

# How to navigate another summer of COVID-19

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Summer: A hallowed time for barbecues, parties, vacations, and visits, and, for many over the past three years, a time of anxiety about how to engage in those vaunted activities without spreading disease.



Knowing how to approach potentially risky activities given the changing state of the pandemic has been complicated. Advances in <u>public health</u> are helping to manage the spread: The CDC has authorized vaccines for children over six months old, rapid testing is becoming more widely available in the United States, and antiviral medications like Paxlovid mean that those who get the disease are less likely to suffer serious illness.

At the same time, the virus is constantly evolving, with the new omicron subvariants BA.4 and BA.5 currently accounting for over half of new COVID cases in the U.S.

To understand how to safely navigate the current state of the pandemic, Penn Today spoke to two Penn experts, Melanie Kornides, who studies misinformation and vaccine acceptance at the School of Nursing, and John Wherry, an immunologist at the Perelman School of Medicine.

## If you're traveling or gathering, get tested

Both Kornides and Wherry stress the importance of testing as a tool for safely gathering or traveling. "If you're getting together and spending extended periods of time indoors, test before you go," says Kornides. "If you're planning to travel, take a rapid test and if you have symptoms, take a PCR test or delay your trip." She also recommends wearing a mask when traveling through airports.

#### Even with new variants, rapid tests are still accurate

Wherry points out that "the virus is mutating mostly in its <u>spike protein</u>," the protein on the surface where most of the antibodies that protect us from infection bind to recognize the virus. "Rapid tests are detecting a different protein that's not changing nearly as rapidly," he says. "So far,



the rapid tests are not affected by these new variants."

Given this, Wherry says, "By and large, the rapid tests are still our best strategy for monitoring when you're infectious." He says this still applies to people five or more days after initially testing positive or showing symptoms for COVID-19, "If you are positive on a <u>rapid test</u>, you should not be out interacting with other people."

#### Vaccinations are the best way to avoid serious illness

While variants have resulted in many breakthrough infections—cases of vaccinated people contracting COVID—CDC data still make it clear that vaccination helps prevent both infection and serious illness. Unvaccinated people are twice as likely to contract COVID and six times as likely to die of COVID than vaccinated individuals.

Wherry says this enduring protection from serious illness is because the vaccines prime two important parts of our immune system: antibodies, which recognize a virus to prevent infections, and T cells, which clear the virus in case of infection. While antibodies wane over time and may have difficulty recognizing new variants, T cells are much more stable over time and are able to clear the virus within a few days, decreasing the likelihood that an infection spreads throughout the body and causes serious illness.

By contrast, the T cells in an unvaccinated person may take up to 2 weeks to clear the virus. For a virus that replicates exponentially, that can mean the disease becomes far more severe.

"You may now have hundreds of thousands of times, many millions of times, more virus getting out and spreading," says Wherry, "This exponential amplification is why having your memory T cells come on board quickly is so important. Vaccination generates really good T cells:



that's largely what is keeping people out of the hospital."

## More vaccinations is still one of the most important public health measures

With the expansion of vaccine eligibility to children over 6 months old, Kornides says it is crucial to vaccinate everyone who is eligible. "It's a mistake to think 'because kids don't get sick, they don't need to be vaccinated,'" says Kornides. Along with protecting those children who might get sick, "what's important is that it's stopping the spread of COVID to adults that are at high risk."

While vaccine hesitancy is still widespread, she says, "the vaccines are proven to be really safe and to be so much safer than getting COVID. If you are talking to someone and they're worried about it, you can reassure them that it's safe."

### Take consideration of the the most vulnerable

"We as a community need to prevent spread and make sure that the most vulnerable citizens are able to get effective treatments when they need it," says Kornides.

Even though most vaccinated people have a greatly reduced risk of serious illness or death from COVID, both Wherry and Kornides emphasize that continuing to protect those who are most vulnerable to the virus, such as elderly or immunocompromised people and those with comorbidities, is essential.

"There's a little bit of personal responsibility. You can't know what's going to happen after you transmit that <u>virus</u> to somebody else. They may not be at risk, but they may not know they're infected and they may



infect their spouse or their aging parent that they're taking care of," says Wherry. "We all have the ability to—in very, very simple, non-onerous ways—help control the risk we're posing in our community."

Provided by University of Pennsylvania

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