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One Health: White Tailed Deer

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Between November 2021 and April 2022, APHIS, in collaboration with State and Tribal wildlife agencies, conducted surveillance for SARS-CoV-2 in wild white-tailed deer (*Odocoileus virginianus*). Thousands of respiratory and blood samples were collected from free-ranging white-tailed deer across 27 States.

Use the map below to learn how SARS-CoV-2 has impacted white-tailed deer by State.

SARS-CoV-2 in White-tailed Deer

In collaboration with its partners, APHIS is using a targeted multi-year surveillance approach to monitor and study wild cervid populations across the country. Conducting surveillance and research studies is helping APHIS to understand if cervids are acting as host or “reservoir species,” meaning if the virus survives in animals, which allows it to potentially mutate into new variants. APHIS aims to better understand the potential impacts of SARS-CoV-2 at the wildlife and human interface.

While experts are still learning about SARS-CoV-2 in animals, there is currently no evidence that animals play a significant role in spreading the virus to humans.

However, since wildlife can carry multiple zoonotic diseases, even without looking sick, it is always important to enjoy wildlife from a distance. For more information, please contact: APHISpress@usda.gov.

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Related Information

- [APHIS Researches SARS-CoV-2 in White-tailed Deer \(video\)](#)
- [Frequently Asked Questions: SARS-CoV-2 Surveillance in Free-Ranging Deer and Other Cervids](#)
- [Frequently Asked Questions: SARS-CoV-2 Surveillance in Free-Ranging Deer and Other Cervids \(Spanish\)](#)
- [Frequently Asked Questions: SARS-CoV-2 Surveillance in Free-Ranging Deer and Other Cervids \(Hmong\)](#)
- [Summary of SARS-CoV-2 Variants Detected in White-tailed Deer from October 2021 to October 2022 \(chart\)](#)
- [White-tailed Deer Surveillance Efforts Across the United States by Sampling Week, October 2021 to October 2022 \(chart\)](#)

Other White-tailed Deer Studies

Information from the map above provides reference to these studies.

[Transmission of SARS-CoV-2 in Free-ranging White-tailed Deer in the United States](#)

[This study by APHIS, University of Missouri, and Centers for Disease Control and Prevention, found evidence that SARS-CoV-2 spilled over from humans, circulated in white-tailed deer populations, and potentially spilled back into humans.](#)

[SARS-CoV-2 Occurrence in White-tailed Deer Throughout Their Range in the Continental United States](#)

[This paper by APHIS releases national information about SARS-CoV-2 detected in cervid populations.](#)

[Accelerated Evolution of SARS-CoV-2 in Free-ranging White-tailed Deer](#)

[This research by The Ohio State University, its partners, and APHIS, shows SARS-CoV-2 spilled over from humans to white-tailed deer in Ohio, that the viruses repeatedly mutated in deer, and that SARS-CoV-2 was evolving faster in deer compared to humans.](#)

[Epidemiological Dynamics of SARS-CoV-2 in White-tailed Deer](#)

[This research by APHIS and its partners shows that male deer have higher positivity rates than female deer, and infection is higher in counties with higher human population densities.](#)

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