



Equine Strangles

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Strangles has been a serious problem for generations of horsemen and can still be dangerous today. Strangles is a highly infectious disease affecting horses of all ages and breeds, although it is more common in younger animals. Strangles (sometimes called "distemper") is inflammation of the respiratory tract and associated lymph nodes caused by infection with the bacteria *Streptococcus equi*. Once infected, a nasal discharge develops and inflamed lymph nodes fill with pus. If the affected lymph nodes are behind the throat, the pressure on the pharynx from the pus-filled lymph nodes and throat inflammation can cause severe difficulty in breathing, hence the name for the disease: "Strangles".

Horses infected with strangles show variable clinical signs, depending on the stage and severity of the infection. Common signs include: Copious nasal discharge, decreased appetite, fever (normal temperature for a horse ranges between 99.5-101.5 degrees Fahrenheit), listlessness, and swelling of the lymph nodes in the neck/throat area. In order to relieve the pressure on the throat, affected horses may stand with their neck outstretched. Horses may be infected for three to twenty-one days before showing signs (incubation period). Clinical signs of the disease are generally visible for three to seven days, but may last up to two weeks. During later stages of the disease, the lymph nodes may burst, draining pus from openings in the skin. Although difficult to treat and control, this disease is not commonly fatal, usually well below 10%, although foals are at a greater risk.

Strangles is easily spread between horses by several mechanisms, all of which involve oral exposure to *S. equi* bacteria. Once the organism is in the oral cavity, the bacteria can invade the tonsils and move to infect the lymph nodes. The infective organisms may be passed from horse to horse directly; by contact with pus or nasal discharges from an infected horse; contaminated bedding; or contaminated feed/water troughs. In addition, flies or other insects may become contaminated and gain the ability to spread bacteria from horse to horse. Therefore, horses that are exposed to other horses and their equipment (via travel, shows, sale barns, etc.) are at a greater risk of contracting strangles than isolated animals that remain in their own barn/pasture. However, just because a horse is exposed to strangles does not mean that it will contract the disease. The dose of the organism is important: poor sanitation and direct contact with the infectious secretions/pus greatly increases the chance of disease. Horses that were previously exposed to strangles have a lesser risk of becoming seriously infected than naïve animals. Stressed animals have a greater chance of contracting strangles, since their immune systems become depressed. Factors that increase stress include: poor nutrition, overcrowding, pre-existing disease and lengthy transportation.

If you suspect that your horse is suffering from strangles, isolate the animal from other horses on the premises and contact your veterinarian. If you suspect you have come into contact with a horse suffering from the disease, do not approach or handle your horse(s) or horse equipment until you have taken steps to decontaminate (e.g. thorough hand washing, changing shoes, etc.).

Your veterinarian can perform a swab of the nasal passages, throat, or abscess of the suspect animal in order to test for the *Streptococcus equi* bacteria, as not all abscesses in that area are caused by strangles. Once the sample has been cultured and strangles confirmed, you may proceed with treatment. There are several options available for the treatment of this disease. In moderate (non-severe) cases, treatment is relatively simple. Monitoring the vital signs (temperature, heart rate, respiratory rate) of the affected horse is the main form of disease management. Mild forms of this disease are generally self-limiting and can be resolved



by the immune system of most healthy horses with no need of treatment with antibiotics. Although it is tempting to treat all strangles infections with antibiotics, they should be reserved for the extreme cases. Using antibiotics in mild cases often results in a rapid decrease in clinical signs but if antibiotics are not administered for an extended period of time (3 weeks or more), after antibiotic treatment is stopped clinical signs return. Extremely infected or swollen exterior lymph nodes may need to be lanced and drained. If you have the abscesses lanced, be sure it is in an area that is easily disinfected or cleaned properly. For example, a smooth concrete surface away from other horses would work best.

The abscesses do not always remain confined to the throat region. Occasionally the abscesses spread to other parts of the body such as: the liver, brain, abdomen, or lungs. This type of infection is known as "bastard strangles" and is generally thought to occur following antibiotic treatment of short duration or low dose. Bastard strangles is uncommon, but has a greater chance of resulting in fatality. Regardless of the type of strangles, young horses and foals are considered to be more susceptible to the infective organism. The lower immune response generated by immature animals may contribute to their greater susceptibility.

Prevention of strangles consists of several avenues. Several *Streptococcus equi* vaccines are commercially available. These vaccines may reduce the risk of the disease occurrence. Fifty percent of vaccinated horses still get sick when exposed. In addition, the vaccines currently available only provide immunity for six months to one year, and require that horses receive regular boosters to maintain adequate protection. There are two types of vaccines, one of which is administered intra-nasally and one which is administered intramuscularly. Vaccination can be given with the first foal vaccines at 2-3 months of age. We recommend using the intranasal vaccine because it works by providing immunity at the nasal surface the first line of natural defense against the organism, which appears to be more affective than traditional, intramuscular strangles vaccine. However it is NOT recommended to vaccinate with the intranasal vaccine in the midst of an outbreak of strangles, it has been reported to make organisms more virulent and more difficult to treat.

If you have multiple horses, it is important to separate infected individuals from healthy individuals. It is also a good idea to isolate any horses that have come into contact with the infected horse, since the signs of the disease often manifest themselves days to weeks after the initial infection. Quarantine the farm, and restrict movement of horses onto and off of the farm for eight weeks. Sanitize any equipment that was exposed to the infected individual, and do not share any equipment with others. After contact with any other horses, or your infected horse, thoroughly wash your hands. It is beneficial to feed/water/groom the affected horses in the herd after handling non-infected horses in order to minimize the risk of spreading strangles. In addition to hygiene and quarantine measures, animals that are confined to a paddock during the course of an infection render that paddock "infected" for at least one month after their signs resolve.

If your horse travels to facilities and comes in contact other horses for shows, competition, or otherwise, there are several useful ways in addition to vaccination to decrease the risk of contracting strangles. Minimize direct contact with other horses, disinfect food and water containers before use, ensure stalls are disinfected between horses, minimize travel-related stress on your horse if possible.

This disease can be a frustrating problem for any horse owner. However, with efforts by the owner to maintain good hygiene and monitor the overall health of the horse, this disease can be resolved. In addition, there is no substitute for proper veterinary care - it is an integral part of the health maintenance of your horse.