

Strangles

A highly contagious, equine specific, bacterial disease.

What is Strangles?

Strangles is a highly contagious bacterial disease of the upper respiratory tract. Strangles is an equine specific disease. It is caused by the bacterium *Streptococcus equi* subspecies *equi* (*S. equi*). Strangles is characterised by fever and the formation of abscesses in the lymph nodes of the head and neck. Clinical signs can vary between individuals with some animals showing only mild signs and some becoming very sick. The disease has significant health implications worldwide and management of an outbreak is difficult and costly.

► Transmission of the disease

- Direct transmission can occur through horse to horse contact.
- Indirect transmission occurs via contact with infected drinking water, feed, equipment and via people.
- Approximately one in ten horses who recover from strangles become long term carriers and are important in continued spread of the disease.



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Strangles transmission can occur through direct or indirect transmission.

► Clinical Signs

- Fever (usually occurs 2-3 days before the horse is infectious to others)
- Swollen/abscessed lymph nodes of the head and neck
- Purulent (pus) nasal discharge
- Dull demeanour
- Loss of appetite
- Cough
- Difficulty swallowing
- Laboured breathing
- Some cases can have serious complications
 - a) "Bastard" strangles occurs when abscesses form in different areas of the body.
 - b) Purpura haemorrhagica is inflammation of the blood vessels leading to swelling (oedema) This can occur under the belly, the limbs and the sheath. There is often accompanying small areas of bruising/bleeding on the mucous membranes (gums and eyes).



► What is a carrier?

Lymph node abscesses are likely to rupture and release copious amounts of highly infectious pus. This can lead to drainage into the guttural pouches, which are extensions of the horse's middle ear. This pus can persist within the guttural pouches as chondroids (hardened balls of pus) or as a biofilm. *S. equi* persisting in the guttural pouches of apparently 'healthy' horses can then be periodically shed and infect naïve animals. This occurs in approximately 10% of recovered strangles cases.

► Diagnosis

- Guttural pouch endoscopy is the gold standard test to allow direct visualisation of the pouches and detection of carriers. Wash samples can be collected for PCR (detection of bacterial DNA) and bacterial culture.
- Nasopharyngeal swabs can be taken but rely on shedding of the bacteria (which is only intermittent).
- Blood tests (iELISA) to detect raised or rising antibodies against *S. equi*.
- Swabs of pus can be taken from abscesses during acute cases to identify the bacteria by PCR/culture.

► Treatment

- Treatment relies upon good nursing and supportive care.
- Some vets may prescribe NSAIDs.
- Antibiotics are unlikely to be used unless the horse is very sick as they may prolong the course of the disease, lead to a lack of development of natural immunity and studies have shown that resistance is developing.
- Most horses will make a full recovery although some may have longer term complications.

► Prevention

Strict biosecurity protocols are required to prevent outbreaks.

New horses entering a yard should be **isolated for 3-4 weeks**. If a horse does not show any signs of ill health in this time then they can be introduced to the herd. However, a horse can still be a silent carrier without showing any clinical signs.

Blood tests may be used but must be interpreted carefully. A positive test may indicate:

- a) Exposure to strangles and incubation of disease, prior to clinical signs.
- b) Current infection (+/- clinical signs).
- c) Previous infection with strangles resulting in antibodies.
- d) Carriers may be detected on a blood test although this is not always the case.



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► Outbreak management

- The yard must be closed to prevent horses leaving and all visitors must be made aware.
- Horses should be split into three groups:
 - Red – Horses showing clinical signs or tested positive
 - Amber – Horses with known contact with positive cases
 - Green – Horses who have had no contact with positive cases
- These groups should be managed separately and all equipment must be thoroughly cleaned and disinfected
- Any horse in the amber or green group which develops clinical signs should be moved to the red group immediately. Rectal temperatures should be taken twice daily to check for fever (often the first clinical sign).
- Unless the primary source of disease is clear, investigation should be carried out to identify and treat carriers.
- The premises must remain closed, with no horses moved on/off, until confirmation of freedom of disease.

This information has been provided by Dechra Veterinary Products, the makers of Strangvac.