

## The CDC says coronavirus is airborne and spread by aerosols, warns of badly ventilated spaces



Ajeet Vinayak of Georgetown University Hospital breaks down how the covid-19 virus attacks the lungs of patients, leaving possible long lasting damage. (John Farrell/The Washington Post)

By Tim Elfrink

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For months, scientists and public health experts have warned of mounting evidence that the novel coronavirus is airborne, transmitted through tiny droplets called aerosols that linger in the air much longer than the larger globs that come from coughing or sneezing.

Now, the Centers for Disease Control and Prevention agrees. The CDC recently changed its official guidance to note that aerosols are “thought to be the main way the virus spreads” and to warn that badly ventilated indoor spaces are particularly dangerous.

“There is growing evidence that droplets and airborne particles can remain suspended in the air and be breathed in by others, and travel distances beyond 6 feet (for example, during choir practice, in restaurants, or in fitness classes),” the agency stated. “In general, indoor environments without good ventilation increase this risk.”

While the CDC has not called for any new action to address the airborne threat of a virus that has now killed nearly 200,000 Americans, experts said the change should help to shift policy and public behavior.

“It’s a major change,” Jose-Luis Jimenez, a chemistry professor at the University of Colorado at Boulder who studies how aerosols spread the virus, told The Washington Post. “This is a good thing, if we can reduce transmission because more people understand how it is spreading and know what to do to stop it.”

The CDC shifted its guidelines on Friday, but the change was not widely noticed [until a CNN report on Sunday](#). Where the agency previously warned that the virus mostly spreads through large drops encountered at close range, it now cites “small particles, such as those in aerosols,” as the most common vector.

“These particles can be inhaled into the nose, mouth, airways, and lungs and cause infection,” the guidance says. “This is thought to be the main way the virus spreads.”

Since the pandemic began, arguments have raged over how the virus travels — and how to best halt it. At first, widespread fear of contaminated surfaces led some to bleach their groceries and mail. But the [CDC](#) soon concluded that person-to-person transmission was a much more pressing threat. Instead, the agency focused its guidance on avoiding the larger droplets hacked up by sneezes and coughs, which are thought to be mostly limited to a six-foot radius.

But researchers long suspected that the virus could travel much farther, especially indoors and in places where people talk loudly or sing. Infamously, one infected person in March unknowingly passed the [coronavirus](#) to 52 others at [a choir practice in Washington state](#). Similar indoor “superspreader” events added weight to the idea of an airborne threat.

The World Health Organization recognized the threat of aerosols in July, [after hundreds of scientists](#) urged the international body to address airborne spread. It’s not clear why the CDC finally followed; Jimenez said high-ranking CDC officials were still arguing publicly against airborne transmission as a major vector as recently as late August.

“Evidence has been accumulating for some time. Those of us who have been studying this were frustrated that the change was slow, but it finally came,” Jimenez said.

While the CDC didn’t make any major changes in its guidance on how to prevent the spread of the virus, some scientists suggested it should drive a major rethink of public policy — particularly at a time when students in many areas are returning to indoor classrooms.

“We have been saying ‘wear a mask’ and ‘6 feet apart’ for months,” [tweeted Abraar Karan](#), a physician at Brigham and Women’s Hospital in Boston and Harvard Medical School. “Cloth masks are not designed to block aerosols. And 6 feet apart may be insufficient, [especially] indoors [with] poor ventilation.”

The change should drive people to adopt concrete solutions to slowing airborne transmission, Jimenez said, such as wearing more tightly fitting masks, improving ventilation and keeping as much distance as possible from others when indoors.

But the CDC’s shift can also help experts and lawmakers better communicate why those measures are needed.

“If we tell people rules they don’t understand, it doesn’t work. We need to tell people why these rules work. Then they can understand, and many more will comply,” Jimenez said.

*Antonia Noori Farzan contributed to this report.*