

Can Coronavirus Survive Heat?

Many people are hoping that the start of summer weather will slow or stop the rapid spread of the new coronavirus. The answer to whether a change in seasons will end the COVID-19 pandemic isn't clear. One theory is that the virus may spread less rapidly in the summer. But COVID-19 is so new that no one knows if this is true.

Besides heat, many other factors are involved, such as how far the virus has spread and how well the world does at containing the virus. Plus, a different coronavirus, MERS, actually thrives in high temperatures. It's not clear what COVID-19 will do.

It's true that some contagious respiratory infections, like colds and flu, peak in the winter in the U.S. and are rarer (but not totally gone) in the summer. And in 2003, there were major outbreaks of SARS in Singapore and Hong Kong, often in air-conditioned hospitals and hotels. Tropical countries like Malaysia, Indonesia, and Thailand that relied less on air conditioning were not impacted as severely.

More recently, Chinese scientists published a study (in the open-access journal *SSRN*) in which they calculated the rate at which COVID-19 replicated in 100 Chinese cities to see how the spread lined up with changes in the weather. They determined that "high temperature and high relative humidity significantly reduce the transmission." This finding is consistent with patterns of the flu's spread. But the study hasn't yet been reviewed by other scientists.

Virus experts at the University of Maryland Baltimore have reported that COVID-19 thrives most in laboratory settings when the temperature is 39 F and the humidity level is 20% to 80%. Those researchers also analyzed the global spread of COVID-19 to date and concluded that all the cities with major outbreaks have an average winter temperature of 41-52 F and an average humidity of 47% to 79%. For these reasons, they predict that the pandemic will likely follow a pattern similar to that of seasonal flu.

Still, findings in a lab don't always translate into real life. And with a brand-new virus, there's no way to know what will happen to it in the warmer weather. The University of Maryland Baltimore researchers recommend using their findings to direct public health efforts to areas where weather might make the disease more rampant.

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Sources

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