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*This article written by Dr. Erik Belloy DVM MRCVS, a partner at The Horse Clinic, is reprinted with the kind permission of The Essex Rider monthly magazine.*

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## Strangles

*Strangles is one of those diseases that causes panic and fear in the horse owning population. It is easy to see why. Affected horses can become very ill, even die. Outbreaks can be very expensive to get under control. While outbreaks are present, yards may be closed, competitions suspended and owners inconvenienced. In this article, Erik Belloy, partner at The Horse Clinic, will explain the problems that Strangles can cause, diagnostics, some solutions on controlling the disease and preventing your horse from becoming infected.*

Thankfully, science has moved on in the field of Strangles over the last few years. In preparation for this article, and to avoid repetition for the readers, I have updated an article I wrote for this magazine less than 4 years ago. I was astonished to find that a lot of the information given only such a short while ago, has been superseded because of new thinking and new tests that have been surfacing.

Recently, there have been a few high profile outbreaks of Strangles in Essex yards. Whilst this affects many horse owners, it is not my impression that the disease is more widespread than normal. Rarely does a month go by when there is not one or a few cases within our practice. When one, or a few, cases are present in a large yard, so many more owners are affected, and when this happens in a competition centre, hundreds of owners become personally affected because the centre will have to be closed for some time.

Strangles is caused by infection with the bacteria *Streptococcus Equi* (S. Equi). When a horse comes into contact with this bacterium, it may become infected. Signs of disease usually occur 5-10 days after coming into contact with the bug. The disease can be very mild (high temperature and slight listlessness, as well as a reduced appetite). Some horses may become more severely ill and show sore throats, coughing, depression and purulent discharge from the nostrils. Occasionally, extreme symptoms may be seen, such as severe swelling around the jaws and throat, erupting

abscesses in the head and neck area, severe pain and even death through strangulation due to the swelling in the neck. Luckily, this last presentation, from which the disease derived its name, is a rare occurrence. Other serious complications or sequels to Strangles can be Bastard Strangles or Hemorrhagic Purpura. In the first condition abscesses could be formed in internal organs, and such large abscesses could cause life-threatening disease signs. The second condition is a severe, and potentially lethal, allergic reaction that affects blood vessels and results in severely swollen limbs.

*Streptococcus Equi* is transmitted mostly through direct contact from an infected horse to a non infected horse. The disease is not very air borne and does not tend to get transmitted or carried very far. The main culprits in carrying this disease further are humans, buckets, fences and tack that is shared between horses. The disease tends to be worldwide.

One of the very strange things about strangles is that horses can become infected without showing any signs of disease, or horses that have been ill with strangles can apparently recover but still harbour the infectious organism. This state is called a 'carrier'. Carriers are horses that have dormant infections with *Streptococcus Equi*, which may look perfectly healthy but could still be at risk of infecting other horses with the disease. This carrier's state could potentially last up to 6-18 months in some horses. It is possible for an apparently very healthy looking horse to be introduced to a new herd, and then start infecting other healthy horses in that herd. Then, sporadic cases of respiratory disease may be seen, and eventually a classic case of severe strangles could occur within that herd.

A diagnosis of strangles can be made by your vet seeing certain clinical signs, but might need to be confirmed with certain lab samples. Three forms of lab samples are regularly employed and all three have advantages and disadvantages to detect the disease, confirm the disease and many of these samples may be employed to try and avoid infection to be carried from horse to horse or from yard to yard.

### **Blood samples**

Blood samples are used to check for the protection levels against strangles. These blood samples will therefore be negative if there are very new cases of infection, where the horse's body has not yet reacted to the infection. Positive samples will indicate that the horse has had contact within the last six months with strangles, or that the horse may be a carrier of strangles. Therefore, blood samples can be used for screening to identify individuals that may be risky, but it is not a very sensitive tool to definitely confirm a breakout of strangles.

### **Throat swabs**

Throat swabs can be collected via the nose by collecting debris and mucus within the throat and nose. These swabs are then taken to the laboratory, where they are cultured and a test for the presence of bacterial DNA is carried out. This test is a relatively cheap and relatively easy to do but a negative with these swabs will need to be followed up with more swabs. The reasoning for this is where the throat swabs are taken, is not where the organism tends to hide mostly.

### **Guttural pouch washes**

For this sample, your vet will introduce a camera into the guttural pouches and the upper respiratory tract of the horse. Samples will be collected from the areas where *Streptococcus Equi* tends to hide, and these samples will be submitted to a lab for culture and presence of bacterial DNA. This is certainly the most definitive test to rule out whether a horse has or has not got strangles at any given moment in time, and can be used in cases with a positive blood test to determine whether they are still actively carrying the bacteria or not.

All these different sampling techniques, can be used with the advice of a vet to deal with outbreaks on a yard, or can be used to prevent introducing an affected horse into a herd. It is important before making up any strategies, that these strategies are discussed with your vet because the layout of the yard, the mixing of the herd and many other external factors are likely to influence the need or otherwise of different tests to be used.

Whatever happens, if you see a horse with sudden onset of respiratory disease signs, or a high temperature, you must contact your vet who will be able to advise on the likelihood of these symptoms being caused by strangles. In conjunction with your vet you need to then work out a risk assessment as to whether the other horses in contact are at risk of developing infectious diseases. Armed with that information, you need to ensure that you keep the rest of the herd as safe as possible. Horses that are newly introduced into a yard, could be screened with blood samples to ensure that they are not likely to infect the other horses in that yard. You will need to speak to your vet to draw up the most efficient plan to avoid carrying out the wrong test at the wrong time when you place a horse in isolation. With a bit of knowledge and understanding of how these different tests work, you may be able to keep your horse, and your stable mates, as safe as possible.



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