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WHY MASKS ARE IMPORTANT IN REDUCING THE SPREAD OF COVID

If you are fully vaccinated and have a breakthrough Covid infection, you most likely won't get very sick. But you might spread the coronavirus to immunocompromised and unvaccinated people. Noah Pisner, a 3-D/immersive editor for The New York Times, recently teamed with the illustrator Julia Rothman to explain why. Here is an edited excerpt.

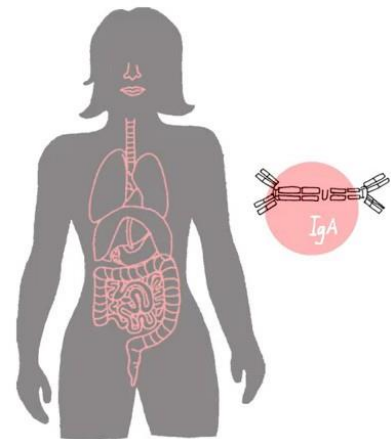


Why are Covid vaccines effective at preventing you from getting severely sick, but not as good at stopping transmission of the virus?

The vaccines are injected deep into your arm where they prompt your immune system to produce T cells and powerful antibodies known as IgG. These antibodies and immune cells circulate through your body, recognizing infected cells. This can offer enough protection to keep you from becoming severely ill.

But IgG antibodies have a hard time reaching the wet, squishy surfaces of your nose, mouth, respiratory tract and digestive system. These areas rely on a different immune response that involves antibodies known as IgA.

New research suggests that current vaccines aren't as good at eliciting a strong IgA response in your nose and mouth. If you're vaccinated, IgG antibodies and T cells will prevent you from becoming seriously ill. But the virus can still bloom in your nose.



The Delta variant is especially contagious. The vaccines will still prevent serious illness if you become infected, but Delta replicates much faster than other variants, increasing the chances that you will transmit the virus from your nose and mouth.

Scientists are testing nose spray vaccines that might help IgA production — but they won't be ready for a while. In the meantime, masks are a simple and effective way to curb transmission.