

## WHAT PAPHIAKOS ANIMAL WELFARE EQUINE CLINIC CAN CURRENTLY OFFER

### • ROUTINE FARM WORK

- Preventative health/senior exams
- Performance/lameness exams & diagnostics
- Vaccinations
- Upper airway evaluation
- Dental evaluations
- Power float
- Ultrasonography
- Digital radiography
- 24 hour emergency services for our clients

### • 24 HOUR EMERGENCY CARE

Examples of urgent emergencies:

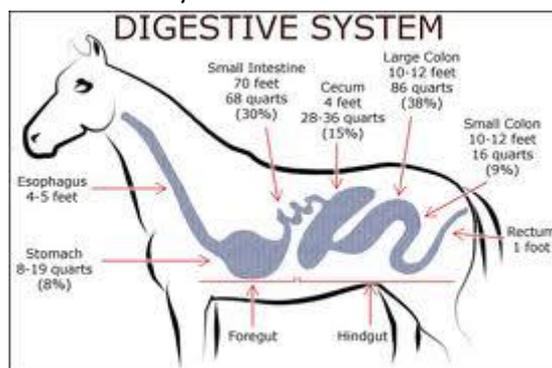
- Non-weight bearing lameness
- Eye related problems
- Colic
- Broken bones
- Heavy bleeding
- Horse trapped in stall, trailer or fence
- Mare in labour unable to deliver the foal

Examples of emergencies that should be seen the same day:

- Mild colic that does not resolve in 30-45 minutes
- All eye related problem
- Sudden loss of coordination or balance
- Lacerations or trauma
- Weak foal that is unable to nurse
- Choke (saliva coming from the nose)
- High fever with in-appetence
- Dull horse with in-appetence
- Retained placenta (more than 3 hours)

### • 10 TIPS FOR PREVENTING COLIC

- The number one killer of horses is colic. Colic is not a disease, but rather a combination of signs that alert us to abdominal pain in the horse. Colic can range from mild to severe, but it should never be ignored. Many of the conditions that cause colic can become life threatening in a relatively short period of time. Only by quickly and accurately recognizing colic – and seeking qualified veterinary help – can the chance for recovery be maximized.



- While horses seem predisposed to colic due to the anatomy and function of their digestive tracts, management can play a key role in prevention. Some horses will appear to colic more frequently than others. Horses that have had colic surgery are also more likely to colic than a horse that has never had surgery. Many factors can be eliminated or reduced in horses that often colic. Special attention to particular individuals as well as techniques for the entire barn can be undertaken to reduce the incidence of colic. Although not every case is avoidable, the following guidelines can maximize the horse's health and reduce the risk of colic:

- Establish a daily routine – include feeding and exercise schedules – and stick to it.
- Feed a high quality diet comprised primarily of roughage.
- Avoid feeding excessive grain and energy-dense supplements. At least half of the horse's energy should be supplied through hay or forage. A better guide to follow is that twice as much energy should be supplied from a roughage source than from concentrates.
- Divide daily concentrate ratios into two or more smaller feedings rather than one large one in order to avoid overloading the horse's digestive tract. Hay is best fed free-choice.
- Set up a regular parasite control program with the help of your equine practitioner this includes regular faeces egg counts to ensure you are not creating resistance to de-wormers.
- Provide exercise and/or turnout on a daily basis. Change the intensity and duration of an exercise regimen gradually.
- Provide fresh, clean water at all times. The only exception is when the horse is excessively hot, and then it should be given small sips of lukewarm water until it has recovered.
- Avoid putting feed on the ground, especially in sandy soils. This is particularly problematic in our area of the country.
- Check hay, bedding, pasture and environment for potentially toxic substances, such as blister beetles, noxious weeds and other ingestible foreign matter.
- Reduce stress. Horses experiencing changes in environment or workloads are at high risk of intestinal dysfunction. Pay special attention to horses when transporting them or changing their surroundings, such as shows.

- **DENTISTRY AND POWERFLOAT**

- Proper dental care is a vital part of preventative healthcare of horses. Filing of sharp edges, removing hooks, and aligning proper grinding of the teeth should be done at least annually.
- As a patient ages, changes within the mouth occur. Fractures of molars, missing teeth, diseased tooth roots, and "wave mouths" become commonplace.
- The importance of equine dental care is becoming more and more apparent to horse owners. In order to stay competitive, equestrians need to have their horses' teeth in perfect order so their horses respond appropriately to the bite and subtle hand signals.
- What was once a physically demanding and difficult task is now an accurate, easy and somewhat gentle procedure on horses. The doctors at Paphiakos & CCP Animal Welfare use a rotary mechanized float (POWERFLOAT) for most of the dental needs encountered with horses. In an average of 6 to 10 minutes, all floating procedures including reduction of enamel points, hooks, ramps, wave mouth, bit seats, and incisor teeth are accomplished with minimal discomfort to the patient. The small size of the abrasive surface and stationary guard permit easy access to all areas of the mouth on all breeds of horses. The instrumentation allows us to complete tasks quickly and with minimal contact to the soft tissues of the mouth. Trauma of the oral mucosa is virtually eliminated.

- **DIGITAL RADIOGRAPHY**

- Computerized radiography (digital X-rays) has become the standard in equine medicine and surgery. Digital X-rays allow one to take an X-ray, process it through the computer, and then manipulate the exposure and magnification. This offers a great advantage for diagnostics, as well as reducing radiation exposure to personnel. The number of retakes is drastically reduced, and the information gained from a single film can be exponentially increased. Whereas before when a conventional radiograph may not have shown a problem, digital films can be enhanced to show a significant lesion previously undetected.
- Specific advantages of digital radiography include:
  - Consistent image quality
  - Reduction in repeat exposures
  - Small bone detail is much more easily defined
  - Radiographs can be turned to a CD, at little or no cost to the owner, for one's own records
  - Radiographs can be e-mailed to a specialist and archived for future reference.
- **FULL IN-HOUSE LABORATORY**
  - Paphiakos & CCP Animal Welfare has a full in-house laboratory. These diagnostic capabilities allow us to provide the best care for our patients. By obtaining immediate results, we can make treatment decisions instead of waiting 2-3 days for an outside lab.
  - Some of the tests we perform include:
    - Complete Blood Count (CBC)
    - White blood cells (infection)
    - Red blood cells (anaemia)
    - Platelets (clotting)
    - Blood chemistries
    - Liver
    - Kidney
    - Muscle enzymes
    - Thyroid testing (T4)
    - Hormone analysis
    - Bile acids
    - Assess liver function
    - Electrolytes
    - Sodium (NA)
    - Potassium (K)
    - Chloride (Cl)
    - Calcium (Ca)
    - Determine type of infection and proper antibiotic to use to kill the organism.
    - Growth within 24-48 hours (up to one week at outside lab)
    - Urinalysis
    - Assesses kidney function and urinary tract disease
    - Assesses transfer of mother's protective antibodies. The test is completed within minutes.
    - SNAP Lyme Test
    - Correlates with Lyme Western Blot Test. The test is completed within minutes.
    - Cytology
    - Microscopic analysis of aspirated/biopsied fluid or tissue samples. Used to diagnose inflammatory, infectious, allergic disease or cancer
    - Faecal egg count
    - Analysis for intestinal parasites (make sure your de-worming program is adequate).

- **GASTROINTESTINAL PARASITE CONTROL & DE-WORMING**

- Internal parasites (worms) can cause extensive internal damage to your horse without you even realizing that your horse is infected. There are over 150 species of worms that can infect horses. The most important, in terms of health risk, are large and small strongyles, ascarids and tapeworms.
- **STRATEGIC DE-WORMING:**
  - ***Where we are today and what is best for your horse:***
    - ✓ New research has shown that de-worming on a rotation of 6-8 weeks is not the best way to care for horses anymore. Because of the emergence of anthelmintic resistance we are recommending a new system of faecal testing, de-worming and protecting the environment to rid horses of any existing infection; as well as preventing horses from becoming infected with parasites in the first place.
    - ✓ First and foremost, for optimal impact, you must give the right de-wormer at the effective dosage at the appropriate time of year. The idea of rotational de-worming between different drug classes was based on the premise that some parasites will survive treatments, the surviving parasites can reproduce with new generations resistant to that particular drug class. This is the problem that some farms are experiencing and why the industry as a whole needs to make a concerted effort to de-worm based on faecal egg counts and by targeting a specific parasite(s) present.
    - ✓ Timing of de-worming is very important. Consider the small strongyle larvae, for example. They are able to migrate and hide in the wall of the large intestine and are not affected by many of our common anthelmintics. These larvae begin to emerge as the days get longer (March-April). We often see an increase in faecal egg counts (FEC) at this time. By de-worming for small strongyles at the proper time in your area of the country, we can thwart extensive egg laying that would contaminate spring pastures and perpetuate infection the rest of the year. Many of our current d-wormers kill only the adults. It is ideal to de-worm with a product that will treat both the adults and the larvae twice annually. It is also important to use a product that will kill tapeworms, as these parasites reside farther up the GI tract and do not always show up in routine faecal testing.
    - ✓ It is imperative to ensure that you are giving the proper dosage to your horse, which is based on his/her body weight. Your horse's bodyweight should be measured and recorded with a weight tape annually. The weight tape gives an estimation of your horse's bodyweight by girth size.
    - ✓ Lastly, it is important to be sure that your horse gets and swallows all of the de-worming medication. Ask for assistance if your horse resists oral administration.
  - ***Determining the effectiveness of your de-worming program:***
    - ✓ Previously we reviewed the importance of identifying horses within your barn with high intestinal parasite loads and how to effectively de-worm these horses. The next step is ensuring that the de-wormer you used is effective – that it will kill off any parasites that your horse may have by at least 90-100%. With the emergence of de-wormer resistance, this is a crucial step in management of parasite loads on your farm and the overall wellness of your horse(s). Unfortunately, it is often overlooked by horse owners.
    - ✓ To determine the effectiveness of the de-wormer you are using, as well as your overall de-worming program, it is essential to perform serial faecal egg counts (FECs). FEC testing determines the concentration of parasite eggs in manure.

Initially, a FEC should be done to determine the parasite load of your horse. If your horse is negative, then your de-worming program is probably OK; however, another FEC should be done at the egg occurrence period (ERP). If your horse is positive, a second FEC should be performed 10 to 14 days after de-worming to establish the effectiveness of the product used (you should expect a FEC near zero). If the FEC is still high, then your horse has worms and the FEC is to be repeated in 10-14 days to establish the effectiveness.

- ✓ The final FEC should be done at the egg reappearance period (ERP). The ERP is a predictable interval where the FEC remains low after an effective de-worming agent is administered and it differs slightly depending on the de-worming product used. The normal ERP is 4-5 weeks for benzimidazole and pyrantel products, 6-8 weeks for ivermectin, and 12 weeks for moxidectin. The second FEC helps to determine which horses have a high parasite load (encysted larvae) and/or if your farm or paddock has a parasite problem (re-infection). By identifying the “problem” you can provide targeted treatment of the individual horse and/or environment.
- ✓ Cleaning manure out of stalls daily and out of paddocks 2-3 times weekly is essential to controlling parasite contamination of your horse’s environment. Rotating paddocks periodically in the hot, dry months allows larval stages to emerge and die off without finding hosts. If you spread your manure over actively grazed areas, it is best to compost it prior to spreading it, as the heat generated during the process kills the parasite eggs. Additionally, you always want to de-worm new horses and check their FEC prior to turning them out with the herd to minimize contamination by an unknown host.
- ✓ Research has found that once a farm and its horses have been declared cleared of parasites, many horses only need to be de-wormed twice yearly with an Ivermectin – Praziquantel combination product to eliminate tapeworms and keep bots under control. This approach to strategic de-worming and parasite control will minimize the potential of developing resistance and is better for the environment. It also stops us from giving unnecessary medications to our equine friends and, in the long term, minimises costs to you, the horse owner.

- **ENDOSCOPY**

- ***Upper respiratory tract:***

- Two things are required of an equine athlete: soundness of the limbs and soundness of the breathing apparatus. Upper airway endoscopy is the only accurate way to assess airway function. A thin one meter long optic fibre endoscope is passed up one nostril and allows us to visualize the nasal cavity, sinuses, pharynx, guttural pouches, larynx, soft palate and trachea. By looking into the patient’s upper respiratory tract we can evaluate functional anatomy. We can also determine the presence of tissue inflammation or infectious disease. If indicated we can also pass probes through the endoscope to retrieve samples for culture, cytology or biopsy.
- Dorsal displacement of the soft palate, entrapment of the epiglottis, subepiglottal cysts, guttural pouch disease, paralysis of the arytenoids (“roaring”), lymphoid hyperplasia, exercise induced pulmonary haemorrhage (“Bleeders”), and infection within the trachea can easily be seen. Videos or still pictures can be taken for further review or comparison at a later date. Signs of airway inflammation or disease can vary from very subtle (exercise intolerance) to very obvious (nasal discharge, sneezing, coughing). If you are concerned that your horse shows any of the aforementioned signs, ask your veterinarian about it.

- ***Urinary tract:***

