

Don't count on warmer weather to curb COVID-19

April 9 2020, by E.j. Mundell, Healthday Reporter



(HealthDay)—Both the U.S. National Academy of Sciences and a report

out of China are dampening hopes that—as happens with colds and the flu—COVID-19 might begin to fade with hotter weather.

"Given that countries currently in 'summer' climates, such as Australia and Iran, are experiencing rapid virus spread, a decrease in cases with increases in humidity and temperature elsewhere should not be assumed," according to experts at the National Academy of Sciences (NAS).

And a new study conducted between early January and early March in 224 coronavirus-endemic cities across China supports that notion. It found that coronavirus transmission did not seem to change with fluctuations in daily temperature or humidity.

"Our study does not support the hypothesis that high temperatures and UV radiation [sunlight] can reduce the transmission of COVID-19," said a team led by Ye Yao, of Fudan University in Shanghai. "It might be premature to count on warmer weather to control COVID-19."

Dr. Robert Glatter, an emergency medicine specialist working at the heart of the U.S. COVID-19 outbreak in New York City, agreed.

The new findings run "contrary to claims in early February that the virus will 'miraculously' go away by April as temperatures rise," said Glatter, who practices at Lenox Hill Hospital in New York City.

Still, there is some reason for hope. As the Chinese team noted, it's long been known that [upper respiratory infections](#) tend to cluster in colder seasons. The exact reasons for that aren't clear, but Yao's group said a number of factors are probably at play.

With more sunlit days, summer could boost people's natural vitamin D levels, which in turn might give a boost to their immune systems. The

sun's UV rays are also thought to help kill viruses such as flu and the common cold. Also, most countries let children out from school in the summertime, which can also lower transmission rates, the Chinese group said.

But what about coronaviruses?

As the NAS noted in a news release Wednesday, "experimental studies show a relationship between higher temperatures and humidity levels and reduced survival of the COVID-19 virus in the laboratory." But the NAS also stressed that many other factors could influence the person-to-person spread of the new coronavirus.

Digging deeper, Yao's group conducted a complex analysis of the spread of novel coronavirus across China, including Hubei province, where the global pandemic began. They compared that epidemiological data to fluctuations in daily temperatures and the amount of sunlight, as well as changes in humidity.

Reporting April 9 in the *European Respiratory Journal*, the Chinese team found that, after adjusting for humidity and UV levels, "the spread ability of COVID-19 would not change with increasing temperature." Likewise, adjusting for temperature and humidity, the amount of UV sunlight also didn't affect transmission rates.

The team pointed out that these patterns are similar to what was seen with another [coronavirus](#)-linked outbreak, the spread in 2012 to 2013 of Middle East respiratory syndrome (MERS). In that outbreak, MERS cases still spread even when outside temperatures in the Arabian Peninsula soared to 113 degrees Fahrenheit.

"Other newly emergent zoonotic [originating in animals] disease, such as Ebola or pandemic strains of influenza, have also occurred in

unpredictable patterns," the scientists noted.

Yao's team stressed, however, that their study is not definitive, and "certainly, further studies with longer follow-up period and wider temperature range are warranted."

For its part, the NAS agreed. "Additional studies as the pandemic unfolds could shed more light on the effects of climate on transmission," the institute said in a news release. But right now, their own "expert consultation" on the potential seasonality of COVID-19 finds little conclusive evidence that cases will drop as the summer nears.

"There is some evidence to suggest that the COVID-19 virus may transmit less efficiently in environments with higher ambient [temperature](#) and humidity; however, given the lack of immunity to the virus globally, this reduction in transmission efficiency may not lead to a significant reduction in disease spread without the simultaneous adoption of major public health interventions," the NAS said.

Dr. Miriam Smith is chief of infectious disease at Long Island Jewish Forest Hills, in New York City. Reading over the Chinese study, she agreed that other factors—not the approach of summer—may finally curb the COVID-19 pandemic.

"Until herd immunity is established, effective evidence-based treatments become available and a vaccine is developed, social distancing will likely continue to play a role in reducing transmission," Smith said.

More information: The U.S. Centers for Disease Control and Prevention has more on the [new coronavirus](#).

Copyright © 2020 [HealthDay](#). All rights reserved.

Citation: Don't count on warmer weather to curb COVID-19 (2020, April 9) retrieved 18 November 2023 from

<https://medicalxpress.com/news/2020-04-dont-warmer-weather-curb-covid-.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.