

## Sugar Cane Juice Causes Deadly Outbreak of Chagas in Brazil

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Thursday, 31 March 2005

Contaminated sugar cane juice is thought to be the source of a Brazilian outbreak of Chagas disease, a potentially fatal parasitic disease normally transmitted to people by insect bites.

In the past few days, health officials in the state of Santa Catarina have recorded 45 cases of patients developing symptoms of Chagas disease after drinking the juice. At least five of the patients died.

The patients initially reported having fever, migraine, and muscle pain, with some going on to develop jaundice, abdominal pain, internal bleeding, fluid in the lungs and heart failure.

Blood tests confirmed the presence of *Trypanosoma cruzi*, the parasite that causes Chagas disease, in 31 of the 45 suspected cases.

The disease is usually spread to people when insects called assassin or kissing bugs bite them, but researchers believe that food and drink that have been contaminated by the parasite could be an alternative route of infection.

So far though, the mechanism is not known.

Sonia Gumes Andrade, who studies Chagas disease at the Gonçalo Moniz Research Institute says that since the 1960s, there have been a number of 'micro-epidemics' of the disease in which the kissing bug was not recorded. She adds that the current outbreak is the most significant in terms of the number of cases.

In 2002, Andrade demonstrated that the parasite could be transmitted orally.

"We introduced *Trypanosoma cruzi* through a tube directly to the stomach of mice and we observed that the parasite not only survives in the gastric juice, but also is able to infect the animal," she said.

Previously, scientists thought the gastric juice would destroy the parasite.

Brazil's Ministry of Health has launched an investigation to find the source of contamination and is warning people of the threat.

Chagas disease infects an estimated 12 million people in Latin America, killing tens of thousands each year.

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