Strangles

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Strangles is a highly infectious disease affecting horses of all ages and breeds. Strangles is inflammation of the respiratory tract and associated lymph nodes caused by *Streptococcus equi*. Once infected, the inflamed lymph nodes fill with pus, and a nasal discharge develops. The pressure on the trachea from the pus-filled lymph nodes and throat inflammation causes difficulty in breathing, hence the name for the disease: "strangles". A horse infected with strangles may show variable clinical signs, depending on the stage and severity of the infection. Common signs include: inappetance, fever (normal temperature for a horse ranges between 99.6°F – 100.8°F), 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 only rarely fatal. A low percentage of horses (less than 10%) have reportedly died as a result of either fatal complications associated with the disease or as a result of lack of treatment.

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, or lungs. This type of infection is known as "bastard strangles". 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.

Strangles is easily spread between horses via several mechanisms. A horse is infected via 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; 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 with increased stress.** 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). The 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. 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 treatment. Mild forms of this disease are generally self-limiting and can be resolved by the immune system of most healthy horses. By the time disease is manifested (i.e., clinical signs are evident), antibiotics will no longer be effective at eliminating the infection. In these mild cases, providing antibiotics may actually harm the beneficial bacteria needed by the normal body systems of the horse. Additional steps for treatment include: making the horse comfortable, encouraging eating/drinking, and keeping a watchful eye for any secondary complications. Extremely infected or swollen exterior lymph nodes may need to be lanced and drained. However, potential complications of drainage include difficulty in cleaning the environment post-drainage. *Streptococcus equi* may persist in the environment for several weeks, and draining the abscesses onto the ground may help spread the infectious process. 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.

Prevention of strangles consists of several avenues. **If you have multiple horses, it is extremely 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, several *Streptococcus equi* vaccines are commercially available. These vaccines may reduce the risk of the disease occurrence in the face of an outbreak, but do have side effects. Fifty percent of vaccinated horses still get sick when exposed. **Vaccinating healthy animals on a farm during an outbreak is not always beneficial, since two weeks are required for the immune system to mount a response to the vaccine.** 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. **The most effective way to prevent an outbreak of strangles is perhaps the most difficult: quarantine all affected or suspect animals.** Horses newly introduced to the herd should also be quarantined. **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 must travel to facilities and contact other horses for shows, competition, or otherwise, there are several useful ways 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.