



# Equine Health Update

Fall/Winter 2009

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## Hours

8:00-5:00 Monday-Friday  
8:00-12:00 Saturday  
Emergency Service 24 hours daily,  
365 days a year

@EquineMedical on Twitter

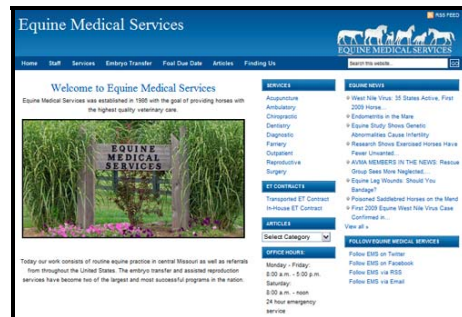
## Greetings!

Here's the 2009 issue of Equine Health Update. It's been around in one form or another since 1982, our attempt to not only keep in touch with you but also provide some information that we hope you find useful, interesting, and/or entertaining. Looking back to that first edition, quite a few things have changed while many have stayed the same. There were no ultrasounds, embryo transfer was a dream, and portable radiography was unusual; all you really needed to practice was a stomach tube (for deworming), a small set of tooth floats, a twitch, a bottle of bute, hoof knife and hoof testers, OB sleeves, a two-way radio, and a truck. We still deal with the same lameness issues, eye problems, colics, etc., but technologic and medical improvements now provide different approaches.

Events this past year have emphasized what a global community we live in, even in the horse community. In 1982, the only international disease threat was Venezuelan Equine Encephalomyelitis which was inching toward Texas from Mexico. Technology, rapid communication, and transportation have changed veterinary practice as well as the health picture as a whole.

Recently H1N1 has shown us how rapidly a virus can spread world-wide in the human population and while horses don't travel quite as frequently internationally as people, that trend is increasing. A drive on the interstate

and the numerous horse trailers traveling to and fro demonstrate the frequency of interstate transport of horses that could help a newly introduced foreign animal disease spread quickly. The presence of Equine Piroplasmiasis in Missouri earlier this year, the CEM "outbreak", the continuing presence of West Nile Virus and the vigilance for the spread of EVA through transported semen all remind us that similar things can happen with horses.



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The world is a new and ever-changing place and it will take vigilance by veterinarians and regulatory agencies to safe-guard our horse's health. Equine Medical Services can be your link to that effort; Dr. Voris has created an almost immediate news source for equine health on our website that can be read at [equmed.com](http://equmed.com). Alternatively, you can have updates sent to your e-mail or SMS messaged to you mobile phone. If you prefer social networking, you can follow us on Facebook or view up to the minute horse health related news on our Twitter feed (@EquineMedical).

Thank you for your part in Equine Medical Services. Please let us know if we can further serve your equine health needs.

Rob Foss

## Eye Injuries

Hunter Ortis, DVM

The most frequent eye related problems in horses are corneal ulcers (abrasions to the surface of the eye), eyelid lacerations and uveitis. Clinical signs of an eye emergency include excessive tearing or discharge, spasmodic squinting, holding the eye partially or completely closed, or constriction of the pupil. Additionally, changes in appearance of the eye and its surrounding structures such as swelling of the eyelids, increased redness of the usually pink tissue around the eye, and cloudiness of the cornea are signs of an eye problem.



Normal equine eye

The most common injury of the eye is a corneal ulcer. Ulcers occur when the surface of the eye comes in contact with a foreign object such a

hay stem, stick or surface of a stall wall, leaving a defect in the integrity of the surface of the eye. A horse with a corneal ulcer will usually have symptoms of a painful eye and/or a hazy bluish appearance of the surface of the eye. Corneal ulcers are diagnosed with a fluorescing stain applied directly to the cornea during examination. Treatment usually includes topical antibiotics because the cornea is easily infected. Other medications may be indicated on a case by case basis.



Eyelid laceration

Eyelid lacerations are commonly caused when the eyelid simply gets snagged on a piece of stall hardware, an overlooked raised nail or piece of wire. These injuries are much easier to diagnose than most other eye emergencies but are equally important to seek rapid veterinary attention. Most lacerations involving the margin of the eyelid will require repair with suture. The integrity of the eyelid margins is vital for maintaining a proper tear film on the surface of the eye. An irregular eyelid margin can cause recurring and chronic eye irritation.

Uveitis, or inflammation in the interior portion of the eye, occurs when inflammatory mediators are released causing leakage of damaging proteins into the internal structures of the eye. There are many different causes of uveitis including blunt or penetrating trauma, corneal ulcers, systemic diseases, and unknown causes to name a few. Most horses with uveitis will show signs of a painful eye that appears cloudy. Diagnosis is usually made with findings from a complete

eye examination including the use of an ophthalmoscope. Rapid and aggressive treatment, often with multiple topical and systemic medications, is essential in minimizing the possibility of permanent damage to the internal structures of the eye.

Injuries of the equine eye should be considered an emergency, and owners should consult their veterinarian immediately when a potential problem has been identified. Delaying treatment or instituting improper treatment on some ocular conditions can lead to permanent damage to the eye and loss of vision.

## Cellulitis

Nathan Voris, DVM

Anyone with a horse has likely walked out to find them with a swollen, painful leg. While there are countless reasons for a horse to become "stoved-up" or "stocked-up", one of the most common is cellulitis.

Cellulitis can be literally defined as inflammation of subcutaneous tissues. Many times, a cause for the swelling cannot be found, but some common reasons for cellulitis include "scratches" (pastern dermatitis), blunt trauma, lacerations or small puncture wounds. Inflammation, with or without bacterial infection, that is trapped under the skin, is clinically expressed as heat and swelling of the affected tissues thus resulting in a swollen, painful leg. Many times the horse will be severely lame and might even have a fever.

Treatment of cellulitis often includes hydrotherapy, sweat/pressure bandaging, anti-inflammatories and antibiotics. Efforts should be made to find the inciting injury as other diagnostic tests or treatments might be required to adequately treat the horse's condition and to check the integrity of underlying bone and soft tissues.

## Fertility News

Hunter Ortis, DVM

A new treatment to re-establish oviductal patency in mares has been proven to improve fertility in some

mares. This procedure is ideal for mares with otherwise unexplained poor fertility. These mares have been fully evaluated and determined to have a normal uterine environment without infection or excessive fibrosis, cycle normally and have been previously bred to a stallion with known acceptable fertility, but still have a poor pregnancy success rate. This poor reproductive performance, whether expressed as failure to establish pregnancy or as a lower than expected recovery of embryos for transfer into recipient mares, is often due to oviductal blockage.

The oviduct (fallopian tube) connects the mare's ovary to the uterus. It collects and nourishes the ovulated oocyte (egg). Fertilization takes place in the oviduct and the early embryo lives and grows there for its first five days. The oviducts can become blocked with materials from previous cycles including unfertilized eggs and proteinacious debris from follicular fluid.

The procedure to reestablish patency of the oviduct is done using a laparoscope to apply Prostaglandin E2 to the surface of the oviduct. Prostaglandin E2 is the same chemical the early embryo releases to signal the oviduct to expel the embryo into the uterus. Direct application of Prostaglandin E2 to the oviduct surface causes a similar reaction in the oviduct, clearing the trapped debris.

We are very encouraged with the results seen with this new treatment for poor fertility in some mares. This is another tool we have in the arsenal to help increase reproductive efficiency in mares.

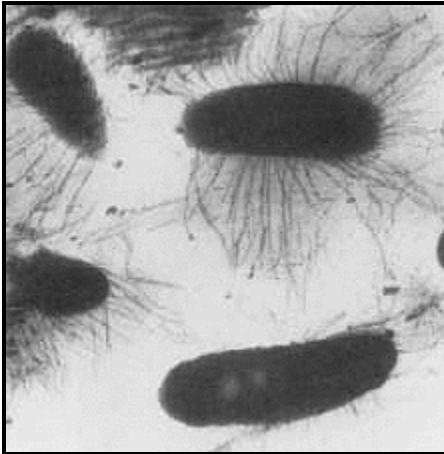
## Contagious Equine Metritis:

Tawna Purcell, DVM

Contagious Equine Metritis (CEM) has been a recent topic of concern for many veterinarians and some owners as of late. CEM, caused by the bacteria *Taylorella equigenitalis*, was first discovered in England in 1977 and was first identified in the United States in 1978 (in Columbia, MO). The disease was eradicated at that time until it made a brief showing

again in 2006 and once again in 2008. Efforts to eradicate the 2008 outbreak are still ongoing.

CEM is highly contagious. Horses are often asymptomatic (no outward sign of infection) although some affected mares can show a mucoid vaginal discharge.



*T. equigenitalis*

Transmission can occur through direct breeding, artificial insemination of a mare from an infected stallion or contact with items contaminated with the bacteria. Infection results in infertility or abortion in mares, while stallions have no clinical signs. Infertility can last for one or more breeding cycles and certain mares can carry the infection, potentially spreading it to others for many months.

Since the 2008 outbreak was first identified in Kentucky, a number of stallions and a few mares have tested positive for CEM, however some 991 horses, spread over 48 states, have been identified as potentially exposed to the bacteria that causes CEM. Most of these horses have now been tested as negative and the few found positive have undergone, or are in the process of treatment.

Testing of CEM is done in partnership between local and state veterinarians to insure proper methods and future eradication. There are three diagnostic methods available, the most common being bacterial culture in both stallions and mares. Should a mare test positive for the bacteria, a blood test will be done to detect systemic antibodies. Stallions do not

develop these antibodies. Stallions who have tested positive, or who have been on a farm with a positive stallion will often undergo a test breeding to negative mares to insure he does not infect them with the bacteria. The process takes 35 days to declare the stallion negative. On average the process to clear a horse takes 6-8 weeks between tests and re-tests.

Although it may seem cumbersome, both mares and stallions can be diagnosed and successfully treated with topical and systemic antibiotics. That along with good hygiene practices will help eradicate CEM from the US once again.

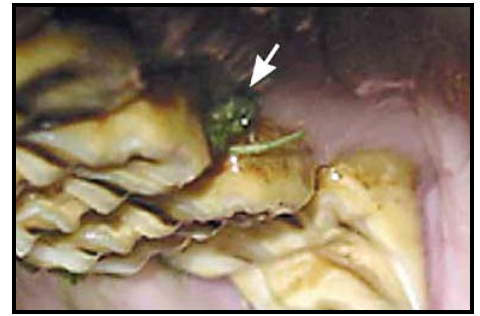
### **Equine Periodontal Disease** Heather Landrey, DVM

Periodontal disease is a condition that causes progressive attachment loss of the periodontium (the tissues that surround the teeth), ultimately resulting in tooth loss. Horses with periodontal disease may show outward signs of abnormal chewing, weight loss, biting problems or behavioral changes. Retrospective studies from the UK and US reveal a 40% prevalence of periodontal disease in horses 3-5 years of age and 60% prevalence of periodontal disease in horses over 15 years old.

Periodontal disease is often secondary to abnormal wear of the teeth. The abnormal wear may be due to varying rates of tooth eruption in young horses or malocclusions in older horses. These variations alter the normal forces of mastication (chewing) resulting in abnormal pressures on the teeth and disruption of the normal passage of food through the mouth (food stasis). As food particles begin to decay, the normal bacterial flora of the mouth is altered which further contributes to the periodontal disease process. The end result, without intervention, is tooth loss.

Periodontal disease is diagnosed via thorough examination of the mouth. Proper visualization of the teeth requires sedation, an oral speculum and a bright light. Implementation of a dental pick and oral mirror allow every aspect of the mouth to be examined.

Once periodontal disease is identified, radiographs should be taken to evaluate the extent of disease below the gum line (gingiva).



Periodontal pocket packed with hay

Treatment options vary based on the stage of disease. Early stages may only require removal of static food and flushing the area with a high pressure water rinse. If the disease has progressed a little further, antibiotic material may need to be implanted into the pocket. In more severe cases, alteration of the tooth surface and use of impression material along with antibiotic implant material may be required. If the disease progression has gone undetected for too long extraction may be the only remaining option.

Good oral care is the best prevention for periodontal disease. Regular oral examinations and floating will correct abnormal wear and malocclusions and allow for early diagnosis of periodontal disease.

### **Horses as a Business** Rob Foss, DVM

Thinking of turning your horse interests into a business? This is a frequent goal of horse owners. Here are a few things to keep in mind:

1. Make reasonable goals before you get started. Is this strictly a business or are you just trying to cover some of the expenses of your hobby? Develop a complete business plan.
2. Start with a thorough knowledge base. This may require an apprenticeship, some business training, or research. Becoming a professional horseman takes time, experience, and usually a mentor.

3. Know your market. This may take significant observation and research.
4. Seek expertise in areas that may not be your strengths such as accounting, business planning, marketing, and breeding.
5. Diversify. This can help keep a more consistent income stream. Relying strictly on sales can be tough during a dry period, but training income, a lesson program, or boarding income can lessen the impact.
6. Be objective. This is very hard in the horse business but of utmost importance. It can be a significant shock when barn blindness meets the marketplace.
7. Be conservative with your estimates of income, liberal with your estimates of expenses, and try to count on a low estimate of market strength.

### Quotations:

Don't hit at all if it is honorably possible to avoid hitting; but never hit soft.

Teddy Roosevelt

Learn from the mistakes of others. You can't live long enough to make them all yourself.

Eleanor Roosevelt

Wise men talk because they have something to say; fools because they have to say something.

Plato

I have left orders to be awakened at any time in case of national emergency, even if I'm in a cabinet meeting.

Ronald Reagan

Brick walls are there for a reason. They're not there to keep us out. They give us a chance to show how badly we want something.

Randy Pausch

### Normal Equine Vital signs:

- Temperature: 99.5-100.5 degrees Fahrenheit
- Pulse (Heart Rate): 28-44 beats per minute
- Respiratory Rate: 8-20 breathes per minute

### Conditions that warrant immediate attention:

- Colic
- Lacerations-especially near the eye or involving limbs
- Non-weight bearing lameness
- Any injury/problem involving the eye
- Grain overload
- Choke
- Recumbent horse (horse unable to get up)
- Temperature greater than 102
- Respiratory distress
- Diarrhea
- Dystocia (difficult delivery of foal)
- Acute changes in a foal's behavior or attitude

This list is not absolute. Do not hesitate to call if your horse is exhibiting a sign or behavior that is of concern to you.

If you enjoyed reading our newsletter, you can find expanded coverage of these and other topics in the "Articles" section of our website: [www.equmed.com](http://www.equmed.com)