



Blood Systems

TRYPANOSOMA CRUZI (T. cruzi) CHAGAS' DISEASE INFORMATION SHEET

What is Chagas' disease?

Chagas' disease is caused by the parasite *Trypanosoma cruzi* (T. cruzi), which is transmitted to animals and people by insects that are found mainly in rural areas of Latin America. The insect vectors are called triatomine bugs (other names include reduviid or kissing bug). These blood-sucking bugs get infected by biting an infected animal or person. The parasite is found in the feces of infected bugs. Chagas' disease is mainly spread by the bite of the bug. During or after a blood meal, the bug defecates near the bite wound. Infection can result if a person accidentally scratches or rubs the feces into the bite wound, eyes, or mouth.

What are the signs and symptoms of Chagas' disease?

Symptoms of Chagas' disease may begin within a few days to a few weeks after infection. There are two phases, acute and chronic.

The acute phase is usually symptom-free, but infected people may have mild signs and symptoms. The symptoms usually disappear in 4 to 8 weeks but the infection, if untreated, persists.

- Swelling at the site of the bite or where feces were deposited
- Fever
- Fatigue
- Body aches
- Rash
- Loss of appetite
- Diarrhea
- Vomiting
- Swollen glands

During the chronic phase, many people remain symptom-free for life, but 20 – 40% of infected people may develop the most serious symptoms.

- Cardiac (heart) problems such as enlarged heart, altered heart rate or rhythm, heart failure, cardiac arrest.
- Enlargement of the esophagus (windpipe) or large bowel, which results in problems with swallowing or severe constipation.

How is Chagas' disease spread?

- Chagas' disease is mainly spread by the bite of the triatomine bug that lives in houses made of mud, adobe, or thatch.
- It can be spread from human to human by blood transfusion or organ transplant.
- It can be spread from mother to baby during pregnancy or delivery.

Chagas' disease is NOT transmitted from person-to-person like a cold or the flu or through casual contact.

What are the risk factors for Chagas' disease?

People can become infected with Chagas' by

- Touching their eyes, mouth, or open cuts after coming into contact with the bug that carries the parasite
- Receiving infection from mother during pregnancy or birth.
- Receiving an infected blood transfusion or organ transplant.

It is generally considered safe to breastfeed even if the mother has Chagas' disease. However, if the mother has cracked nipples and/or blood in the breast milk, she should pump and discard the milk until the nipples heal and the bleeding resolves.

Can Chagas' disease be treated and prevented?

Medication for Chagas' disease is usually effective when given during the early acute phase of infection. Once the disease has progressed to the later phase, medication may be less effective. In the late chronic phase of infection, treatment focuses on managing the symptoms associated with the disease. **It is very important** that you let your physician review your laboratory test results, as he/she is in a better position to evaluate your overall health status.

There is no vaccine or recommended drug to prevent Chagas' disease. You can prevent Chagas' disease if you

- Avoid sleeping in thatch, mud, or adobe houses.
- Use insecticides to kill bugs and reduce the risk of transmission.
- Remain aware that, in some countries, the blood supply may not always be screened for Chagas' disease and blood transfusions may carry a risk of infection.

How is blood tested for T. cruzi?

All donated blood is tested for T. cruzi before it is transfused to a patient. A sample of the donor's blood is tested using a screening test, called an enzyme immunoassay (EIA), that detects antibodies to T. cruzi. A second test, called RIPA, is then performed to confirm the presence of T. cruzi antibody. All blood from donors who test positive on the EIA test or the RIPA test is destroyed and is NOT used for transfusion. For the purposes of counseling, further confirmatory tests may be performed. If the screening and confirmatory tests are positive, a donor is considered infected with T. cruzi and is permanently deferred from donating blood.

Should a person with a positive T. cruzi test result donate blood?

NO. Studies show that T. cruzi can be transmitted through blood transfusion. Those with confirmed positive T. cruzi test results are permanently deferred from donating blood for others.

What is meant by a false-positive test result?

A false-positive test result means that the initial screening test was reactive, but a more precise supplemental test was negative. Almost all false-positive test results occur because of interference with the test and are not due to infection. Receiving a false-positive test result can be worrisome and upsetting, but tests that are false-positive really mean that infection is not present in the blood. However, a false-positive T. cruzi test result may be indicative of cross-reactivity with other similar parasitic infections. If you have any additional concerns, you may speak to your physician who can give you medical advice. Repeat testing may also be discussed with your doctor. Medical evaluation and follow up is strongly recommended.

What should I do if I am infected with Chagas' disease?

Donors who have a **positive** T. cruzi supplemental test (RIPA) should take several steps to protect their health and the health of others.

DO call the Donor Counselor at 1-800-289-4923 if you have questions and concerns.

DO see a doctor promptly for medical evaluation, even if you do not feel sick, and obtain follow-up testing, additional information and advice on treatment considerations.

DO inform your obstetrician of your test results immediately if you are female and pregnant or thinking of having a baby.

DO have your family members tested if you think they could have become infected.

DO NOT donate blood, plasma, bone marrow, or body organs.

You can find more information about Chagas' disease on the following website:

Centers for Disease Prevention and Control (CDC) Division of Parasitic Diseases:

<http://www.cdc.gov/chagas>