

# EEEEK! Strangles!!

By Ann Bennett, Windrush Hill Farm

Could it happen in YOUR barn? Have you, or someone you know, already experienced the frustration and inconvenience of the disease? Somewhere along the line, STRANGLES will surface.

This personal experience article is not meant to substitute for professional advice. In your particular situation, I suggest that you FIRST and foremost, always consult your vet about strangles, whether your horse has been exposed or not, if you are wondering about vaccinating or not, and what kind of precautions you should take when traveling, and what to do if your horse gets sick.

I had worked at a barn with strangles over 20 years ago, so was familiar with the large volume of thick yellow mucus snot and messy pussy abscesses; all surefire signs of the disease. The first signs may be a thick yellow snotty discharge and wheezy breathing. Once you see a stance with neck outstretched, then swollen lymph nodes under the jaw that swell and drain thick yellow pus, there is no doubt after the first horse presents! Interestingly enough, there is no bad odor associated with the yellow pus.

The progression is different for individual horses, depending on natural immunity from previous exposures or vaccinations, or their own health and immune response. About 1/3 of the horses on my farm did not demonstrate any symptoms, 1/3 demonstrated a snotty nose with thick yellow discharge for a couple days and nothing further, and 1/3 of the horses progressed through all the symptoms. It seemed that horses with recent vaccinations had some protection and less serious symptoms, but there were horses without any strangles vaccination history that did not get sick, but there was no history on any naturally obtained immunity. The literature suggests a horse may have immune protection up to five years after recovery from the disease; we identified a couple of horses that may have had longer immunity, or their symptoms were mild enough when they were re-infected, that strangles was not suspected. One mare was bought as a weanling at a sale barn, had what the owner thought was a nasty cold that first winter, was never vaccinated for strangles, and is now seven years old and did not get sick during the strangles outbreak.

Strangles is endemic in the horse population and has been recognized and described since the 12<sup>th</sup> century by terms like

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"glanders." Strangles is a highly contagious disease. The incubation period is 3 to 21 days. There is a litmus test under development at the University of Maine that tests mucus or pus, and changes color if the horse has strangles. This would be very effective to identify horses with strangles at an earlier stage and be able to isolate sick horses sooner. Checking temperatures can help you identify sick horses early during incubation. I did not find a horse with a temperature, even after they were demonstrating symptoms. Most of the horses on the farm had been vaccinated during the previous 6 to 9 months, some with a booster, some with two or three initial vaccinations, and some elected not to vaccinate. Due to the controversial data and information regarding the strangles vaccine, the relative effectiveness, and possible complications, I let owners and their vets decide what they wanted to do.



The strangles vaccine is listed on the American Association of Equine Practitioners (AAEP) website not as a "core" vaccine but a "risk based" vaccine.... usually recommended when there is an outbreak in your local area or if your horse has a lot of exposure to large numbers of other horses. HOWEVER, the strangles vaccination is NOT advised if your horse has been exposed to strangles because a horse with high antibody levels is at greater risk for a complication called purpura haemorrhagica, which can be fatal. According to a very good article by Nancy Loving, DVM, she also reminds us that a horse should not be vaccinated after recovery from strangles for at least one year

and probably longer due to high antibody levels. I was really glad that she mentions this as a consideration, because I had not read this anywhere else and it does make sense. The strangles vaccine is controversial because of increased risk of side effects like purpura haemorrhagica and it is not considered a particularly effective vaccine with efficacy only estimated around 60% for the intramuscular (IM) killed vaccine and higher for the newer intranasal (IN) modified live vaccine. The vaccine is thought to reduce the symptoms if your horse does get sick. Strangles does not usually kill horses with a healthy immune system, and recovered horses seem to have good natural immunity. Fatalities and complications include a version called "bastard strangles," where the disease causes internal abscessing.

There are currently two types of vaccine, IM killed vaccine and IN modified live vaccine. The IN is considered more effective to protect the horse from the disease because it delivers the vaccine close to where the strep bug likes to live. It is a modified live vaccine and requires special care when handling because it is easy to contaminate another injection site, causing a nasty reaction. It is best to give the intranasal at a different time than the other IM vaccinations. Be careful as the horse can have a violent reaction to the squirt up his nose such as throwing his head and sneezing. It is important that you do at least two vaccinations 2 to 3 weeks apart when first using the strangles vaccine, as a single booster is only effective when horses have been previously vaccinated. The IM vaccine is a killed vaccine and is also to be given in a series of 2 or 3 shots several weeks apart if a horse has not been vaccinated before.

The strep equi bug likes to live and hide out in the guttural pouch of the horse. Normally, a horse is still considered infectious for four weeks after the abscesses heal, due to shedding the strep equi bug from the nasal pharyngeal passages; consequently, you need to quarantine for four weeks after a horse recovers. A carrier horse will not show symptoms, but will harbor the organism in the guttural pouches and can shed strep equi for months and even years, and intermittently when under stress. The only way to identify a carrier is an expensive process that includes sedating the horse, a nasopharyngeal swab, and both a culture and polymerase chain reaction (PCR) test to identify the bug, and this needs to be repeated until there are three consecutive negative cultures and/or

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PCR reactions.

People think that once a premise has horses with strangles, the premise is a common source of re-infection, but what I learned is that there are asymptomatic carrier horses that shed strep equi bacteria for months and even years after they recover from the disease, so a carrier can be the source of a recurrent infection on a farm. Strangles is spread by direct and indirect contact. Horses transmit strangles by sharing common areas, feed bunks and drinking sources. People transmit the bacteria on hands, boots, clothing, and tools. To avoid contaminating other horses or barns it is suggested that you not go to another barn or handle well horses after handling sick horses. Wear clean clothes and clean boots when visiting other barns, or just avoid contact with other barns and horses until your outbreak is under control. The strep equi bug is usually not viable in the environment for longer than a couple days. In ideal conditions, the bug can remain viable on interior surfaces for up to eight weeks, and four weeks outside. It is recommended that you rest pastures for four weeks, and let ultraviolet light and soil microbes sanitize your pastures or outdoor spaces.

It is recommended to sanitize interior surfaces, water buckets, water tanks, stalls, tie rails, feed bunks, halters, brushes, wash bays, rubber mats or any common surface where a horse could spread snot or pus. Many sanitizing products' effectiveness is compromised by the hardness of water and organic matter. So it is suggested that surfaces first be cleaned with soap and water or a power washer, and then use a sanitizing product. One article explained that phenols (like a carbolic acid solution) are best on porous surfaces in dirty conditions. Povidine iodine and chlorhexidine are recommended to kill strep equi, and for washing hands or sanitizing buckets or cleaning non-porous surfaces. Laundering and drying seems to be sufficient on clothing. Boots are tough to sanitize, due to organic matter, and should be cleaned before bathing in a sanitizing solution. Be sure to read all safety labels and cautions.

For the stalls, we removed all bedding material and top layer of flooring, which is packed lime chips, power washed walls at a low PSI (this avoids atomizing and spreading contamination), then hand scrubbed walls and feed containers with a chlorhexidine solution. Then we put down a fresh layer of dairy barn lime and lime

chips. For an indoor arena, you can sanitize walls, but you cannot really sanitize dirt. We power washed walls, then scrubbed with chlorhexidine and painted the indoor arena kick walls. Removing and replacing all footing would be very expensive. Eight weeks is the time limit for viable strep bacteria to survive in an ideal environment indoors and without ultraviolet light.

I had exposed my whole farm, because I turned all horses on a common waterer and common fence line until I fixed a couple of frozen water tanks. Then I noticed the first horse with a suspicious snotty nose and swollen lymph nodes. I elected to quarantine the farm and let it run its course. During the strangles outbreak, we did twice a day visual pasture checks. The swelling under the jaw progressed from the juncture of the throat latch, and matured more under the jaw and finally messy abscessing. The name *strangles* indicates that the horse can have pressure from the swellings that obstructs their breathing. We did not have any serious cases that obstructed the breathing. We let the disease run its natural course with no antibiotics and made sure all horses were able to eat and drink. We were prepared to use hot packs to help give a horse relief on any swelling coming to a head to abscess, but it seems about the time we were ready to apply a hot pack, it would break on its own. Horses would get itchy when healing and rub their jaw and scrape the scab and hair off. We did not notice horses refusing to eat and drink except at first, when they stood around with head and neck extended like they had a sore throat. This stage lasted only a day or two before lymph nodes swelled to the point of seeing them under the throat. All horses, with the exception of one, recovered on their own with no complications. One old mare, under the supervision of a vet, got antibiotics in the middle of the disease process as she coliced, and we did not know if it was related to possible abscesses in the gut like bastard strangles, or just a spasmodic colic episode. She was not impacted or dehydrated. Her abscesses under the jaw healed, but as soon as the antibiotic was stopped, the abscessing was back and the disease process finished running its course. The usual length of time to go from snotty nose through abscessing and healing, seemed to be about a month.

I re-opened my barn on April 1st, 2011. I advise all clients bringing horses to the barn for lessons or training that we are

recovering from a strangles outbreak, and statistics suggest that I will have a carrier horse on the farm. So they need to talk to their vet and decide about vaccinating or not, and the risk of transmitting the disease to horses at home. For all the horses that lived on the farm this winter, they were probably all exposed and have high antibody levels and you probably would not vaccinate this coming year, but again, that is something to talk over with your vet.

In summary, strangles is a common disease of horses, it is highly contagious and messy. It takes three or four months to run its course, including incubation, transmission, disease process, and waiting four weeks after the last horse heals up. Fortunately, there were no fatalities or complications on my farm. The silver lining for my business is that it occurred in winter and a slow time of year, and the silver lining for the horses is that they should be less susceptible to future infections.

## **Lessons learned:**

- Quarantine all horses coming in.....I am a training barn and the new horse can be restricted to his own paddock, drink, and feed buckets. I don't have quarantined working space so would still be tying up and working in common areas.
- When traveling, trail riding or going to an event, carry and use your own feed and water buckets, avoid sharing bits or tack or grooming tools, tie up to your own trailer if possible, and avoid letting your horse sniff noses with other horses.

In my opinion, it is an ethical responsibility and a courtesy to advise people about strangles at your barn, so they can educate themselves, consult with their vet and have the chance to make good management decisions depending on their circumstances. This includes advising other professionals like your farrier that come to your barn, and who could go to other barns and spread the disease. Let them know so they can make your barn the last stop, and go home to sanitize tools, clothing and boots.

Realize that strangles is not bubonic plague, and if you own horses, you will likely deal with strangles at some point if you leave home or have other horses come and go at your barn.

And last, I would like to say *thankyou* to all my clients who continue to trust me with the care and welfare of their precious horses.