

# Detection of Carriers

There are currently three tests available which can be carried out by your veterinary surgeon:

- 1. A blood test available at the Animal Health Trust (AHT)
- 2. Guttural pouch endoscopy including bacteriological analysis of guttural pouch washes.
- 3. A series of three clear nasopharyngeal swabs, taken at weekly intervals, testing for the presence of the bacterium.



Picture illustrates a horse diagnosed with Bastard Strangles

The blood test analysed by the AHT identifies two antigens that are specifically produced by *S. equi* and are targeted by the equine immune system following exposure to strangles.

In practice the blood test developed by the AHT is used to identify both carriers and recently infected horses with a 90.9% sensitivity and because it requires only one blood sample, it is easier and more convenient for veterinarians to routinely screen horses prior to movement, competition or sales. If the test is positive the horse is likely to have been in contact with strangles in the recent past. Further tests are then required to confirm if the horse is recovering from the disease or is a carrier. Once identified, carriers can usually be successfully treated using guttural pouch flushing via endoscopy.

# Strangles Blood Test

The blood test can identify:

- horses that are acutely affected and are showing clinical signs
- horses that have been infected with strangles in the last few months and have recovered
- horses that have been infected in the past and have immunity to the disease
- horses that have been previously infected and have become carriers.

An important limitation of the blood test is that it takes approximately two weeks for a horse to develop antibodies against each antigen and so it may not be possible to accurately identify horses that are incubating the disease. The test is particularly useful as a screening tool prior to movement or introduction of a horse into a new herd, and in the identification of potential carriers at the end of a strangles outbreak. The new blood test should result in more rapid diagnosis as the results can be obtained within 24 hours of receipt of the sample by the AHT, and only one sample is needed.

# Treatment

Each case of strangles should be individually discussed with the attending veterinary surgeon with regards to the most appropriate treatment for the infected horses.

# Prevention

It is important for yard owners to implement a strict isolation procedure for new arrivals to the yard. Many yard owners are now requesting that a new arrival is confirmed with a clear blood test before accepting the horse on to the premises. Yard owners are also advised to prepare a biosecurity management plan in the event of an outbreak. A strangles outbreak can last for many months on a premises with inadequate isolation procedures causing continued welfare problems and disruption to the yard.

Strict hygiene and biosecurity plays an important role in the prevention and control of this disease.

- Disinfecting all food and water containers, clothing, stabling and equipment used by an infected horse is imperative.
- If transporting horses it is good practice to disinfect the horseboxes used before and after collecting any new horses.
- Quarantining new arrivals to a yard is the most effective way to prevent a strangles outbreak.
- Quarantine means no direct or indirect contact between a new horse and other animals, or equipment used by other horses.
- A quarantine period should be no less than two weeks. Horses assessed as high risk are advised to be kept isolated for three weeks.
- Horses that are disease-free after this quarantine period only pose a risk if they are a carrier. A blood test will help to detect a carrier status of a horse.
- A vaccine for strangles has been reintroduced to the market. Contact your veterinary surgeon for further information.

**IF YOU SUSPECT YOUR HORSE MAY BE SUFFERING FROM ANY OF THE CLINICAL SIGNS OF STRANGLES, OR YOU ARE WORRIED BY ANOTHER HORSE ON YOUR YARD CONSULT A VETERINARY SURGEON IMMEDIATELY OR INFORM THE YARD MANAGER WHERE APPLICABLE.**

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# ADVICE ON Strangles



# The Disease

Strangles is a commonly diagnosed infectious disease that affects all equine species worldwide. Caused by the bacterium *Streptococcus equi* (*S. equi*), this disease is highly contagious (ie spread by direct or indirect contact). It can affect any age or breed of horse and remains a widely feared disease because of its debilitating effects. Strangles has no legal notifiable requirements but affected establishments are strongly encouraged to advise neighbouring equine premises of the outbreak to reduce the risk of spread.



Picture illustrates nasal discharge

## Clinical Signs

The severity of clinical signs can vary depending on the age and condition of the horse. Young and debilitated or stressed horses are often the worst affected. Clinical signs are not usually seen until 3-14 days after the horse has been in contact with the bacterium.

Clinical signs include:

- Depression and dullness
- Loss of appetite
- Nasal discharge
- Development of a cough
- Fever
- Swelling of the lymph nodes (glands) under the jaw or on the neck approximately a week after the onset of clinical signs.

The abscesses which cause the lymph nodes to swell often burst discharging highly infectious, thick creamy-yellow pus. In some cases the glands swell so much they restrict the airway, hence the term **strangles**.

Atypical strangles is now commonly recognised whereby infected horses display minor or no clinical signs. The infected horse may exhibit a mild respiratory infection but no abscesses develop. Such affected horses may not be recognised or treated and may represent the majority of the group of horses affected.

Most affected horses recover uneventfully over a period of 3-4 weeks but more severe cases can take longer to make full clinical recoveries. Some horses can remain as infectious carriers for many years even though they appear to have made a full recovery.

In a very small number of cases the infection spreads causing abscesses to form in lymph nodes and body organs distant from the head and neck. This condition, known as bastard strangles, is potentially fatal. Another less common complication, purpura haemorrhagica, causes bleeding into the gums, skin and organs such as the lungs and may also be fatal.

## Spread of Infection

Strangles can be spread easily by direct contact between horses or indirectly by handlers, equipment or contamination of the environment, often leading to large outbreaks with many horses becoming infected.

For example, the infection can be spread:

- by nose to nose contact between horses
- via equipment shared with infected horses, such as:
  - water troughs where the bacterium can survive for long periods
  - feed buckets
  - brushes
  - tack

Overcrowding and the mixing of horses from different areas may increase the risk of disease spread. Extra caution should be taken at shows to prevent direct contact between animals. Outwardly healthy horses are often overlooked when investigating a case of strangles. It is important to remember:

- A horse may be infected but not yet showing any clinical signs
- A horse may have atypical strangles
- Horses recovering from the disease can still be infectious for many weeks. Untreated horses (not given antibiotics) will shed the bacteria on average for 2-6 weeks after infection.
- Carriers can be intermittently infectious for months or years

All infected or suspect horses should be isolated immediately, including any other horse(s) they have been in contact with. Isolation plays an important role in preventing further disease spread. The 'Strategy to Eradicate and Prevent Strangles (STEPS)' provides detailed information on isolation procedures; please contact the BHS Welfare Department for a copy.

Picture illustrates severe swelling of the lymph nodes



**THE DISEASE CAN ALSO BE TRANSFERRED INDIRECTLY BY HANDLERS, FARRIERS AND VETERINARY SURGEONS ATTENDING THE ANIMAL.**

## Carriers

It has been observed that many outbreaks of strangles occur after the introduction of apparently healthy animals to a yard. In around 10% of cases (normally when a horse has not been treated with antibiotics), infected horses become carriers even though they themselves have recovered and appear clinically healthy and normal. This occurs when infected abscess material forms in the guttural pouches (air sacs in the back of the throat) of the horse and is not completely eliminated. It is not known how long carriers last for, although trials have shown the bacteria can survive for long periods of time, sometimes for more than five years.

**CARRIERS CAN CONTINUE TO SPREAD THE DISEASE CAUSING NEW STRANGLES OUTBREAKS.**