

US Olympians at the 2016 Rio Games were infected with West Nile virus, not Zika

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Blood samples were drawn from US Olympic and Paralympic athletes and staff before and after the Rio Games in 2016. Credit: Charlie Ehlert, University of Utah Health

U.S. Olympic and Paralympic athletes and staff who traveled to Rio de

Janeiro, Brazil, for the 2016 Summer Games did not become infected with Zika virus but did test positive for other tropical, mosquito-borne viral infections, including West Nile Virus, Dengue Fever and Chikungunya. Results from the University of Utah Health-led study will be reported at IDWeek, a national infectious disease conference being held in San Diego.

None of the infected travelers became seriously ill, say the study's investigators. But the findings are a reminder that amidst the frenzy over Zika, travelers were also susceptible to other, long-standing public health risks that did not receive the same level of scrutiny.

"Everyone was concentrating on Zika and ignoring that there could be other infections caused by mosquito bites. We did not expect to find so many with these other infections," says U of U Health infectious disease specialist Krow Ampofo, MBCHB., who will be presenting the study's results on Oct. 7. "That is one of the reasons why we think that being vigilant about monitoring for infectious diseases after travel to at-risk areas is so important."

Other sources have indicated that there were no Zika cases reported during the Rio Olympics. But the U of U Health investigation is the first to examine a large cohort for viruses that cause other tropical [infectious diseases](#).

Of the 457 athletes and staff who provided blood samples after returning from Brazil, testing found that 32 (7%) had become infected with mosquito-borne viruses while abroad. Twenty-seven had West Nile Virus, three had Chikungunya, and two had Dengue. None had signs of Zika.



Blood samples were drawn from US Olympic and Paralympic athletes and staff before and after the Rio Games in 2016 and tested for Zika, West Nile Virus, and other tropical infectious diseases. Credit: Charlie Ehlert, University of Utah Health

Twelve of the individuals who tested positive filled out post-travel surveys. From those, only three - two with Chikungunya and one with West Nile Virus - reported having symptoms that can include body aches and rash. Symptoms emerged within two weeks after travel and resolved shortly thereafter.

"We were thrilled that there were no cases of Zika," says lead investigator Carrie Byington, M.D., who began the study while at U of U Health and is now at Texas A&M Health Science Center. "One of the reasons we think that post travel diagnostics is really important is because multiple things can cause a similar picture and it's important to know what you had."

In general, most people infected with one of the other three viruses tested in the study - West Nile Virus, Chikangunya or Dengue - either had no symptoms or, when ill, had mild symptoms. In rare cases, these infections can be severely disabling or lethal.

At the time the study began, organizers were particularly concerned about Zika, which can also spread through sexual transmission and cause debilitating birth defects in unborn babies.

The 2016 Olympic and Paralympic Summer Games were held not long after the height of the Zika epidemic. The U of U Health study was

mounted as a rapid response to monitor the [health](#) of U.S. athletes and staff traveling to Brazil, the epicenter of the outbreak. Of the estimated 2,000 travelers, 950 enrolled in the study, and just under half submitted samples for testing upon return. Participants who tested positive were sent letters explaining their results and recommending they consult with their [health care provider](#).

"We all had our Hollywood sunglasses on, and they blinded us to other possibilities," says Marc Couturier, Ph.D., a medical director at ARUP Laboratories who led the testing. "We can't forget that West Nile Virus has been around for a while, and is still here."

More information: Dr. Krow Ampofo will be presenting this study, titled "Arboviral Infections Following the 2016 Olympic and Paralympic Games in a Cohort of US Athletes and Support Staff," as an oral abstract (#2486) on Oct. 7 at 2:00 p.m. PDT in the Global Infections session at IDWeek in Room 01AB.

Provided by University of Utah

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