



Background

Strangles is an extremely contagious respiratory disease of horses. It is the worst version of a “sinus infection” that your horse will ever have. The infectious agent or “bug” that causes this disease is identified as the bacteria *Streptococcus equi* subspecies *equi* (referred to as *S. equi*). In some states if you have a horse infected with Strangles (*S. equi*) it is a Reportable Disease¹, but in South Carolina Strangles is **not** a Reportable Disease.

One key thing to remember about infection with Strangles (*S. equi*) is that the disease has a wide range of clinical signs (signs of sickness, like “symptoms” in people). These signs vary from highly serious to no apparent signs at all. In some cases, horses will never show signs of being sick but instead will be silent carriers of the bacteria and thus be able to spread it to other horses. The origin of the common name “strangles” is due to the significant swelling that occurs under the jaw and throat latch region. This swelling in the throat region can possibly cause a horse to be “strangled” from not getting the correct amount of oxygen that is essential for life. Though it happens rarely, a horse can die if this occurs. Therefore it is important to take this infection very seriously. Fortunately, most horses that are infected with Strangles (*S. equi*) do **not** die from the infection.

Diagnosis and Treatment

To confirm an infection of Strangles (*S. equi*), contacting your local veterinarian is the best way to start your investigation. An exam by a veterinarian can help rule out other problems and diseases that may have signs similar to Strangles (*S. equi*). Other problems and diseases with similar presentations include upper airway infection, tooth infection or abscess, trauma with infection to the jaw or throat, and/or other infectious agents like a virus or different bacteria. Often your veterinarian can make a diagnosis based on a thorough history and physical exam. If an infection cannot be determined based on a history and physical exam alone, then your veterinarian can perform laboratory tests that can rule in or out a diagnosis of Strangles (*S. equi*).

If your horse is diagnosed with Strangles your veterinarian will advise you on how to treat your horse(s). Treatments will be recommended based on the severity of the infection, which will be determined from what is found on the physical exam. Some horses will work through the infection without needing medications, while others may need life-saving medications and procedures.

Every year the State Veterinarian’s office receives numerous calls with questions regarding the disease in horses called “Strangles.” Strangles is one of the most common diseases that horse owners have had to deal with for centuries. We are often approached by horse owners who are unsure how to handle situations like these: their horse was diagnosed with Strangles, they suspect a Strangles infection in their horse, or someone they know has a horse with Strangles. Questions include: What is Strangles? How do horses get Strangles? Is Strangles contagious? What do I do?

Clinical Signs

It may only be a matter of days from the time that a horse is exposed to the Strangles bacteria until the horse develops sickness. The most common sign that owners see and experience are swollen lymph nodes or abscesses on the area below the cheek bones (mandibles) in the area of the throat latch. The disease often lasts 6 to 8 weeks. Figure 1 below includes several images of horses that are infected with Strangles (*S. equi*) and Table 2 lists clinical signs (sickness) in horses infected with Strangles (*S. equi*).

Table 1: Images with descriptions of horses infected with Strangles (*S. equi*). It is important to be able to recognize a horse that you suspect may have Strangles (*S. equi*). You are the first line of defense in preventing infection in your horse!



Classic characteristic of Strangles swelling of the skin below the cheek bone.



These swollen lymph nodes have not ruptured yet.

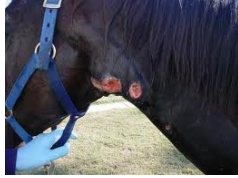


Ruptured Lymph nodes below the check bone draining pus.

Table 2.

Clinical Signs² (Listed from more common clinical signs at the top to less common at the bottom):

Swollen Lymph Nodes
Fever (>101.5)
Abscesses under the jaw, in the throat latch
Difficulty Swallowing
Nasal Discharge (white to yellow to clear)
Difficulty Breathing or Noise when Breathing
Decreased Appetite
Abscesses can also be on the head, neck, or body
No Appetite
Decreased energy, sluggish
Depressed
Head down
Neck extended
Weight loss
Drooling
Limb/extremity swelling
Small bruising on gums and inside mouth
Silent Carriers/no signs (source of infection)
Chondroids (residual source in inner ear)
Internal Abscesses



Silent Carriers

One of the reasons that we are not able to eradicate Strangles (*S. equi*) is because of asymptomatic (no symptoms) or *silent carriers* of the disease. A silent carrier is a horse that can shed and spread the disease without showing any evidence of being sick. In *silent carrier* horses, it has been shown that the area in the head similar to the inner ear called the guttural pouch can harbor persistent, infectious materials called chondroids. A chondroid is a firm concretion, or mass, of pus that is trapped in the inner ear. This “inner ear” of the horse provides a great environment to protect and harbor the infectious bug. Over time, and through normal daily interaction, some of the infectious Strangles bacteria are released to the environment and to other horses. When a naïve or immunocompromised horse is exposed to this infectious agent, disease develops in the new horse. *Silent carriers* are very dangerous because they can travel from farm-to-farm and show-to-show without concern, while spreading the disease. Silent carriers are hard to identify without aggressive testing.

Prevention

One of the most frustrating things about Strangles is that we learn that the disease could have been easily prevented when we review most histories of infected horses. Here are a few things you can do to prevent disease on your farm or in your horses:

1. Have a known health history and a health certificate, on any new horses that are being shipped in or brought to a new facility.
2. Place all new animals in an isolation area for 2 to 3 weeks, especially those with an unknown health history or unknown travel history.
3. Consult with your veterinarian about what vaccines are available and which vaccines are best for your horse.
4. Very important: Remember good decision-making to minimize chances for exposure when at a horse event, show, or activity.

Transmission

Two of the most important things to remember about an infection with Strangles (*S. equi*) is how extremely contagious it is and how it is transmitted from horse to horse. The disease is spread via nasal secretions (sneezing, coughing, nose-to-nose contact)

and pus from draining abscesses. Flies and contaminated equipment, such as water buckets or troughs, feed, stalls, fences, tack, and pitchforks, can also transmit bacteria. A person handling an infected horse can carry the organism on clothing, boots, or unwashed hands. *S. equi* bacteria can survive for weeks in water troughs and moist environments. Approximately 20 percent of horses shed the bacteria for a month after all clinical signs are gone.

If you have an infected horse, you should be very aggressive about preventing transmission to other horses or other farms. Steps to prevent spread to other horses and farms should include, but are not limited to, the following:

1. Isolate the horse(s), farm, or ranch.
2. Wear designated clothing, footwear, and gloves when dealing with infected horses.
3. Dedicate one worker to manage close interaction with the infected horses. If this can't be done, then work with the infected horses last.
4. Use dedicated equipment that is only allowed in the isolation area.
5. Wash hands often and disinfect everything (halters, leadropes, trailers, wash rack, stalls, etc.) used between horses, especially in a common area; if total isolation is not applicable. Disinfect water troughs daily (troughs are great places for bacteria to grow and live).
6. Rest pastures of infected horses for 4 weeks after disease to allow for natural UV light to disinfect the environment.
7. Do not dump feces or stall shavings/cleanings in an area where other horses can be exposed by direct contact or fly transmission.
8. Test previously-infected horses 3 separate times with 3 consecutive negative results before allowing them to have contact with other horses.

Summary

Remember, it is first your responsibility as a horse owner or trainer to use good horsemanship practices and smart decisions to ensure that the risk for the exposure, infection, and spread of Strangles (*S. Equi*) is minimized. Your good management decisions and your ability to use proper disinfection will considerably reduce your chances of having a horse become infected with Strangles. If you are associated with, or know of an infected horse or farm, please do your part to help educate, prevent an outbreak, and reduce the spread of this disease. Your local veterinarian is your best source to examine, diagnose, treat, and manage horses infected with Strangles (*S. equi*).

1. Reportable Disease - Reportable Diseases are diseases that are required by law to be reported when cases are identified or suspected to ensure the well-being of all animals and the safety of the food supply in S.C. and U.S. A complete list of Reportable Diseases in South Carolina can be found on the internet at this site: http://www.clemson.edu/public/lph/ahp/rep_disease.html

2. Clinical Signs - It is important to remember that one clinical sign does not mean your horse has Strangles. A diagnosis of Strangles can be made with a combination of clinical signs along with a history, physical exam and diagnostic lab tests performed by your veterinarian.