



# Human African trypanosomiasis



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*He was weak, he slept all day – even during meals. I knew that when people sleep all the time, they could have sleeping sickness so we went to the hospital.*

Placide’s mother

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**Placide**, sleeping sickness patient, Democratic Republic of Congo

**In 2011, Placide suffered a severe bout of sleeping sickness that came close to killing him. He was diagnosed with stage-2 HAT - when the parasites attack the brain - and was treated with NECT, which required more than two weeks in hospital. He was cured, but his family and doctors believe he has long-term neurological effects from the illness.**

**“There is still something not ‘right’ with him. He is very anxious and can’t continue at school, I’ve had to pull him out. He doesn’t have any friends,” said his mother.**

**Asked if he remembers his treatment, Placide nods and points to his lower back, where he received a lumbar puncture.**

**Today Placide is 11 years old and sits in his family’s courtyard, endlessly chipping away at a piece of wood, not far from the site of DNDi’s Phase III clinical trial for fexinidazole, a new oral therapy that will treat both stages of the disease, doing away with the need for lumbar puncture prior to treatment.**

In 2009, DNDi and its partners delivered the combination therapy nifurtimox-eflornithine (NECT) which replaced earlier

toxic treatments for HAT. NECT is now used to treat 100% of stage-2 g-HAT patients and has contributed to a dramatic reduction in HAT cases. However, the treatment is difficult to ship and administer, patients must undergo a lumbar puncture to confirm the disease stage, and must remain hospitalized for the full duration of treatment.

The development of new all-oral treatments would enable patients to be treated immediately, potentially at home, and would provide the tools needed to reach and sustain HAT elimination. If successful, this would represent a fundamental shift in disease management.

## THE DISEASE

- Caused by two subspecies: *Trypanosoma brucei gambiense* (g-HAT, comprising 98% of reported cases) and *T. b. rhodesiense* (r-HAT)
- Humans are a reservoir for g-HAT; animals are a reservoir for r-HAT
- Transmitted by the bite of a tsetse fly
- Occurs in two stages: stage-1, often un- or misdiagnosed due to non-specific symptoms

(headaches, chills), and stage-2, the late stage where the parasite crosses the blood-brain barrier, causing serious neurological disorders including sleep cycle disruptions, neurological manifestations, and progressive mental deterioration

- Fatal without effective treatment
- WHO Roadmap objective: to eliminate HAT as a public health issue by 2020

**13**  
MILLION  
estimated to live in areas at moderate to very high risk

**61**  
MILLION  
people at risk

**53**  
CASES  
of r-HAT reported in 2016



**24**  
COUNTRIES  
g-HAT endemic in West & Central Africa

**13**  
COUNTRIES  
r-HAT endemic in Eastern and Southern Africa

**1,447**  
CASES  
of g-HAT reported in 2017

### DNDi aims to deliver:

- Safe, effective, and orally administered drugs to replace current first-line HAT treatments, and to simplify current case management
- The goal is to develop two drugs effective for both stage-1 and 2, and both subspecies of the parasite