

New study determines how long Zika remains in body fluids

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Transmission electron micrograph (TEM) of Zika virus. Credit: Cynthia Goldsmith/Centers for Disease Control and Prevention

A study published in the *New England Journal of Medicine* provides evidence that the Zika virus particles remain longer in blood than in urine and some other body fluids. This information suggests that blood

serum may be the superior diagnostic specimen.

The study was led by researchers from the U.S. Centers for Disease Control and Prevention (CDC), and included multiple partners including researchers at the Rollins School of Public Health at Emory University.

The team sought to determine the frequency and duration of detectable Zika Virus (ZIKV) RNA in blood, urine, semen, and other [body fluids](#). It is the first study to examine multiple body fluids for the presence of Zika virus over a length of time. Specimens from more than 150 ZIKV RNA-positive men and women in Puerto Rico were collected within one week of diagnosed Zika symptoms, with regular testing occurring over a six-month period.

According to the results, half of the participants had detectable [virus particles](#) in [blood serum](#) at 14 days after the start of symptoms with five percent still detectable at 54 days. In urine specimens, half of the participants had virus particles at eight days, with five percent still detectable at 39 days.

Researchers also examined traceable Zika particles in semen to determine how long men may be able to transmit the virus to partners. Results indicated that Zika remained longer in semen than other body fluids, with half of the participants showing virus particles one month after the start of symptoms and five percent remaining after three months. Regarding women, Zika virus particles that remained in blood serum were largely undetectable in vaginal fluids and saliva specimens of both men and women after one week.

"The findings of this study are important for both diagnostic and prevention purposes," says Eli Rosenberg, PhD, assistant professor in the Department of Epidemiology at Emory's Rollins School of Public Health and scientific co-investigator of the study. "The results fully support

current CDC sexual transmission recommendations but also provide critical information to help in understanding how often and how long evidence of Zika virus can be found in different body fluids. This knowledge is key to improving accuracy and effectiveness of testing methods while providing important baseline information for future research."

More information: Gabriela Paz-Bailey et al. Persistence of Zika Virus in Body Fluids—Preliminary Report, *New England Journal of Medicine* (2017). [DOI: 10.1056/NEJMoa1613108](https://doi.org/10.1056/NEJMoa1613108)

Provided by Emory University

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