

# Bats more likely than rodents to carry disease, new study says

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Rodents hugely outnumber bats, but bats are more likely than rodents to carry viruses that can be transmitted between animals and humans, according to new research by Colorado State University disease ecologists.

"There's been a lot of speculation that bats might be special in some way as far as their potential to host [zoonotic diseases](#)," said Angela Luis, a postdoctoral fellow who conducted the research with Colleen Webb, a biology professor at Colorado State. Zoonotic are diseases that can be transmitted from animals to humans. "We found that although there are twice as many [rodent species](#) as there are [bat species](#), bats hosted more zoonotic viruses per species than rodents."

Luis and Webb scoured existing studies to produce their findings, which

appear this week in the online edition of the [Proceedings of the Royal Society B – Biological Sciences](#). The research was funded by Research and Policy for Infectious Disease Dynamics, or RAPIDD, through the National Institutes of Health Fogarty International Center and the U.S. Department of Homeland Security.

Bats carry SARS, Ebola, Nipah and Hendra viruses – all of which can be deadly to humans. The researchers found that bats were more likely to share viruses such as these between species and that viruses may pass more easily between different bat species that live in the same geographic range than between rodent species.

While humans should keep their distance from bats, the ecosystem benefits from healthy [bat populations](#) that eat insects and pollinate fruits, Luis said. Bats eat enough insects to account for as much as \$3 billion worth of pesticide control annually in the United States.

"Even though this work shows that [bats](#) are special as far as hosting these nasty diseases, they're really important ecologically," Luis said. "We want to promote limiting bat and human contact, which will be beneficial for both bat conservation and human health."

**More information:** [www.news.colostate.edu/content.../Complete\\_paper.pdf](http://www.news.colostate.edu/content.../Complete_paper.pdf)

Provided by Colorado State University

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