

Bedbugs could be potential new source of tropical disease in US

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Penn Study Shows Bed Bugs Can Transmit Parasite that Causes Chagas Disease.
Credit: Penn Medicine/Robert Press

(HealthDay)—Until recently, insect-transmitted Chagas disease was found mainly in Latin America and South America, but it has made its way to the United States over the past few years.

The potentially fatal illness is typically transmitted via the bite of the

"kissing bug," which feeds on the faces of humans at night. And now a new study suggests that common [bedbugs](#) might be carriers as well.

"We've shown that the bedbug can acquire and transmit the parasite. Our next step is to determine whether they are, or will become an important player in the epidemiology of Chagas disease," study senior author Michael Levy, assistant professor in the department of Biostatistics and Epidemiology, University of Pennsylvania's Perelman School of Medicine, said in a university news release.

According to background information from the researchers, Chagas disease affects 6 million to 8 million people worldwide and kills about 50,000 a year, and is one of the most common and dangerous illnesses in Latin America. The disease, caused by the microscope parasite *Trypanosoma cruzi*, can progress without symptoms for years, but can end up attacking the heart and causing heart failure, the researchers explained.

Recently, "we are finding new evidence that locally acquired human transmission is occurring in Texas," Melissa Nolan Garcia, a research associate at Baylor College of Medicine in Houston told *HealthDay* earlier this month. Her team reported the findings at the annual meeting of the American Society of Tropical Medicine and Hygiene in New Orleans.

It's been long known that "kissing bugs" can transmit Chagas disease to people through their feces, but bedbugs were thought to be disease-free.

However, in a series of experiments, Levy's team found that the parasite that causes Chagas disease *can* be passed back and forth between mice and bedbugs.

"There are some reasons to worry—bedbugs have more frequent contact

with people than kissing bugs, and there are more of them in infested houses, giving them ample opportunity to transmit the parasite. But perhaps there is something important we don't yet understand about them that mitigates the threat," Levy added.

The parasite that causes Chagas disease appears especially at home in the guts of bedbugs, added study co-author Renzo Salazar, a biologist at the Universidad Peruana Cayetano Heredia in Lima, Peru.

"I've never seen so many [parasites](#) in an insect. I expected a scenario with very low infection, but we found many parasites—they really replicate well in the gut of the bedbugs," Salazar said in the news release.

The number of people infected with the parasite that causes Chagas disease is growing in the United States and now numbers about 300,000, according to the U.S. Centers for Disease Control and Prevention.

"The [kissing bugs](#) we have here don't come into homes frequently like the more dangerous species in South and Central America do," Levy noted. However, "I am much more concerned about the role of bedbugs," he said. "They are already here—in our homes, in our beds and in high numbers. What we found has thrown a wrench in the way I think about transmission, and where Chagas disease could emerge next."

The findings appear online Nov. 17 in the *American Journal of Tropical Medicine and Hygiene*.

More information: The U.S. Centers for Disease Control and Prevention has more about [Chagas disease](#).

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