

What Horse Owners Should Know About Strangles

On Behalf of the Equine Research Coordination Group

AAEP Press Release

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Photo provided by Corinne Sweeney, DVM, courtesy AAEP Strangles is a highly contagious disease that causes horses to have swollen and painful lymph nodes that block their airway and can cause difficult breathing. The name was coined because these enlarged nodes sometimes (but rarely) suffocate affected horses.

The first reported case of strangles in a horse was in 1251 by Jordanus Ruffus in Europe. Convinced of its contagious nature, Ruffus recommended isolating affected animals and pointed out that the most common source of infection for horses was water buckets previously used by infected animals. This advice remains valid today.

Here are some common questions and answers about strangles:

What causes strangles and what should I expect to see?

Strangles is caused by the bacteria *Streptococcus equi* (commonly known as *S. equi*), which gains access to a horse either through the animal's nose or mouth. Bacteria then invade the lymph nodes in the head and throat area, making them swollen and painful. With time, abscesses in the lymph nodes will mature and rupture to drain a creamy pus. Other lymph nodes in the head and throat may be involved but not be apparent because many of them will drain into the horse's throat and nasal cavity.

Additional signs of the disease that often develop include fever, loss of appetite and listlessness.

How does a horse become exposed to strangles?

Most horses that develop strangles contract the disease through contact with the infected nasal discharges from another horse that has an active case of strangles or has recently recovered from strangles. Direct transmission occurs when horses, being very social creatures, have nose-to-nose contact with each other. Indirect transmission occurs when a susceptible horse shares feed, water buckets or housing with an infected horse.

About 20% of horses continue to shed *S. equi* in their nasal secretions for several weeks after they have recovered from the disease, making all recovered horses a potential source of infection for at least six weeks after clinical signs have resolved. An extremely small percentage (1% to 10%) of horses continue to shed *S. equi* in their nasal secretions for months to years. These horses frequently have guttural-pouch infections caused by *S. equi*.

Fortunately, *S. equi* is not a hearty organism and does not persist for long in the environment. While it is possible that a horse could contract strangles from the pasture that housed a horse with strangles, it is very unlikely.

How will a veterinarian know if a horse has strangles?

A veterinarian generally will diagnose a case of strangles based on the classical clinical signs. The gold standard to confirm the infection is a bacteriologic culture from either nasal swabs or pus from the abscesses. Another test is a polymerase chain reaction (PCR), which detects the DNA of *S. equi*. While this test is excellent, it does not distinguish between dead and live organisms and therefore should not be used alone to make a diagnosis of strangles.

What should be done if there is a strangles outbreak?

Proper management by the horse owner or the farm manager is the key to the successful control of an outbreak of strangles. Working with a veterinarian, the owner or farm manager can identify affected groups of horses, look at the geography of the premises and review management practices to develop a practical disease-control strategy.

Several specific aims of the plan should include:

1. Preventing the spread of *S. equi* infection to horses on other premises and to new arrivals on the infected premises. This is done by stopping all movement of horses on and off the affected premises until further notice. Horses with strangles and their contact should be maintained in well-demarcated "dirty" quarantine areas. Clustering the cases in groups should allow parts of the premises to be allocated as "dirty" and other parts as "clean."
2. Establishing when horses that have recovered are no longer infectious. The veterinarian will institute a program of culturing nasal swabs over several weeks. Horses that consistently test negative are returned to the clean area.
3. Investigating long-term carriers. If a horse continues to shed *S. equi* longer than expected, the veterinarian will recommend an endoscopy examination of the guttural pouches and determine treatment if needed.
4. Preventing infection spreading from dirty areas to clean areas of the premise. Ideally, the individuals working with horses should be divided to deal with each of the two groups of horses. If this is not possible, horses in the clean area should be attended to first. The veterinarian will also be able to describe methods of disinfecting facilities.

Is it possible to vaccinate against strangles?

Field experience suggests that vaccinating horses usually reduces the incidence and severity of strangles. However, vaccination is not an absolute preventative. Researchers are actively working to develop improved strangles vaccines to protect horses from this highly contagious disease.

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Read on for more information on strangles >>