunity developed, this will limit replication of the virus in the body and hopefully reduce the number of virus particles exhaled to infect other people," he said. Heit said the other possibility is that vaccinated patients develop such strong immunity against the virus that they won't get infected at all.

"That, of course, is what we're hoping for because then you completely shut down any chance of those people transmitting the virus, because the virus goes into their body, and even before it can infect and start growing, it gets cleared."

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