Herd This?

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The weather is turning off cooler and you are probably starting to ride more. The mosquito population has exploded so don't forget to call and schedule an appointment for:

- **Fall Vaccinations**
- **Annual Dentistries**
- **Coggins (annual)**
- **Wellness Exams (check out the Equine Wellness Program on our website for discounts)**
- **Fecal Exams/ Deworming Recommendations**

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Focus on the Hoof: Normal Anatomy

To understand proper care of horses' feet, the structures of the foot and the functions of its various parts must be known and understood. The major parts of a horse's foot are the hoof wall, coronet, sole, frog, and internal structures such as connective tissue, bones, and tendons.

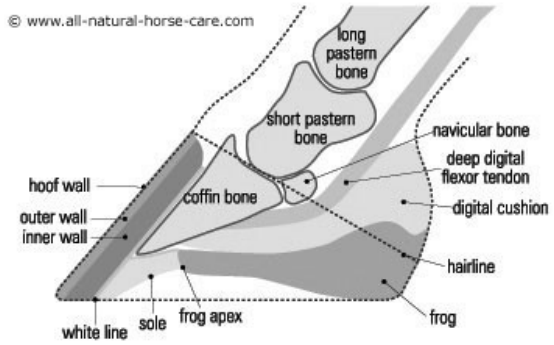
Hoof Wall: The hoof wall is one of the most important structures of the foot as it provides a weight-bearing surface, protects the internal structures of the foot and maintains moisture in the foot. It is composed of parallel fibers that should be free from ridges (stress indicators) and cracks. During times of metabolic stress these fibers can become inflamed causing what we know as laminitis. Refer to the article on page two for further information on laminitis.

Coronet Band: The coronary band is the source of hoof growth. A healthy foot will grow about 1/4 inch per month. The hind feet tend to grow faster than the forefeet and unshod feet grow faster than shod feet. Injury to the coronary band can result in irregular hoof growth and potentially permanently unsound feet.

Sole: The sole is also a very important structure of the foot and its primary function is to provide protection to the sensitive inner portions of the foot. It should be firm, slightly concave, and of a uniform texture. Horses have no feeling at the exterior sole surface. Horses that have experienced founder tend to develop a "dropped" sole and in turn are predisposed to sole bruising (see page three on more about bruising).

Frog: The frog is a spongy, flexible pad that is also a weight-bearing structure on the foot. The condition of the frog is generally a good indicator of the overall health of the foot. Without proper flexibility, expansion, and ground contact, the frog cannot perform its function in helping to circulate blood to and from the foot as well as absorb shock throughout the foot during weight-bearing moments.

continued on p.3



Check Out Our New Website

Pineview Veterinary Hospital is dedicated to keeping our clients informed about current events and providing educational articles to assist you in the management of your large animals.

Therefore, we have created a NEW website that we hope you will find very user-friendly and educational. Not only does it give information about our business and the services we provide, but you will find links to all our newsletters as well as educational articles about particular conditions. We are updating it frequently so feel free to check in often.

In addition, don't forget that we have a Facebook page that is listed as Pineview Veterinary Hospital. If you stay connected thru this venue, be sure to "Like" us for up-to-date news.

Additionally, if you have pictures you would like to post to our Facebook page or website, feel free to email those to us.

Our new website is:
www.pineviewvet.com

Hoof Abscesses: Causes and Prevention

The appearance of a hoof abscess that came out the sole

The appearance of a hoof abscess that came out the coronary band

Hoof abscesses are by far the most common cause of sudden lameness in the horse. They can occur for any number of reasons but fundamentally a break down occurs between the hoof wall and sole (the white line) which leads to the entry of foreign material such as gravel, dirt and sand as well as infectious agents such as bacteria or fungi, into the hoof. Some more common conditions that cause mechanical breaks or weakness in the white line are hoof imbalances (excessive toe length, heels too high), hoof wall separations (white line disease, seedy toe), aggressive removal of sole, chronic laminitis, and excessive moisture or dryness. If left untreated, the hoof abscesses often will follow the path of least resistance, either up the hoof wall to the coronary band or down the hoof wall to the sole. The ones that track up the hoof wall often lead to a defect in the hoof wall and potentially abnormal hoof growth in the future. Both types of abscesses are painful and often need veterinary attention to make the horse more comfortable and ensure nothing more serious is going on such as a fractured coffin bone.

Keeping a strong healthy foot is essential in preventing hoof abscesses from occurring in the future. Having your horse's feet trimmed in an appropriate manner by a qualified farrier and on an appropriate schedule is essential. The use of hoof hardeners such as Keratex as well as bedding your horse on shavings or sawdust may be useful to harden the feet during extremely wet weather or when the horse is being washed frequently such as during show season. Lastly, it is very important that excessive removal of hoof wall and sole (the protective structures of the foot) does not occur. This is a common practice, as emphasis is often placed on eye appeal instead of functional strength of the foot.

It is true that certain horses are more prone to abscesses but there is sometimes an underlying medical condition that predisposes these horses to abscesses. Therefore, a working relationship with your veterinarian is important in horses that develop abscesses frequently to rule out these medical conditions or address particular management practices.

Routine trimming/shoeing by a trained farrier is essential to preventing hoof abscesses

Laminitis and Founder: Causes and Symptoms

X-rays of horses' hooves showing rotation of the coffin bone (above) and rotation and sinking (below).

Laminitis is defined as inflammation of the sensitive layers of tissue (laminae) inside a horse's hoof. Laminitis and founder are often thought to be the same disease. However, laminitis is caused by metabolic changes within the horse that affect the innermost fibers of the hoof wall whereas founder is an actual displacement of the coffin bone from the hoof wall within the foot itself. Founder can occur due to a case of laminitis but it is possible for a horse to have laminitis without founder. Laminitis can be caused by a number of ailments but the most common are overeating lush forage, colic (grain overload or intestinal damage), trouble birthing (dystocia), retained placentas, excessive stress or exhaustion, and systemic infection.

The most common signs associated with laminitis include restlessness or agitation, pacing around the stall, shifting weight from the back to the front legs frequently, reluctance to turn or even move at all, and a stiff gait in the front legs when walking. The hooves may feel hot to the touch with bounding digital pulses felt on either side of the back of each fetlock. If not seen quickly by a veterinarian, acute mild case of laminitis can progress into more severe cases where sinking and rotation of the coffin bone (founder) occurs. These changes may or may not be correctable following treatment.

Chronic laminitis can sometimes be detected just by looking at the changes in the hoof wall growth. Regular or frequent disturbances to the laminae will result in changes to the rate of hoof wall growth. The heel will grow faster than the toe and growth rings on the hoof wall will be further apart at the heel. These changes should be looked for when purchasing a horse for a specific level of exercise. If you have questions regarding laminitis or founder don't hesitate to call the office and speak with Heidi or Christine.

Normal Hoof Anatomy (continued from p.1)

Internal Structures: The coffin bone within the hoof provides the shape of the foot as well as the rigidity needed for a horse to bear weight. When sinking or rotation of the coffin bone occurs with horses that have experienced laminitis, the coffin bone is no longer in line with the hoof wall, creating an unstable hoof. The overall blood supply to the hoof wall runs through the sensitive laminae that are located between the hoof wall and the coffin bone.

Most horses' hooves need to be trimmed every 6-8 weeks but this is dependent on the rate of hoof growth and overall wearing of the hoof wall. If your horse spends the majority of its time on hard surfaces such as dirt lots or hard compacted soil, the hoof will grow more slowly than normal. On the other hand, if your horse spends the majority of its time on lush, soft pasture then their hoof wall will grow much faster than normal and more frequent trimming may be necessary. Daily inspections of your horse's hooves are ideal to ensure they are clean and free from debris that can cause problems in the future.

Now that you are familiar with the overall structure of the horse's foot, I encourage you to continue reading this newsletter as we will be discussing a few commonly encountered hoof problems that you as a horse owner may find yourselves contending with: hoof abscesses, sole bruises, and laminitis.

An x-ray superimposed on a photo of the foot gives a good visual of the

Please refer to our website www.pineviewvet.com for more information regarding any of the articles discussed in this quarter's equine newsletter. Click on the "Client Education" link on our home page and search any of the articles that interest you.

Sole Bruises: Causes, Symptoms, Prevention

Sole bruises are one of the most common causes of sudden lameness in the horse. They are caused by anything that creates excessive pressure to the bottom of the foot such as stones, uneven surfaces, a loose shoe, or continuous concussive forces from a horse's particular discipline. Horses with thin soles and/or flat-footed, low heel confirmations are more prone to develop bruises as well as improperly shod or trimmed horses. Just like bruises that we develop, they can be non-painful to very painful depending on the severity and the degree of blood vessel rupture.

Symptoms of a sole bruise include lameness, heat in the foot, sensitivity to hoof testers, and sometimes obvious bruising on the sole. Many bruises may not be visible from the bottom of the foot for several weeks after the painful insult if the sole is thick. Bruising can lead to an abscess if bacteria gain entry into the affected area. It is important that if your horse is suddenly very lame or if a less severe lameness persists for several days that you contact your veterinarian since simple bruises and hoof abscesses can look similar to more severe things like a fractured coffin bone or laminitis.

Obviously preventing sole bruises is much better than treating them. The best way to prevent bruises is to have your horses seen by a well-trained farrier every 6-8 weeks. Your farrier can let you know if your horse would benefit from shoes to prevent bruising by raising the sole off the ground if they have thin soles. Additionally, the routine trimming of a horse's hoof makes the hoof stronger and prevents low heels and long toes that can make a horse more prone to bruising. If your farrier recommends it, your horse may benefit from special boots while you are riding in rocky areas or they may recommend a sole pad to protect your horse's sole further. You can prevent bruising as well by cleaning your horse's hooves before and after riding to check for loose shoes and to remove stones that may be in the foot. While it may be impossible to prevent all bruises, following these basic preventative measures can certainly reduce the incidence and make them less painful when they do happen.

Sole bruises range in severity from minor (shown above) to more severe ones as shown below.

Find us on Facebook

So whether you eat or drink or whatever you do, do it all for the glory of God.

1 Corinthians 10:31

Pineview Veterinary Hospital is a large animal veterinary practice meeting the needs of large animals in south-eastern North Carolina and northeastern South Carolina.

Our mission is to provide high quality service to our clients coupled with the most advanced and progressive veterinary care for our patients with an emphasis on preventive and herd health medicine.

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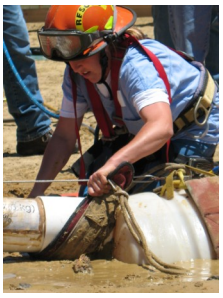
Columbus County Animal Response Team

Columbus County is in the process of revising their County Animal Response Team (CART). The CART is actually a plan for how the county will handle animals of all types if we were to have a disaster (hurricane, tornado, flood, etc.).

If you would like to have your name listed as a person to contact for either keeping horses temporarily, transporting them, or volunteering your time to assist at a local equine evacuation facility, please let us or our county extension agent, Phyllis Creech-Green know. This is in no way a commitment, as you will always have the option to say no should you feel you cannot provide help at that time.

We are excited to be able to help with this endeavor and hope to set up some training opportunities in the future for both those who volunteer to help at an evacuation facility as well as large animal rescue training. Therefore, if you are interested in either of these opportunities, be sure to sign up to help!



Dr. Hart performing a mud rescue at a Technical Large Animal Rescue Training

Demonstration Clinic for Dormosedan Gel at PVH

PVH is introducing a new product, Dormosedan Gel, a sedative specifically tailored for horses who are anxious about particular procedures such as hoof trimming or shoeing, body clipping, or ear trimming. We have also found it useful for donkeys who don't have their feet handled very often as well as horses that have been on lay-up and are starting to be hand-walked and turned out into paddocks.

Pfizer has created an oral gel formulation that owners can administer that is given under the tongue 40 minutes prior to the intended task and sedation typically lasts 1.5-3 hours.

To launch this new product, Pfizer and PVH are teaming up to hold a **demonstration clinic on October 3rd, 2011 at PVH starting at 6pm. Farriers and owners are invited** to a pizza dinner followed by a demonstration of the product.

Anyone interested in attending should **contact Donna at (910) 655-2442 no later than Friday, September 30th.** Please invite your farrier as well so they can see how it works and handle horses before and after sedation to see if they are comfortable working with the sedated horse. Also, we are looking for demonstration horses, so if you know of any that could benefit from this product please let Donna know.