

# Should I Mask? Can I Travel? What About Hugs? How Delta Is Changing Advice for the Vaccinated

The rise of the Delta variant of the coronavirus has raised new questions about how the vaccinated can stay safe and avoid breakthrough infections. We asked the experts for advice.



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For the vaccinated, it was supposed to be a worry-free, “hot vax” summer of socializing and fun. But the rise of the highly infectious Delta variant has spoiled those plans.

While the vaccines remain remarkably protective against Covid-19, especially against serious illness, headlines about breakthrough infections and new recommendations that vaccinated people should sometimes wear masks have left many people confused and worried.

While new research shows vaccinated people can become infected and carry high levels of the coronavirus, it’s important to remember that those cases are rare, and it’s primarily the unvaccinated who get infected and spread the virus.

“If you’re vaccinated, you’ve done the most important thing for you and your family and friends to keep everyone safe,” Gregg Gonsalves, assistant professor of epidemiology at the Yale School of Public Health, said. “There’s substantially more freedom for people who are vaccinated, but the idea that everything is the same as the summer of 2019 is not the case.”

As long as large numbers of people remain unvaccinated, vaccinated people will be exposed to the Delta variant. Parents have the added worry that children under 12 probably won’t be eligible for vaccination until well into the fall. As a result, every vaccinated person should consider a safety checklist to help minimize the risk of becoming infected and spreading the virus to others.

- Am I sure the people I’m with are vaccinated? Are they symptom-free?
- What are the vaccination and case count rates in my community?
- What is my risk, and the risk of those around me, for complications of Covid-19?

We asked the experts 10 questions about how vaccinated people should adjust their lives and behaviors during the Delta surge. Here are their answers.

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## New Guidance for the Vaccinated

- If I’m vaccinated, why do I need to worry about Delta?
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## If I'm vaccinated, why do I need to worry about Delta?

No vaccine offers 100 percent protection. Think of vaccine antibodies like a sea wall designed to protect a town from a storm surge, says Erin Bromage, a comparative immunologist and biology professor at the University of Massachusetts, Dartmouth. Most of the time, the wall stands up to the pounding waves, but a hurricane might be forceful enough to allow some water to get through. Compared with earlier forms of the virus, Delta is like a viral hurricane; it's far more infectious and presents a bigger challenge to even a vaccinated immune system.

"Vaccinations give you that extra protection you wouldn't normally have," Dr. Bromage said. "But when you hit a big challenge, like getting near an unvaccinated person who has a high viral load, that wall is not always going to hold."

The good news is the current crop of vaccines available in the United States are doing a remarkable job of protecting people from serious illness, hospitalization and death. More than 97 percent of those hospitalized with Covid-19 are unvaccinated. And new data from Singapore shows that even when vaccinated patients are hospitalized with Delta breakthrough infections, they are far less likely to need supplemental oxygen, and they clear the virus faster compared with unvaccinated patients.

## What's the real risk of a breakthrough infection after vaccination?

Breakthrough infections make headlines, but they remain uncommon. Although the Centers for Disease Control and Prevention stopped tracking all breakthrough cases in May, about half of all states report at least some data on breakthrough events. The Kaiser Family Foundation recently analyzed much of the state-reported data and found that breakthrough cases, hospitalizations and deaths are extremely rare events among those who are fully vaccinated against Covid-19. The rate of breakthrough cases reported among those fully vaccinated is "well below 1 percent in all reporting states, ranging from 0.01 percent in Connecticut to 0.29 percent in Alaska," according to the Kaiser analysis.

But many breakthrough infections are probably never reported because people who are infected don't have symptoms or have mild symptoms that end before the person even thinks about being tested.

"Breakthrough infections are pretty rare, but unless we have a population-based sample we don't know the level of rarity," said Dr. Asaf Bitton, executive director of Ariadne Labs at Brigham and Women's Hospital and the Harvard T.H. Chan School of Public Health in Boston. "A lot of people with mild scratchy throat for a couple days may have had them, but we don't know. It's not a failure of the vaccine that we're having breakthrough cases. It's been estimated that we've staved off 100,000 to 200,000 deaths since the vaccine campaign started."

What is clear is that the risk of a breakthrough infection increases the more opportunities you give Delta to challenge the wall of protection conferred by your vaccine. Big crowded events — like a July 4 celebration in Provincetown, Mass., or the packed Lollapalooza concert in Chicago — pose a much greater risk that a vaccinated person will cross paths with an infected person carrying a high viral load.

“The more people you put yourself in contact with, the more risk you have, but it also depends on the local climate of risk,” Dr. Gonsalves said. “Soon we’ll probably see a Lollapalooza outbreak. All these people crushed together is an ideal situation for the spread of Delta.”

## When should I wear a mask?

The C.D.C. has a color-coded map of Covid-19 outbreaks in the United States. Blue and yellow zones show relatively low levels of infections, while orange and red zones indicate areas where cases in the past week were above 50 cases per 100,000 people. The agency advises people to wear masks if they live in an orange or red zone — which now accounts for about 80 percent of the counties in the United States.

Infection numbers remain relatively low in much of the Northeast and Upper Midwest, while Delta has caused huge spikes in cases in Missouri, Arkansas, Louisiana and Florida.

The problem with the map is that case counts are changing rapidly and may surge in your local community before the map has changed colors. Even if you’re certain you’re living in a highly vaccinated community with very low case counts, it makes sense to consider the case counts and vaccination rates in nearby communities as well, because people — and viruses — cross state and county boundaries all the time.

Most experts agree that you don’t need to wear a mask outdoors if you’re not in a crowd and have plenty of distance (at least six feet) from people whose vaccination status isn’t known. It’s still risky to attend a packed outdoor concert, but if you do, wear a mask.

“I would still suggest wearing a mask if you are indoors with people whose vaccination status you don’t know, especially if you will be within a few feet of them for any amount of time, or if you will be in the room for a long period of time with those people,” said J. Alex Huffman, an aerosol scientist and associate professor of chemistry and biochemistry at the University of Denver. “I don’t wear a mask indoors in all situations now, because I’m fully vaccinated, but I put my N95 mask on whenever I go into indoor public spaces.”

## Should I upgrade my mask?

You will get the most protection from a high-quality medical mask like an N95 or a KN95, although you want to be sure you have the real thing. A KF94 is a high-quality medical mask made in Korea, where counterfeits are less likely. If you don’t have a medical mask, you still get strong protection from double masking with a simple surgical mask under a cloth mask. A mask with an exhale valve should never be worn, since it allows plumes of viral particles to escape, and counterfeit masks may have faulty valves that let germs in.

You may want to pick your mask based on the setting. A cloth mask may be adequate for a quick trip into an empty convenience store in an area with high vaccination rates. But a higher-quality mask makes sense during air travel or in a crowded grocery store, especially in communities where vaccination rates are low and case counts are high. Masks with straps or ties around the back of the head seal more tightly than masks with ear loops.

“All the mitigation efforts we used before need to be better to hold off the Delta variant, and this includes masks,” Dr. Huffman said. “I strongly encourage people to upgrade their mask to something with high filter quality and something that fits tightly to their face. The No. 1 factor, in my opinion, is to make sure the mask is sealed well all around the edges — over the nose bridge, by the cheeks and under the chin. So any mask that fits tightly is better than almost any loosefitting mask.”

## What's the risk of hanging out with my vaccinated friends and family?

Vaccinated people are at very low risk when they spend time, unmasked, with their vaccinated friends and family members. "I don't think mask-wearing is critical," Dr. Huffman said. "If you are indoors with a small number of people you know are vaccinated, wearing a mask is low on my list of worries."

But some circumstances might require extra precautions. While it's unusual for a vaccinated person to spread the virus to another vaccinated person, it's theoretically possible. A vaccinated friend who is going to crowded bars, packed concerts or traveling to a Covid hot spot is a bigger risk than someone who avoids crowds and spends most of their time with vaccinated people.

With the Delta variant spreading, Dr. Bitton suggests an "outdoor first" strategy, particularly for families with unvaccinated children or family members at high risk. If you can take your event outside to a backyard or patio this summer and minimize your time indoors, you lower your risk.

Spending time with smaller groups of vaccinated friends has less risk than attending a big party, even if you believe everyone at the party is vaccinated. If you're indoors, open the windows to improve ventilation. If someone in the group is at very high risk because of age or because they are immunocompromised, it's reasonable to ask even vaccinated people to be tested before a visit. A simple rapid home test can even be offered to guests to be sure everyone is Covid-free.

## Can I still dine at restaurants?

The answer depends on local conditions, your tolerance for risk and the personal health of those around you. Risk is lowest in communities with high vaccination rates and very low case counts. A restaurant meal in Vermont, where two-thirds of the population is vaccinated, poses less risk than an indoor meal in Alabama or Mississippi, where just one-third of the residents are vaccinated.

Parents of unvaccinated children and people with compromised immune systems, who studies show may get less protection from vaccines, may want to order takeout or dine outdoors as an added precaution.

## Is it safe to travel? Should I skip the peanuts and water and keep my mask on?

Airplanes are typically well ventilated and not a major source of outbreaks, but taking precautions is still a good idea. The potential for exposure to an infected person may be even higher in the terminal, sitting in airport restaurants and bars, or going through the security line. In airplanes, air is refreshed roughly every two to three minutes — a higher rate than in grocery stores and other indoor spaces. While airlines still require passengers to wear masks, people are allowed to remove them to drink water or eat.

To prevent air from circulating to everyone throughout the cabin, airplane ventilation systems keep airflow contained to a few rows. As a result, an infected passenger poses most risk to those sitting in the seats in the immediate area. Watch this simulation to see what happens when someone sneezes on an airplane.

Most experts say that they use a high-quality medical mask, like an N95 or KF94, when they fly. If you don't have one, double masking is advised. For a vaccinated person, the risk of removing a mask briefly to eat or drink during a flight is low, but it's better to keep it on as much as possible. The C.D.C. says it's best for unvaccinated people, including children, to avoid flying.

Dr. Bromage said he recently traveled by air and took his mask off briefly to drink a beverage, but kept it on for most of the flight. He said he would be more comfortable removing his mask to eat if he knew the people next to him were vaccinated. He said he would be more concerned if the person next to him didn't seem to care about Covid precautions or wore the mask under the nose. "If you've got a random person next to you, especially a chatty person, I'd keep the mask on," he said.

## How safe are buses, subways and trains for vaccinated people?

Most buses, trains and subways still require everyone to wear a mask, which lowers risk. While vaccinated people are well protected, the risk of viral exposure increases the longer the ride and the more crowded the train car or bus. For many people, riding public transit is essential for getting to work or school, and wearing a well-fitted medical mask or double mask is recommended. When public transit is optional, the decision about whether to ride should factor in local vaccination rates and whether case counts are rising.

## Can I hug and visit older relatives? What about unvaccinated children?

While it's generally considered safe for vaccinated people to hug and spend time together unmasked, parents of unvaccinated children have more risks to consider, particularly when visiting older relatives. In communities with low case counts and high vaccination rates, it's generally considered safe for unvaccinated children from a single household to spend time with vaccinated grandparents. But as the Delta variant spreads and children return to school, the risks of close contact also increase for older or immune-compromised people who are more vulnerable to complications from Covid-19, even if they're vaccinated.

When families plan a visit to a high-risk relative, it's a good idea to minimize other exposures, avoiding restaurant dining or working out at the gym in the week leading up to the visit. Even though the risk of a vaccinated person spreading Covid-19 remains low, vaccinated grandparents should also reduce their personal exposure when they spend time with unvaccinated children.

"I have not been masking up indoors with my octogenarian parents at this point, because I am still very careful in the way I wear masks in public settings," Dr. Huffman, the aerosol scientist, said. "But if I had more interactions that increased my overall risk of exposure, I would strongly consider masking up when indoors with vulnerable individuals."

Rapid home tests are an added precaution when visiting grandparents or an immune-compromised family member. Take a test a few days before the visit as well as the day of the visit. You can learn more about home testing [here](#).

Home tests are "a wonderful option for people with a little more anxiety right now in regards to the virus," Dr. Bromage said. "What we're doing is buying those, and each and everyone tests before they come together — literally right before we're together. When everyone is clear, you can enjoy that time together."

## How do I know if I have the Delta variant?

If you're diagnosed in the U.S. with Covid-19, the odds are overwhelming that you have the Delta variant. The C.D.C. now estimates that Delta accounts for more than 82 percent of cases in the United States. The Delta variant has become dominant in other countries as well. In late July the World Health Organization said Delta accounted for 75 percent or more of the cases in many countries, including Australia, Bangladesh, Botswana, China, Denmark, India, Indonesia, Israel, Portugal, Russia, Singapore, South Africa and the U.K.

That said, standard Covid tests won't tell you if your infection was caused by the Delta variant or another variant of the virus. While health departments may use genomic sequencing to identify levels of different variants in a community, this information typically isn't shared with individuals. You still need to isolate and seek medical advice if you have low blood oxygen levels, have trouble breathing or have other worrisome symptoms. You can learn more about when to seek medical advice [here](#).