

Neglected Parasitic Infections in the United States

Chagas Disease

Chagas disease is a preventable infection caused by the parasite *Trypanosoma cruzi* and spread by infected insects called triatomine bugs. The initial infection usually does not cause severe symptoms and is often not even diagnosed. After years of chronic infection, some people develop heart diseases such as abnormal rhythms, heart failure, and an increased risk of sudden death. Chagas disease can also cause gastrointestinal problems, such as severe constipation and difficulty swallowing.

Infection is typically spread by contact with the triatomine bug, most commonly found in rural parts of Mexico, Central America, or South America. However, the disease can also be transmitted from mother to baby (congenital), through organ transplant, or through blood transfusion. Chagas disease is considered a Neglected Parasitic Infection, one of a group of diseases that results in significant illness among those who are infected and is often poorly understood by health care providers.

Who is most at risk for Chagas disease:

People in the United States are at higher risk of acquiring Chagas disease if they have emigrated from rural Mexico, Central America, or South America, have lived in a house made with mud walls and a thatched roof (where triatomine bugs hide), and have been in contact with the bug.

Chagas disease primarily affects individuals from endemic areas (Mexico, Central America, or South America) who acquired the infection before arriving in the United States. Children born to infected mothers are at risk for congenital transmission of Chagas disease.



Center for Global Health
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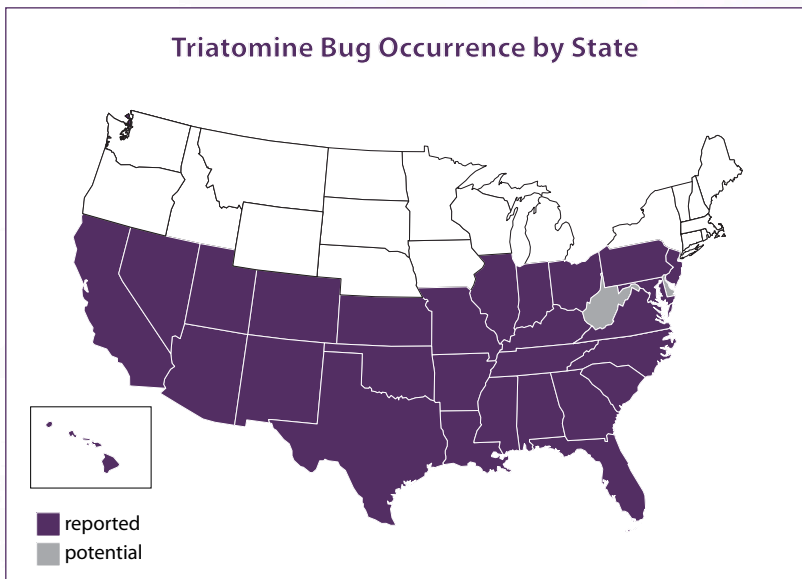
Triatomine bug, which can carry the parasite that causes Chagas disease.

Why be concerned about Chagas disease in the U.S.?

- An estimated 300,000 infected people are living in the United States, nearly all of whom were originally infected in endemic areas. These persons often do not know they are infected and are at risk for the severe cardiac or gastrointestinal problems from the disease. Diagnosis and treatment can reduce this risk.
- Donor screening to detect *T. cruzi* in the blood supply began in early 2007. As of early 2012, almost 1,600 confirmed positive infections among blood donors had been reported to AABB (formerly American Association of Blood Banks) by blood centers. While these efforts have likely reduced the risk of acquiring Chagas disease from blood products, the large number of positive donors identified indicates that many people with Chagas disease do not know they are infected and could benefit from diagnosis and treatment.
- Infected triatomine bugs and wild animals that harbor *T. cruzi* infection have been found in the United States for decades. There are some reports of vectorborne (spread by contact with the bug) infection originating in the United States.

What CDC is doing to address Chagas disease:

- Partnering with state and local health departments to educate and advise health professionals to help them better care for patients with Chagas disease
- Increasing provider awareness of Chagas disease, including publishing free, Web-based Continuing Medical Education (CME) and Continuing Nursing Education (CNE) programs
- Conducting studies that assessed Chagas disease perception, awareness, and understanding among patients and health care providers to help direct education outreach and address barriers to care for Chagas disease patients
- Developing, in collaboration with a number of other groups including academic institutions and partner organizations, improved diagnostic tests for Chagas disease and ways to determine if treatment has been successful
- Collaborating with investigators in Houston to determine the congenital risk of Chagas disease among at-risk mothers living in Texas
- Helping with global efforts to control Chagas disease through improved diagnostic tests, bug control, and epidemiologic studies to assess the likelihood of infants acquiring the infection from their mothers



What more needs to be done:

- Improve outreach to healthcare providers so they can better care for patients with Chagas disease
- Determine the risk of transmission of *T. cruzi* in the United States to help prevent new infections:
 - » From bugs
 - » From mothers with Chagas disease to their unborn babies
- Quantify the number of people with heart disease caused by Chagas disease

For more information on Neglected Parasitic Infections, please visit www.cdc.gov/parasites/npi.html

