

Strangles

Strangles is the lay term given to the disease caused by infection with the bacteria **Streptococcus equi** (often abbreviated to "s. equi"). This bacteria mainly affects the **respiratory** tract and lymph nodes. Severe infection of the lymph nodes/glands will cause swelling of these glands in the throat and neck, which can occasionally cause pressure on the windpipe hence the name "strangles". In fact this is rare and many horses that become infected show only mild signs such as a snotty nose, high temperature ($>38.5^{\circ}\text{C}$) and anorexia. Neck stiffness is quite common and often horses are unwilling to bend down to water buckets. Most horses will recover with some TLC to control high temperatures. A smaller percentage will require more involved veterinary care to lance abscesses and treat internal infections of guttural pouches or sinuses. In almost every infected yard at least one horse will become a "carrier" after it has apparently recovered from the disease. The bacteria colonises the guttural pouches inside the horses head and is randomly & intermittently shed from the nose. No one knows how long a horse can be a carrier but we have seen cases known to be at least 10 months since the horse had clinical signs of strangles. These carrier horses are thought to be the most important factor in spreading the disease to new populations.

The disease is very infectious over short distances and mainly spread by direct horse to horse contact and nasal discharge will remain infectious in damp conditions for several days. Thus head collars, buckets, tack and handlers clothes or dirty hands will facilitate spread through a yard. Involvement of your vet at the early stage of a yard infection will help greatly in managing/minimising the spread and identifying carriers. Yards can be quarantined for several months as an outbreak works its way through the resident population and the "clean-up" process can be quite protracted.

Yards become infected generally in two ways, either by horses out competing meeting infected competitors or by new horses being taken into livery yards. The bacteria has evolved to survive by being quite clever and creating a carrier

state, where the host horse look entirely healthy. Identifying carriers is the key to stopping the spread of this disease regionally & nationally.

Prevention is based on two approaches, firstly **incubation**. The time taken from a horse being exposed to the bug and developing clinical disease itself is called the incubation period and for s.equi this is widely quoted as being 3 weeks. However as with most statistics this is based on the majority of the population (ie 99%) the remaining 1% can have incubation periods of up to 4 weeks and we have experienced this in two outbreaks where a 3 week quarantine was inadequate. So the simple answer is if you are happy protecting against 99% of the risk then a 3 week quarantine is adequate if you wish to be sure then a full month is required. Many yards only do a two week quarantine which will probably catch over 80% of cases.

Secondly testing; there are two main tests

-Blood test, this is a test for recent exposure to s.equi by looking for antibodies in the horses blood. Results fall into three broad categories, if they are high then they have been recently exposed and require further testing to find out if they are infectious to other horses. If they are medium then they need to be tested again in two weeks to see if the levels are rising or falling. If they are zero then it is likely that they have never been exposed or are still early in the incubation process having just met an infected horse in the last few days. The blood test is regarded as a broad screening test for exposure, it is NOT a test for CARRIER horses.

-Sampling the guttural pouches and swabbing the throat, performed together, this is now regarded as the only way of detecting carrier horses with a high degree of accuracy. If a yard wishes to completely protect its resident horses from all incomers then this should be performed after two weeks incubation. It is a relatively straight forward procedure for an experienced vet and with light sedation its is only slightly uncomfortable for the horse.

In practical terms this is difficult to set as a level of biosecurity in most livery yards when many resident horses are out competing and meeting new horses and returning to the yard on a daily basis. Any one of these could bring strangles into the resident population and with this ongoing biosecurity risk it is not sensible to levy the bar much higher for new livery clients.

We are happy to discuss each yards biosecurity requirements tailored to the risk level you are happy with. Many yards perform a two week isolation with a screening blood test towards the end of this period which provides an >80% chance of catching incubating cases but does not test for carriers. This can be enhanced by guttural pouch sampling of all horses that return exposure positive blood tests to rule out a carrier status.

