

## Yes, you still need to wear a mask after you get the COVID-19 vaccine

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The country's first coronavirus vaccinations are now being distributed. The FDA granted the Pfizer vaccine emergency authorization for use, and it's expected that soon, possibly by this week, it will do the same for



the Moderna vaccine. In trials, the Pfizer vaccine was 95% effective in preventing COVID-19, and the Moderna vaccine stands at 94%, both significantly more effective than many scientists anticipated.

"This is close to the gold standard of all vaccines, the measles vaccine," says Eric Sachinwalla, medical director of Infection Prevention and Control at Einstein Medical Center Philadelphia, noting that the MMR vaccine used to prevent measles is about 97% effective.

Both versions of the vaccine require two injections. If you get them both, your chances of getting infected with the <u>coronavirus</u> are likely low. But even if you get vaccinated in the near future, experts say it'll be months until you can ditch the masks and hug everyone around you.

## WHY WE HAVE TO CONTINUE TO WEAR MASKS

The main challenge? Studies of the COVID-19 vaccines only measured whether vaccinated people developed symptoms, not whether they got infected. We know that you can become infected with the coronavirus and be asymptomatic, meaning you never develop symptoms. Asymptomatic people can still spread COVID-19 to others. So we don't know whether a vaccine prevents asymptomatic infections and if there's still the possibility that a vaccinated person could transmit the virus without knowing it.

"The vaccine is probably the most important tool we have right now in controlling this pandemic, but it's not perfect and it's not a magic bullet that can end this for good right away," says Neal Goldstein, assistant research professor of epidemiology and biostatistics at Drexel University.

We wear masks for two reasons: to protect ourselves, and to protect others. Because there's still a chance that you could be a silent carrier



even after getting vaccinated, wearing a mask, practicing social distancing, and hand-washing all remain important.

## HOW IS IT POSSIBLE TO BE VACCINATED BUT POTENTIALLY CARRY THE CORONAVIRUS?

The Pfizer and Moderna vaccines work by generating a body-wide immune response. They are injected deep into the muscles and travel through the bloodstream where the body creates antibodies and other types of white blood cells important for immunity.

"For a respiratory germ, like SARS-CoV-2, [COVID-19], the point of entry into the body is through the respiratory tract, predominantly nose and mouth," says Goldstein. "An important question is whether the vaccines elicit a strong immune response at these locations, [the nose and mouth], or the immune system destroys the virus elsewhere in the body."

Researchers are trying to figure out whether you could still carry the virus in your respiratory tract, even if you're protected from getting sick. In theory, it's possible not enough antibodies will circulate in the blood to the mucosa, the moist tissue that lines the nose and mouth. In this case, the virus could potentially live in your <u>respiratory tract</u>, but not make you sick because your body is fending it off elsewhere. If it does remain in your mouth or nose, this means you could sneeze, cough, or breathe out contagious virus particles and still infect others. But the answer is still unknown.

There's also the rare chance that you get vaccinated and still end up getting sick. While the two front-runners are "close to being perfect," says Goldstein, no vaccine is 100% effective, which means there's always the chance you could still get infected. But again, that's uncommon, and the more people who get vaccinated, the less easily the virus can spread.



"As long as you have enough people who are vaccinated, then if in the odd chance someone gets infected, there are very few susceptible people to spread it to," explains Sachinwalla.

## SO, WHEN CAN WE SAY GOODBYE TO MASKS?

Experts estimate that around 70% of the population—more than 200 million people—in the U.S. would need to gain immunity, either from coronavirus infection or a vaccine, for the pandemic to end. The <u>general</u> <u>public</u> is not expected to have access to vaccines until spring.

"It's going to take months, not weeks, but at the same time also not years, until we can end these mitigation measures. Not everyone can get vaccinated, not everyone will get vaccinated, and we're still learning about the vaccination, so everything else we've been doing all along is still so important," says Goldstein.

By mid-2021, experts predict we'll know enough about how well this vaccine is blocking infections at a population level to determine when we can start scaling back on mitigation measures. As for when we'll actually say goodbye to masks and social distancing all together?

"My optimistic view on this is by December 2021," says Goldstein. "The big unknown is whether the public will accept and get the vaccine—both doses—in sufficient numbers."

Sachinwalla agrees that getting the public to accept the vaccine is crucial. And you need both doses, spaced three weeks (Pfizer) to four weeks (Moderna) apart, to get the maximum protection. A recent published study showed the Pfizer vaccine efficacy was 52% after the first dose and didn't reach 95% until after the second.

Sachinwalla's best guess for when we can stop wearing masks presents a



slightly shorter timeline.

"I'm hoping sometime this summer, assuming we get good <u>vaccine</u> uptake in the community and it works as well as these initial studies have suggested," he says.

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