

Trypanosoma evansi

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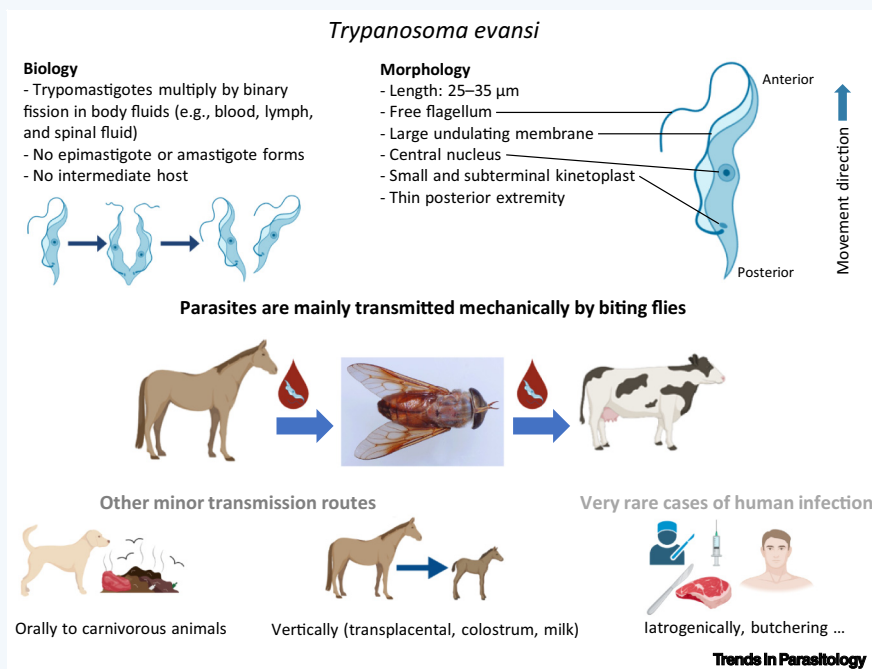
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KEY FACTS:

T. evansi can affect all mammals and has a wide range of domestic and wild reservoirs.

Diagnosis is made by detection of parasites in blood. This method has low sensitivity when the parasites are few in number (e.g., in reservoirs and wild mammals) or absent in blood while present in the nervous system; surveillance is consequently challenging.

No vaccine is available because of the rapid changes in trypanosomal surface glycoproteins, supporting avoidance of immune responses.

Very rare human cases have been described from India, Vietnam, Sri Lanka, and Egypt. Clinical presentation among humans is quite similar to the first stage of the chronic form of human sleeping sickness caused by *T. brucei*.

Trypanosoma evansi, the causative agent of 'surra', is a flagellated hemoprotozoan parasite. It kills thousands of animals every year and causes significant animal morbidity and loss of productivity. *T. evansi* originated from *Trypanosoma brucei* through deletion of the maxicircle kinetoplast DNA which conferred the capacity for mechanical transmission by flies and allowed *T. evansi* to expand beyond the tsetse belt. Presently, it is the most widely distributed pathogenic trypanosome in Africa, Asia, and Latin America, but its potential for geographical extension is not limited, as shown by recent sporadic cases in Spain and France. The most susceptible animals are horses, dogs, camels, and buffaloes, but other domestic livestock and wild mammals (including Australian marsupials, experimentally) can also be infected. Test-and-treatment of infected hosts and mass treatment programs are recommended in high-prevalence settings. International trading of potential carriers is a risk.

DISEASE FACTS:

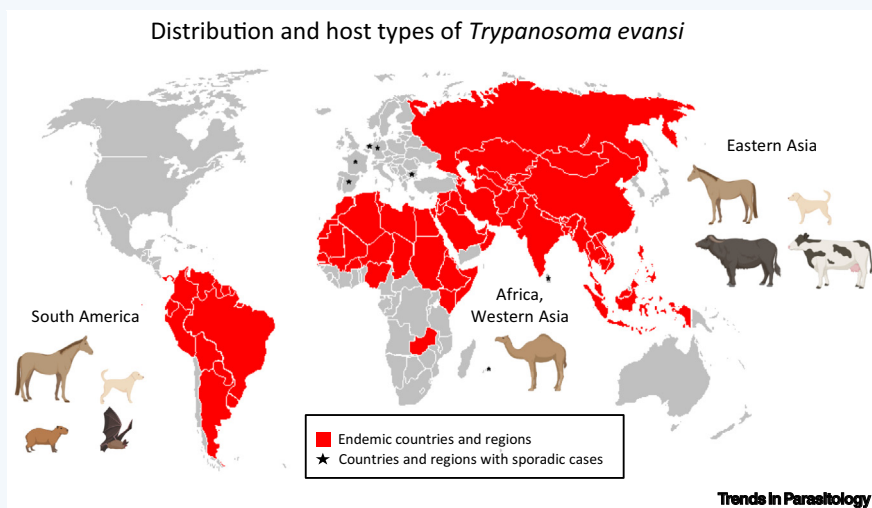
Surra is a trypanosomal disease that affects multiple mammalian taxa, with variable clinical presentation, severity, and outcome.

Clinical presentation may include fever, anemia, edema, loss of weight and condition, overt emaciation, sometimes paralysis, and death.

Surra can occur as acute, subacute, or chronic disease, or it may be asymptomatic.

Treatment with melarsomine and quinapyramine is efficacious if applied early. Otherwise, surra is invariably fatal in highly susceptible individuals.

Better knowledge of distribution and treatment is needed.



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Declaration of interests

The authors declare no competing interests.

Resources

www.oie.int/fileadmin/home/eng/health_standards/tahm/3.01.21_trypano_surra.pdf

<https://efsa.onlinelibrary.wiley.com/doi/10.2903/j.efsa.2017.4892>

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TAXONOMY AND CLASSIFICATION:

PHYLUM: Euglenozoa

CLASS: Kinetoplastea

ORDER: Trypanosomatida

FAMILY: Trypanosomatidae

GENUS: *Trypanosoma*

SPECIES: *T. evansi*