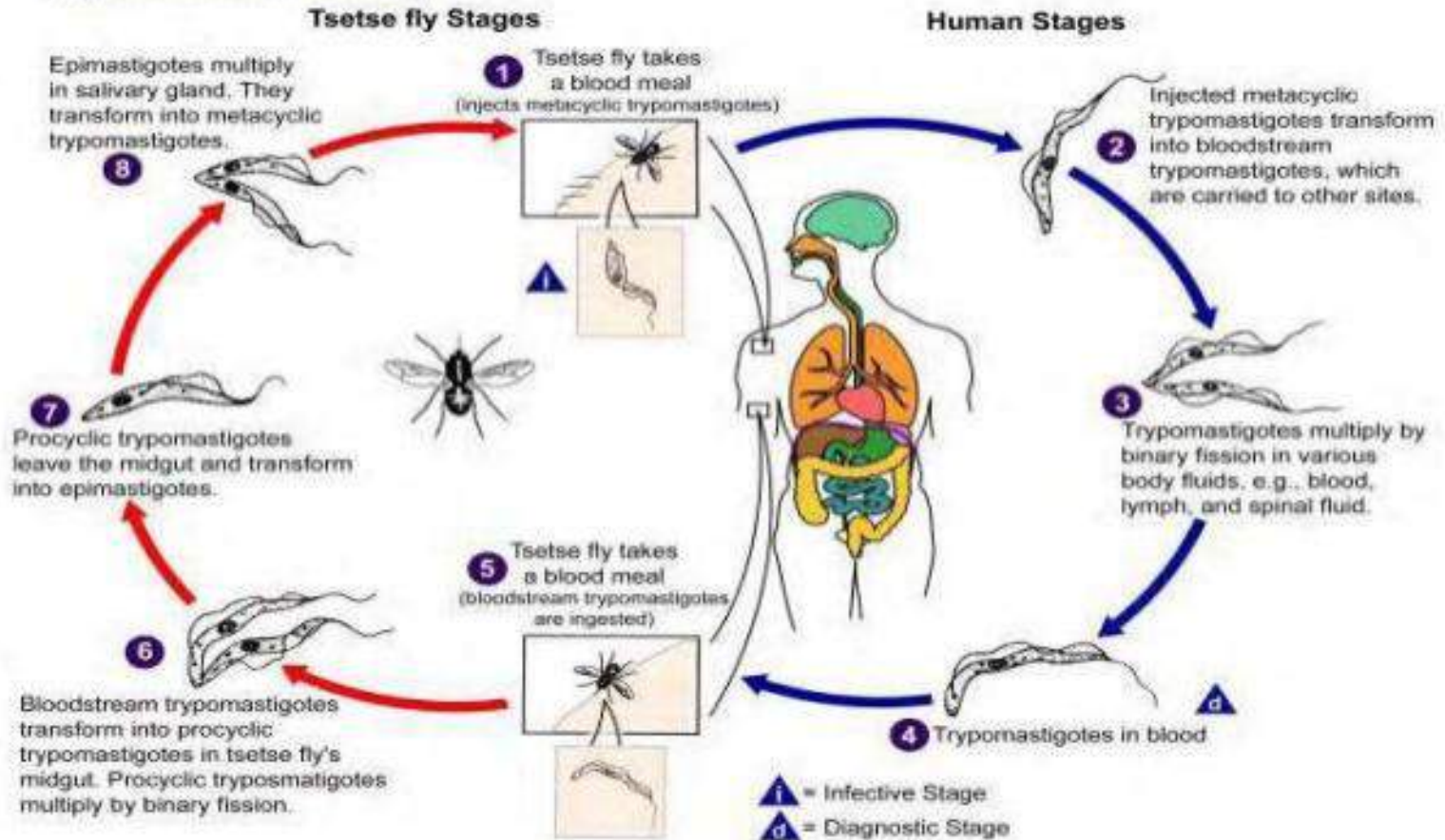


Life cycle

Sleeping Sickness, African (African trypanosomiasis)

(*Trypanosoma brucei gambiense*)

(*Trypanosoma brucei rhodesiense*)



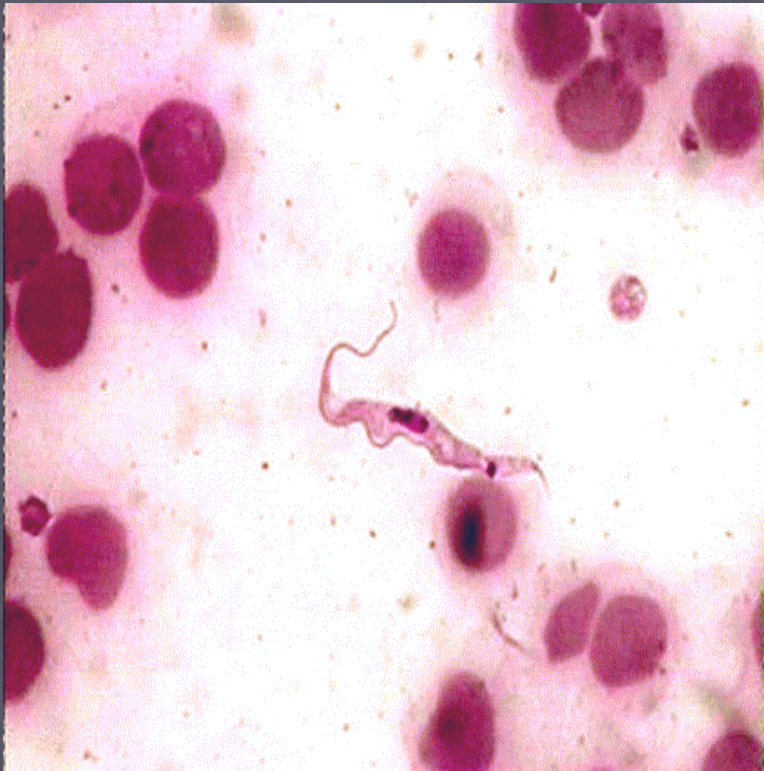
Generalized life cycle of the *Trypanosoma* spp

Trypanosomes are hemoflagellate ► protozoa. Two distinctly forms of genus *Trypanosoma* occur in humans. They cause **African trypanosomiasis** (or African sleeping sickness) and **American trypanosomiasis** respectively

► *Trypanosoma brucei* : African trypanosomiasis – sleeping sickness

T. brucei gambiense (Gambian sleeping sickness) is seen in western and central parts of equatorial Africa and *T. brucei rhodesiense* (Rhodesian sleeping sickness) in east Africa . approximately 20.000 cases are reported each year. *T. brucei gambiense* and *T. brucei rhodesiense* are similar in all aspect except their geographic distribution and clinical manifestation . *T. rhodesiense* , which could infect man, in whom it caused an acute disease; and *T. gambiense*, also infective to man but producing a much more chronic disease. *T. b. gambiense* and *T. b. rhodesiense* parasites inhabit the connective tissue. In man and other vertebrate hosts, these are found in the blood stream, lymph nodes and cerebrospinal fluid

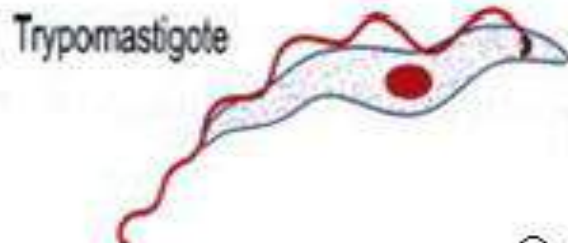
Morphology



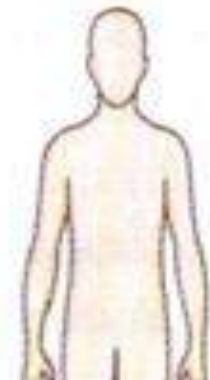
Morphology



In salivary glands and proboscis of tsetse fly (transfer stage to human)

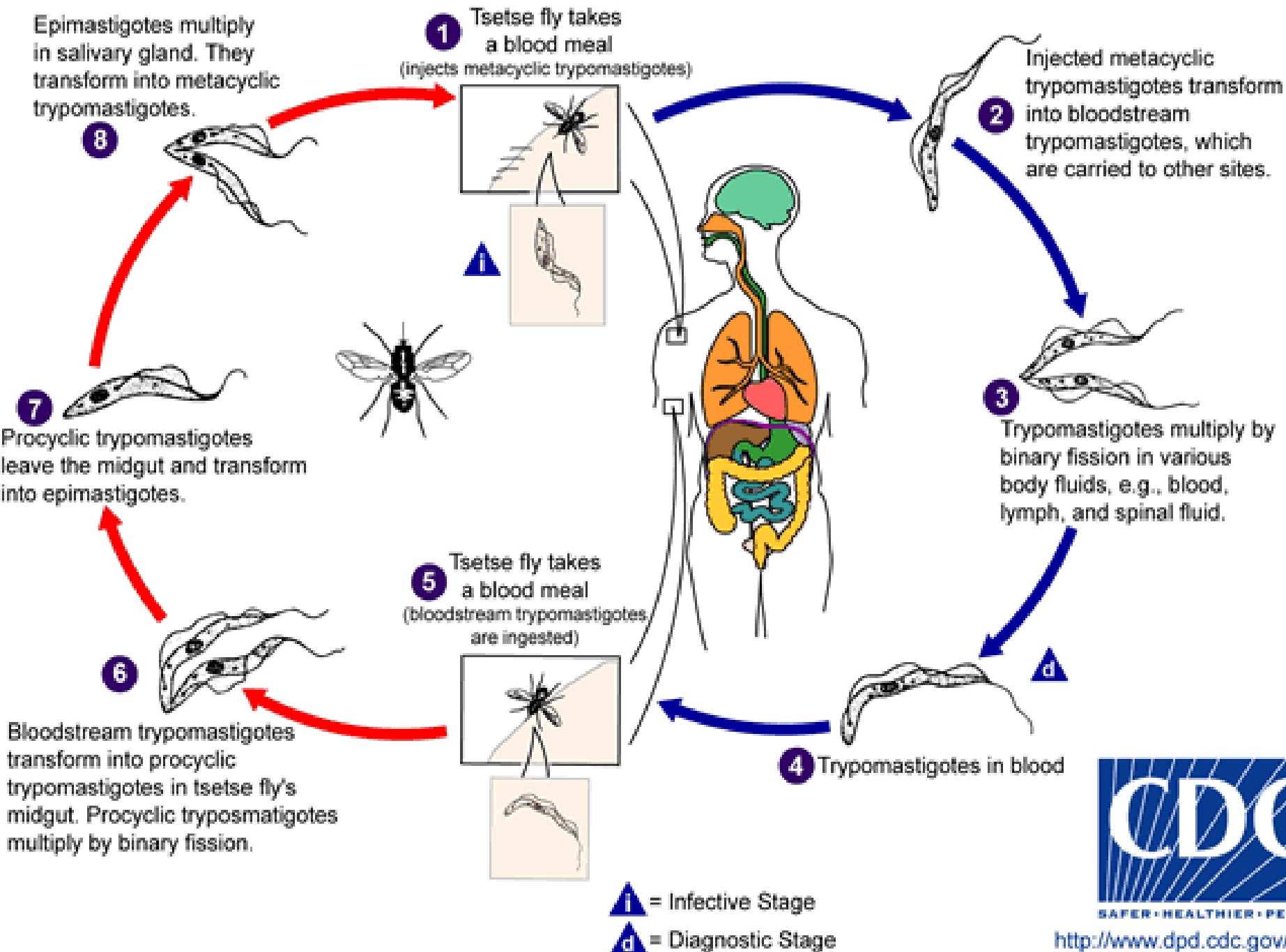


In bloodstream, lymph nodes and later CNS of humans



Tsetse fly Stages

Human Stages



- 1- *Trypanosoma brucei gambiense* (West African)
- 2- *Trypanosoma brucei rhodesiense* (East African)

- **Location:** Throughout the body in the blood and tissues.
- **Pathology:** Both subspecies cause African Sleeping Sickness.
 - ◆ *T.b. gambiense* causes chronic, long-term form.
 - ◆ *T.b. rhodesiense* causes an acute form.
- Starts with a small sore at bite.
- Trypomastigotes divide rapidly and spread throughout body.