

What We Know About Your Chances of Catching the Virus Outdoors

By [Michael Levenson](#), [Tara Parker-Pope](#) and [James Gorman](#), Published May 15, 2020 Updated May 23, 2020

A stir-crazy nation wonders: Is it safe to stroll on the beach in a deadly pandemic? How about a picnic in the park? Or coffee with a friend at an outdoor table? The risk is in the details.

The warmer weather across the country calls to mind carefree summers — picnics in the park, swimming at the beach, fireworks on the Fourth. But nothing feels carefree now.

As states move to relax restrictions intended to fight the coronavirus pandemic, even the simplest outdoor activities seem fraught with a thousand questions and calculations.

Is it safe to meet friends in the park, as long as they stay six feet away, on the other side of a blanket? What about a burger and beer at an outdoor restaurant? How risky is a trip to the beach or swimming pool with the kids?

The good news: Interviews show a growing consensus among experts that, if Americans are going to leave their homes, it's safer to be outside than in the office or the mall. With fresh air and more space between people, the risk goes down.

But experts also expressed particular caution about outdoor dining, using locker rooms at pools and crowds in places like beaches. While going outside can help people cope with quarantine fatigue, there is a risk they will lower their guard or meet people who are not being safe.

"I think going outside is important for health," said Julia L. Marcus, an epidemiologist and assistant professor at Harvard Medical School. "We know that being outdoors is lower risk for coronavirus transmission than being indoors. On a sunny, beautiful weekend, I think going outside is indicated, but I also think there are things to do to reduce our risk."

While many treasured outdoor rites of the season have been closed or canceled, including Disney's amusement parks, the Coachella festival in California and Free Shakespeare in the Park in New York, governors across the country have been opening golf courses, trails and beaches, hoping to restore some semblance of a normal summer for restless Americans.

Some parks, including small urban ones like Ellis Island and vast ones like Joshua Tree National Park, remain closed. But Yellowstone will reopen on a limited basis on Monday, and the Grand Canyon reopened its South Rim entrance on Friday. In Los Angeles County, beaches reopened on Wednesday, but not for sunbathing. Only active pursuits like jogging, swimming and surfing are allowed.

Even in the hard-hit New York region, some restrictions will be eased. Connecticut plans to allow outdoor seating at restaurants and outdoor exhibits at zoos on May 20. New Jersey, New York, Delaware

and Connecticut will open state beaches on Memorial Day weekend, restricting them to 50 percent capacity. But New York City's beaches and pools will remain closed.

The different approaches have left many Americans bewildered about what is safe behavior outside. Experts have a simple answer: Practice social distancing and wear a mask when that is not possible.

Ideally, people should socialize only with people who live in their homes, they say. If you decide to meet friends, you're increasing your risk, but you can take precautions. It's important to keep gatherings small. Don't share food, utensils or beverages; keep your hands clean; and keep at least six feet from people who don't live in your home.

"I think outdoors is so much better than indoors in almost all cases," said Linsey Marr, an engineering professor and aerosol scientist at Virginia Tech. "There's so much dilution that happens outdoors. As long as you're staying at least six feet apart, I think the risk is very low."

Pandemic life is safer outdoors, in part, because even a light wind will quickly dilute the virus. If a person nearby is sick, the wind will scatter the virus, potentially exposing nearby people but in far smaller quantities, which are less likely to be harmful.

"The virus load is important," said Eugene Chudnovsky, a physicist at Lehman College and the City University of New York's Graduate Center. "A single virus will not make anyone sick; it will be immediately destroyed by the immune system. The belief is that one needs a few hundred to a few thousand of SARS-CoV-2 viruses to overwhelm the immune response."

While the risk of outdoor transmission is low, it can happen. In one study of more than 7,300 cases in China, just one was connected to outdoor transmission. In that case, a 27-year-old man had a conversation outdoors with a traveler who had just returned from Wuhan. Seven days later, he had his first symptoms of Covid-19.

"The risk is lower outdoors, but it's not zero," said Shan Soe-Lin, a lecturer at the Yale Jackson Institute for Global Affairs. "And I think the risk is higher if you have two people who are stationary next to each other for a long time, like on a beach blanket, rather than people who are walking and passing each other."

One recent study found that just talking can launch thousands of droplets that can remain suspended in the air for eight to 14 minutes. But the risk of inhaling those droplets is lower outdoors.

For many Americans who have spent anxious months at home, wide-open parks and trails feel like the safest options these days.

Kate Wathall, a Los Angeles television producer and reporter, went for her first hike in weeks last Sunday, one day after local trails reopened. She drove an hour to Trail Canyon Falls in Tujunga, avoiding more popular trails in the city.

"It was like being back to normal life," she said. "Obviously, it's not. But it's a day where I forgot what was going on."

In Memorial Park in Maplewood, N.J., on Thursday, Gabriella Gabriel, 22, was exercising with her friend Candace Brodie, also 22, on mats a few feet apart on the grass.

“People are spread out and there’s no way for someone to be right on top of me,” Ms. Gabriel said. “But in a pool or beach, everyone is so condensed — too close for comfort.”

Experts agreed that the risk of swimming in pools, lakes or the ocean is not from the water, but from exposure to people in and near the water.

Although scientists don’t have data on the novel coronavirus specifically, other coronaviruses are not stable in water and are very sensitive to chlorine, said Angela Rasmussen, a virologist at the Columbia University Mailman School of Public Health.

“In my opinion, pool water, fresh water in a lake or river, or seawater exposure would be extremely low transmission risk even without dilution (which would reduce risk further),” Dr. Rasmussen said in an email. “Probably the biggest risk for summer water recreation is crowds — a crowded pool locker room, dock or beach, especially if coupled with limited physical distancing or prolonged proximity to others. The most concentrated sources of virus in such an environment will be the people hanging out at the pool, not the pool itself.”

Experts say that a person walking, jogging or cycling too close for a few seconds is not a big worry. But they recommend joggers wear a mask or some other form of face covering if they’re going to come close to other people. If someone sets up a picnic blanket within your six-foot perimeter and plans to stay a while, that’s a bigger concern. Try to avoid a confrontation. That only increases your risk of exposure. Such conflicts could spike as more people head outside.

“If someone is too close to you and not wearing a mask and you don’t feel safe, instead of yelling at them, just say, ‘I need some space, please,’” Dr. Marcus said.

For families with small children, navigating the outdoors can produce a special anxiety.

Ms. Gabriel said her brother, who is 6, had wanted to go to the playground, but her mother wouldn’t allow it. She worries about the virus lingering on slides and swings and about a mysterious inflammatory syndrome linked to the virus that has been sickening and killing some children.

“It’s hard for a child to understand,” Ms. Gabriel said. “At least we can stay six feet apart. You can’t tell a little kid that.”

One challenge in dense cities is finding six feet to call your own on a running path or in a bicycle lane. An open-air cafe may seem safe, until people start walking by on the sidewalk without masks.

Some cities, including New York, Boston, Minneapolis and Oakland, have closed streets to traffic, giving people room to spread out. Others have extended sidewalks to make more space for pedestrians and outdoor seating.

Even outside, there is a risk of contracting the virus by touching a contaminated surface — a restaurant menu, park bench or lawn chair — and then touching your face. Studies have shown the virus can last

three days on hard surfaces like steel and plastic and about 24 hours on cardboard under laboratory conditions. The virus is also more stable in heat and humidity than many other viruses are.

According to Dr. Chudnovsky, a sunny day is better than a cloudy day, because there's more sunlight to kill the virus and more wind to dilute it. If you want to take extreme precautions, position yourself upwind from other people. "This may be especially important at the beach, where people tend to spend a long time at one localized place," he said.

Experts said that although outdoor restaurant patrons can't wear masks while eating, servers should. The main risk of exposure is if the guests within a few feet at the table aren't from your household. Sitting and talking for extended periods of time as well as sharing food and common serving utensils are also potential sources of exposure if one of the guests is infected and doesn't know it.

Another worry: Because it can take two weeks for symptoms to appear after a person is infected, there is no way to know if you're going to the beach or the park in the midst of an invisible local outbreak, experts said. It's yet another reason to take precautions.

"If we now go back to the old normal and don't follow the social distancing strategy anymore, it's like a ticking time bomb," said Peter Jüni, an epidemiologist at the University of Toronto and St. Michael's Hospital. "You never know where it blows up and when."

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