

# Surra

This disease is not present in Australia at this time.

Surra is a blood borne parasitic disease transmitted by biting flies. Surra is caused by *Trypanosoma Evansi*.

Surra has a wide host spectrum. The disease is most severe in horses, donkeys, mules, camels, dogs and cats. Mortality rates are low in cattle and buffalo raised in endemic areas, but movement of animals from Australia (a non-endemic area) to Indonesia (an endemic area) has resulted in high mortality rates

Some species of wallaby are known to be able to be experimentally infected but other potential native hosts are unknown. Dingoes and feral pigs should be considered as potential hosts. Human infection is not an issue.

Infection of horses can lead to death, but recovered animals can become hosts for the parasite. Introduction of the parasite to new areas is characterised by a high degree of infection, with mortality reaching 30–100%. No effective vaccine has been able to be developed as yet.

The Incubation period for the disease is generally between 5 and 60 days although longer periods of 3 months have been recorded.

The acute form of the disease may last for up to three months and is characterised by irregular fever, progressive weight loss in the presence of continued good appetite, anaemia, recurrent keratoconjunctivitis and urticarial plaques on the neck and flank, and dependent oedema of the chest, abdomen, genitals and legs. Increases in body temperature correspond with peaks in the parasitic load. The mucous membranes will become pale and yellow.

The clinical signs in chronic cases are less distinctive. Unthriftiness, lethargy, rough hair coat, progressive wastage in body condition, anaemia, weakness and recurrent fever may be observed.

In the absence of adequate treatment, surra is often acute and rapidly fatal in horses, donkeys,

mules. The course of the acute form of the disease may be as short as 2–3 weeks or as long as four months. Some breeds may also be more tolerant to the trypanosomes than others. There is evidence that donkeys have an extended form of infection and become reservoir hosts. Local breeds of horse in Indonesia thrive in endemic areas where introduced thoroughbreds rapidly succumb to infection.

In addition to the typical signs of the acute syndrome described above, petechial (pinpoint) haemorrhages in visible mucous membranes, a wide-based stance, loss of balance and hindlimb proprioceptive deficits (impaired awareness of joint position) may be seen in affected horses (Monzon et al 1990).

In South America, the disease in horses is known as *mal de caderas* ('swaying of the hips') and is characterised by gradual development of central nervous system involvement with weakness, hyperexcitability and incoordination, usually progressing to terminal weakness and paralysis.

Surra could be introduced into Australia by the import or entry of an animal that was apparently healthy but was a host 'carrier'. This could include dogs, pigs or even deer that could travel from the islands to the north of the mainland. The parasite has also been found to be present in semen, and is thought to survive freezing, so it could be brought in through this means.

