

Kissing Bugs: Not So Romantic

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What Are Kissing Bugs?

Kissing bugs (Triatominae), also known as cone-nosed bugs, are commonly found in Central and South America, and Mexico, and less frequently seen in the southern United States.

These insects are called “kissing bugs” because they typically bite hosts around the eyes and mouths. Kissing bugs are nocturnal blood feeders; thus, people experience bites while they are sleeping. Bites are usually clustered on the face and appear like other bug bites, as swollen, itchy bumps. In some cases, people may experience a severe allergic reaction and possibly anaphylaxis (a drop in blood pressure and constriction of airways causing breathing difficulty, nausea, vomiting, skin rash, and/or a weak pulse).

Kissing bugs are not specific to one host and can feed on a variety of animals, such as dogs, rodents, reptiles, livestock and birds. Common hosts include raccoons, opossums, armadillos and skunks. They are found outdoors near their host, such as in dog kennels, chicken coops, rodent burrows, other animal dwellings, woodpiles and underneath porches. Aged structures with holes or cracks, in particular, are susceptible to infestations.

Identify a Kissing Bug

Adult kissing bugs have flat, oval-shaped bodies and are $\frac{3}{4}$ to $1\frac{1}{4}$ inches long. They range from light brown to black and have a band around the edge of their body with stripes that can be orange or red. Their legs are usually uniformly long and thin. The most common species found in the south-central US are *Triatoma sanguisuga* and *T. gerstaeckeri*. Although neither are commonly encountered, *T. sanguisuga* and *T. lecticularia* are both found in Tennessee.

Pest Management Tactics

The main goal of kissing bug management is to disrupt environments that the insects will typically inhabit.

- Focus management on areas such as your house, housing for animals, or piles of debris.
- Fix any cracks, holes or damage to your home's exterior. Window screens should be free of holes to prevent insect entry.
- Avoid placing piles of leaves, wood or rocks within 20 feet of your home to reduce possible shelter for the insect near your home.
- Use yellow lights to minimize insect attraction to the home.
- Control or minimize wildlife hosts around a property to reduce additional food sources.
- See UT Extension publications [W 658 A Quick Reference Guide to Pesticides for Pest Management Professionals Working in and Around Structures](#) and [PB 1303 Managing Pests Around the Home](#) for insecticidal treatments and more management options.



Size comparison of different kissing bugs to a penny. From left to right: *Triatoma sanguisuga*, *Triatoma gerstaeckeri*, *Triatoma protracta*. (Credit: modified from Gabriel L. Hamer)

Chagas Disease

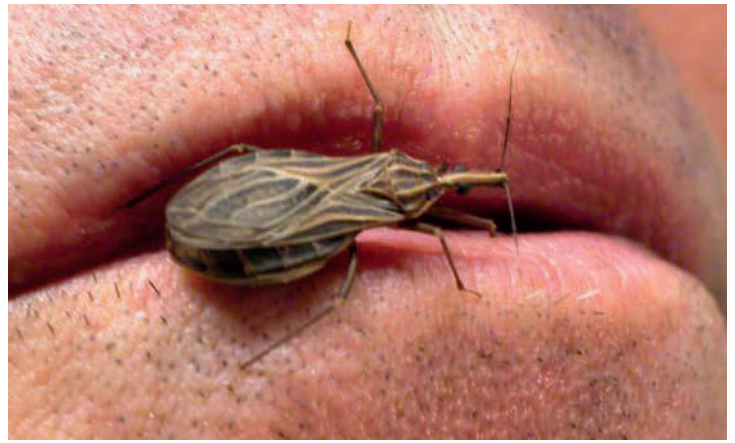
Chagas disease is caused by *Trypanosoma cruzi*, a parasite that affects about 8 million people worldwide. Most Chagas cases occur in Latin America with 300,000 cases estimated in the US. Transmission is via oral ingestion of the infected bug or through fecal transmission. Fecal transmission occurs when parasite-infected feces are accidentally rubbed into the open feeding wound after the bug defecates near the feeding site. Infection may also occur from mother-to-baby, organ transplant from an infected donor, and contaminated blood products. In the US, about half of the adult kissing bugs have this parasite, but Chagas disease incidence is low.

Symptoms

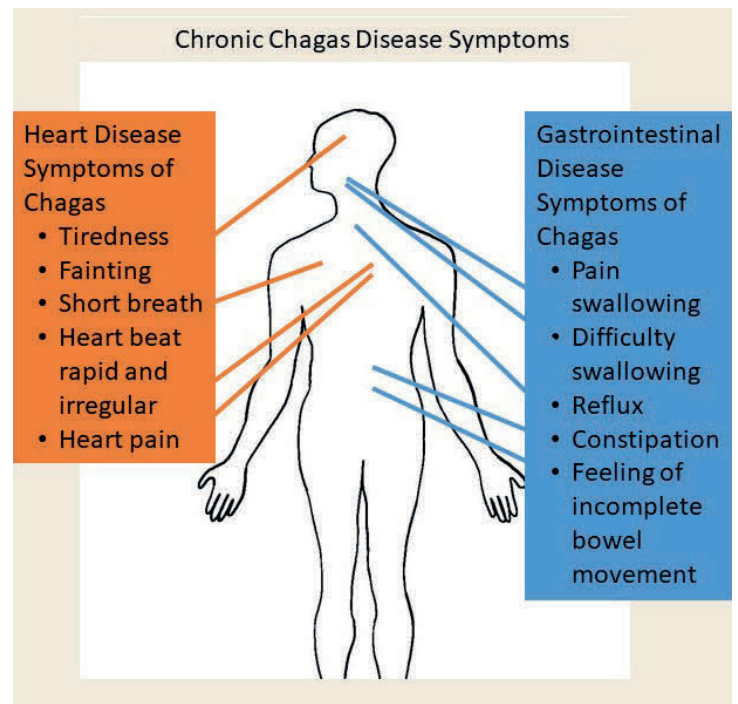
Chagas disease consists of an acute and chronic phase. The acute phase occurs first and can last many months. Most people are typically asymptomatic during this phase and the symptoms are very similar to that of other common illnesses (i.e., headaches, rashes, fever, vomiting, and/or diarrhea); therefore, it may be difficult to diagnose those infected with the pathogen. After the acute phase, roughly 20-30 percent of those infected will progress to the chronic stage and experience multiple health complications such as abnormal heart rhythms, dilated heart, and dilated esophagus or colon.

Minimal Risk in Tennessee

Kissing bugs have been identified in 28 states in the southern half of the US. Importantly, not all kissing bugs are infected with the *T. cruzi* parasite, kissing bugs in the US do not typically defecate near their feeding site and they rarely establish infestations inside homes. One local human Chagas case was reported in Tennessee between 1955 and 2010. Nine Chagas cases were reported in Tennessee between 2010 and 2018, of which one was acquired locally, two were acquired outside the US, and the other six case origins were unknown. The average Tennessean's risk of infection is low, but people should still be cautious of kissing bugs. In Texas, 60 percent of kissing bugs tested positive for *T. cruzi*, making it a higher risk area for infection. Chagas disease incidence in the US is suspected to be higher than reported, but it is still low. If you think you have contracted Chagas disease, contact your health care professional.

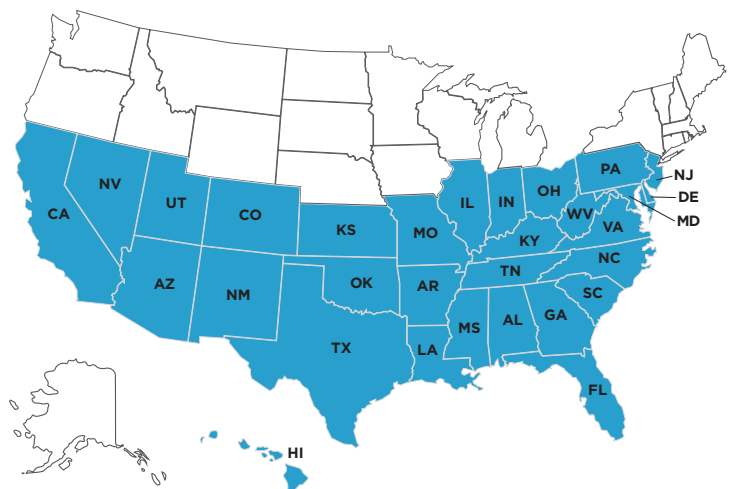


Kissing bug *Rhodnius prolixus*, a Central/South American species, on lips of a host. (Credit: Erwin Huebner)



Potential symptoms for those with chronic Chagas. (Credit: UT E&PP)

Triatomine Bug Occurrence by State



Blue U.S. states above have had reportings of kissing bugs. (Credit: CDC)

Moderate Risk for Dogs

Dogs also experience acute and chronic phases of Chagas disease with many of the infected being asymptomatic. In a 2008 study of 860 dogs from 31 Tennessee counties, 55 (6.4 percent) tested positive for the *T. cruzi* parasite. The parasite was more likely to be found in dogs that spent 100 percent of their time outdoors. There are no treatments for Chagas disease, so it is imperative to follow the pest management tactics listed above to prevent kissing bugs from feeding on dogs too. For dogs kept in outdoor kennels overnight, consider reducing lighting, screening the enclosure, and removing woodpiles, brush and other potential harborage for the kissing bug from the vicinity. Suggestions for structural insecticidal treatments can be found in UT Extension publications [W 658 A Quick Reference Guide to Pesticides for Pest Management Professionals Working in and Around Structures](#) and [PB 1303 Managing Pests Around the Home](#).



*Kissing bug on human host skin. (Credit: Glenn Seplak, 2007
www.flickr.com/photos/gauchocat/519475022)*

Resources and More Information

- Anonymous. 2018. Pet Talk: Chagas Disease in Dogs <https://vetmed.tamu.edu/news/pet-talk/chagas-disease-in-dogs-2018>
- Anonymous. 2018. Kissing Bugs and Chagas Disease in the U.S. Texas A&M University <https://kissingbug.tamu.edu/FAQ>
- CDC. 2020. Chagas Disease - Detailed FAQs. https://www.cdc.gov/parasites/chagas/gen_info/detailed.html#intro
- Lynn, M.K., B.H. Bossak, P.A. Sandifer, A. Watson, and M.S. Nolan. 2020. Contemporary autochthonous human Chagas disease in the USA. Acta Tropica. <https://www.sciencedirect.com/science/article/pii/S0001706X19313166>
- Mekonnen, S. 2020. Kissing Bugs and Chagas Disease. <https://www.poison.org/articles/kissing-bugs-and-chagas-disease-193>
- Nall, R. 2019. Kissing Bug Bite: Identification, Treatments, and Prevention <https://www.healthline.com/health/kissing-bug-bite>
- Rowland, M.E., J. Maloney, S. Cohen, M. J. Yabsley, J. Huang, M. Kranz, A. Green, J.R. Dunn, L.R. Carpenter, T.F. Jones, and A.C. Moncayo. 2010. Factors associated with *Trypanosoma cruzi* exposure among domestic canines in Tennessee. J. Parasitol. 96: 547–551
- WHO. 2020. Chagas disease. [https://www.who.int/news-room/fact-sheets/detail/chagas-disease-\(american-trypanosomiasis\)](https://www.who.int/news-room/fact-sheets/detail/chagas-disease-(american-trypanosomiasis))



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