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Hunting down the last cases of sleeping sickness

Sleeping sickness once killed tens of thousands of people every year. Now, in the Democratic Republic of the Congo, EU-backed researchers are testing a simpler way to find and treat the last remaining cases and eliminate the disease for good.

25 August 2026 - By VITTORIA D'ALESSIO

Sleeping sickness has been all but eradicated, but a couple of hundred cases still continue to appear across the Democratic Republic of the Congo (DRC) – the second-largest country in Africa. Missing even a few could allow the disease to flare back to life. To track these cases down, mobile health teams travel from village to village, searching for the last people carrying the parasite.

During the 1990s, the insect-borne disease is thought to have claimed hundreds of thousands of lives across western and central Africa. In 1998 alone, over 34 000 cases were reported, but the World Health Organization (WHO) estimated the true number of cases to be 10 times higher. Today, after decades of intensive screening, improved surveillance and better treatments, just 471 cases were reported worldwide in 2025, most of them in the DRC.

For Dr Elena Nicco, an epidemiologist and senior researcher at the Institute of Tropical Medicine (ITM) in Antwerp, that is remarkable progress, but not the end of the story. The WHO wants to stop the disease's

spread completely by 2030, and ITM, backed by the EU, is supporting the WHO's international effort to achieve that goal.

"Of course, it's excellent news that case numbers have dropped so dramatically," she said. "But when numbers are low, the challenge of elimination becomes even greater."

Nicco leads STROGHAT, an EU-funded trial testing whether a radically simpler treatment strategy could help eliminate sleeping sickness for good.

"The parasite uses humans as its main reservoir, so every single infected person must be found and treated if we want to stop transmission."

New treatment approach

West African sleeping sickness, or gambiense human African trypanosomiasis (gHAT), is caused by a microscopic parasite transmitted through the bite of an infected tsetse fly.

Once inside the body, it spreads through the blood and lymph, causing fever, headaches and joint pain. Left untreated, it eventually invades the brain and central nervous system, causing confusion, muscle weakness and the disturbed sleep patterns that gave the disease its name. It is almost always fatal.

For decades, controlling the disease depended on teams travelling village to village, testing communities and treating those found to be infected: painstaking work that steadily reduced transmission, but was far from straightforward.

STROGHAT brings together researchers, clinicians and public health specialists from Belgium, France and Switzerland, working closely with the DRC's national sleeping sickness programme to speed up and simplify the eradication process.

Supported by the EU's Global Health EDCTP3 partnership, the team is testing a strategy built around acoziborole, a drug that received a positive scientific opinion from the European Medicines Agency earlier this year for use in places where the disease remains endemic.

Acoziborole is the third treatment for sleeping sickness to come out of the Drugs for Neglected Diseases initiative (DNDi) since 2009. DNDi is a non-profit that develops treatments overlooked by commercial drug makers.

Balancing risks

Before 2009, the treatment used for second stage gHAT was so toxic, clinicians needed absolute certainty of the diagnosis before starting therapy. Melarsoprol, the arsenic-based intravenous treatment used for advanced sleeping sickness, could trigger a severe, sometimes fatal brain inflammation, making many patients understandably reluctant to accept treatment unless absolutely necessary.

People who tested positive during community screening only began treatment once the parasite had been confirmed through a complex lab test requiring a microscope. The choice of treatment depended on disease stage, with a lumbar puncture being required to see if the parasite had reached the central nervous system.

Newer treatments are a lot safer, reducing the risks. Acoziborole is also a single-dose oral drug, meaning treatment is further simplified.

“Older strategies were very challenging in remote rural communities where roads are poor, electricity is limited and laboratory facilities are scarce,” explained Nicco. “With acoziborole we can consider treating anyone with a positive screening test because toxicity is not a problem.”

“The idea is to simplify everything as much as possible,” she added. Instead of lengthy hospital treatment and painful procedures, patients could be treated with a single supervised dose of just three tablets.

Acoziborole has demonstrated 98.1% efficacy in clinical trials so far. Although some neurological effects of advanced sleeping sickness may be irreversible, doctors can now cure the infection at both stages, eliminating the need for a lumbar puncture before treatment.

Treat first, confirm later

The new “screen-and-treat” strategy uses mobile teams to test people in their villages. Everyone with a positive screening test is then treated. Samples are also sent to a laboratory for confirmatory testing.

If the trial confirms this simplified approach is safe and effective, future programmes could become far easier to deliver: people who test positive could receive all three tablets immediately, completing treatment in their own communities without the delays and invasive procedures previously required.

Because fewer than 1% of the population test positive to the screening test, researchers believe it is better to treat a few false positives than risk missing someone carrying the parasite.

A second aim is to determine whether this approach can interrupt transmission across an entire hotspot in Nord Équateur, one of the DRC’s remaining regions where the disease is endemic.

“Sleeping sickness is highly clustered geographically,” said Nicco. “Traditionally, if a village has reported cases, surveillance will focus there, but neighbouring villages may also be affected.”

To address that, in the final year of the study, the researchers have expanded screening to surrounding communities through random sampling, casting a wider net than previous programmes.

The team will run a large-scale prevalence survey across Nord Équateur, testing a representative sample of the population to see whether transmission has genuinely stopped. If it has, the evidence could help the DRC’s national programme, and eventually the WHO, decide whether screen-and-treat should become standard practice elsewhere.

Even before that final assessment, the numbers already look encouraging. Two years in, the team has screened almost 455 000 people, reaching 95% of the population at risk. In the screening test, only 0.43% showed antibodies indicating possible infection. Less than 10 of these were confirmed as true cases.

By the end of 2025, 803 people had received a dose of acoziborole, with one more year of the trial still to run.

Bringing communities on board

Science alone will not be enough to eliminate sleeping sickness. Most remaining cases occur in remote DRC communities, where decades of conflict, displacement and underinvestment have made healthcare access difficult.

For that reason, researchers are working closely with local authorities, village leaders, healthcare workers and communities.

“Building trust is essential,” said Dr Charles Kambo, a physician and field investigator for STROGHAT in Équateur Province.

According to Kambo, communities have responded enthusiastically to village-based screening and treatment.

“In the past, sleeping sickness caused many deaths and devastated villages across the region, leaving painful memories that many communities still carry today. Stopping transmission would be a major victory and contribute to the wellbeing and development of our communities.”

The strategy keeps screening in villages, moves confirmatory testing to nearby health centres where confidentiality is protected, and brings treatment back to patients in their own communities.

“This has built such a high level of trust that some people who have tested positive are now actively requesting treatment themselves,” Kambo said.

If the trial’s final years confirm the promise shown so far, sleeping sickness could become one of the few infectious diseases eliminated through a mix of scientific innovation, persistent fieldwork and community trust, relegating one of Africa’s most feared diseases to the history books.

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More info

- STROGHAT (CORDIS)
- STROGHAT project website
- EU Global Health Strategy
- Global Health EDCTP3
- Drugs for Neglected Diseases initiative