



Steinbeck Country  
Equine Clinic

TIM G. EASTMAN DVM, DACVS  
W. KENT FOWLER, DVM  
ALEXANDRA EASTMAN, DVM, MS  
MATT DURHAM, DVM  
ERIC DAVIS, DVM, DACVS, DACVIM

# STEINBECK COUNTRY EQUINE CLINIC NEWSLETTER



## IN THIS ISSUE

- **What's New:  
Gastrosopy  
Laser Surgery**
- **New Faces:  
Dr. Corbett Post**
- **Gastric Ulcers in  
Horses**
- **Monterey Horse  
Park**
- **Beet Pulp**
- **Remarkable  
Patients**
- **Horseman's  
Day was a big  
Success**
- **AAEP**
- **WNV update**

## S.C.E.C. IS THE PROUD NEW OWNER OF A VIDEO GASTROSCOPE

Equine Gastric Ulcer Syndrome is a common disease in foals and horses. (See page 2 for more information). Until recently, we had to diagnose gastric ulcers in adult horses by response to therapy or by referral to another hospital for gastrosopy. With the purchase of the gastroscope we can look directly into the stomach of a horse and evaluate the stomach lining not only to diagnose ulcers, but monitor their response to treatment as well.

## WE NOW HAVE A DIODE LASER

After sharing a diode laser with some other practices, we were so happy with the results we had surgically that we now have our own. While a laser does not replace the scalpel, it does offer unique advantages in many types of surgery. The laser seals blood vessels and nerves as it cuts, decreasing the amount of surgical pain and bleeding. This can mean less pain and swelling for the patient postoperatively.

## S.C.E.C. STARTS AN INTERNSHIP PROGRAM



With the arrival of Dr. Corbett Post on June 15, 2003, Steinbeck Country Equine Clinic started an official internship program. In veterinary medicine, unlike the practice in human medicine, internship programs are optional. The vast majority of veterinary students go directly into private practice after graduating from school. Some graduates choose to pursue additional education and experience by entering an internship program. Veterinary interns are fully licensed veterinarians who choose to spend one year working in an educational setting. In our case we hope our interns will leave having had a good balance of experience in a busy general practice and specialty training by our board certified veterinary specialists. Our

internship program has been approved by the American Association of Equine Practitioners, the California Veterinary Medical Association and the California Veterinary Medical Board of Examiners. Dr. Post is a Texas A&M graduate. He moved here for the year with his wife Jana. Jana is working with us part-time as a technician and is volunteering at Freedom Reigns, a therapeutic riding program at the Riding Academy. We know you will enjoy meeting them both.

## EQUINE GASTRIC ULCERS

are not a new phenomenon for horses. However, thanks to the availability of longer endoscopes in private practice, they are more frequently diagnosed and treated. For horses suffering from Equine Gastric Ulcer Syndrome, this can be very good news. Before they became man's other best friend, horses spent their days wandering the range eating an all-day buffet of grass. Many of the feed and environmental changes we have imposed upon our equine friends predispose them to gastric ulcers. Not all horses under the same conditions will get ulcers. However, it is thought that as many as 70-80% of untreated horses in heavy training and 25-50% of foals may have ulcers.



Clinical signs in adult horses can include some or all of the following signs: mild or intermittent colic, dullness, changes in attitude or appetite, teeth grinding, decreased performance,

reluctance to train, or poor body condition. Foals with gastric ulcers will frequently nurse more briefly than normal foals (15-20 seconds) then go lie down and roll on their backs. Foals may also grind their teeth and may develop a "pot-belly" appearance.

The stomach itself has two portions, the non-glandular (top portion) and glandular portions (lower portion). The non-glandular portion is usually covered by smooth pale pink tissue that does not have secreting glands. This portion is limited in its ability to withstand acid contact without eroding. Anything that causes acid to make extended contact with the non-glandular portion of the stomach can cause ulcers. The lower section of the stomach contains the glandular mucosa. This portion produces acids to aid in digestion and buffering agents, which help protect the mucosa in this area allowing it to be able to withstand very low pHs (acidic environments). Anti-inflammatory drugs and other factors which decrease the ability of this portion to protect itself can cause the less common ulcers found in this region of the stomach.

### FACTORS PREDISPOSING HORSES TO ULCERS

**FASTING:** Hay and saliva are known to buffer gastric acidity. Horses fed continuously have higher (less acidic) gastric pHs than those fasted. The common practice of feeding horses concentrated meals twice daily may be a contributing factor in gastric ulcers.

**RECOMMENDATION:** If your horse does not have access to pasture, consider providing a grass hay for him to eat throughout the day. This may also decrease the likelihood of him developing vices linked to boredom. In foals or horses off feed due to illness, treating for ulcers in a prophylactic manner may prevent the formation of ulcers. Alfalfa hay, high in protein and calcium, can act as a buffer for up to 5 hours in the stomach. Due to the incidence of enteroliths (intestinal stones) in California, do not feed more than 50% alfalfa hay.

**VOLATILE FATTY ACIDS:** Fermentation products of carbohydrates were found to induce acid injury in the non-glandular portion of horses' stomachs by a couple of mechanisms.

**RECOMMENDATION:** Limit the amount of grain fed. When you are feeding sweet feed concentrates, feed them with roughages to help buffer their effect. Consider beet pulp for additional calories.

### NONSTERODIAL ANTI-INFLAMMATORY DRUGS:

NSAIDs, work for pain control by decreasing prostaglandin production. However, prostaglandins play a protective role in the glandular portion of the stomach. Extensive NSAID use may predispose a horse to gastric ulcers.

**RECOMMENDATION:** If your horse is on NSAIDs (Bute or Banamine), be aware of their influence on the stomach and feed accordingly. Never exceed the recommended dose of any NSAID prescribed by your veterinarian.

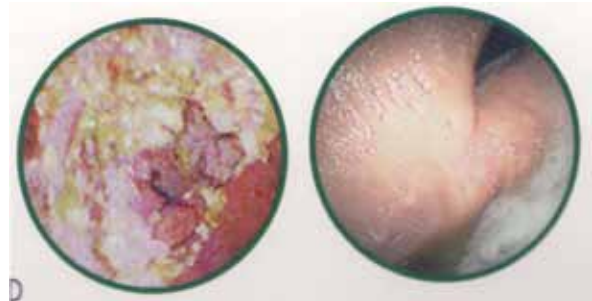
### INTENSE EXERCISE

During periods of intense exercise, particularly speed events, the pressure in the abdomen increases and the contents of the stomach are pushed farther up into the non-glandular portion of the stomach than normal.

**RECOMMENDATION:** If your horse is in training, particularly for speed events, periods of intense exercise will be a necessary part of your horse's life. However, knowing that they may increase his/her chance for gastric ulcers, you will want to pay particular attention to the feeding recommendations above.

### DIAGNOSIS

If you suspect that your horse has gastric ulcers, you can have an endoscopic exam performed. The horse will need to be held off feed for 24 hours to allow the stomach to empty enough for the gastric mucosa to be visualized. Your horse will be sedated for the exam. The endoscope, a long black tube about the same diameter as a stomach tube, will be inserted into one nostril and passed through the larynx into the esophagus and then into the stomach. You will be able to watch the exam on a video monitor in the room.



Endoscopic view of the equine stomach with ulcers before treatment (left) and after treatment (right)

Photo by Denver Bryan /www.denverbryan.com

### TREATMENT

Currently, there is only one FDA approved treatment for gastric ulcers in horses. GastroGard is a paste and is given to horses once daily for 28 days. Because the medication is expensive, we recommend having the horse's stomach rechecked after 2-3 weeks of treatment. Some horses respond very quickly to treatment and do not require the full 28 days of treatment. If you have concerns about ulcers in your horse, please discuss them with one of our veterinarians.

## MONTEREY HORSE PARK

Dr. Tim Eastman was recently elected to the board of directors of the Monterey Horse Park. The population explosion in California shows no signs of slowing down. Horse property is divided up every day as suburban growth extends south into our back yard. With this in mind, a group has formed with the hopes of preserving 340 acres of Fort Ord land for equine purposes. Dr. Eastman and all of SCEC are very much in support of the project. For more details, please see the insert.



## FEEDING BEET PULP

Beet pulp is a byproduct of sugar extraction from sugar beets. It is not a new horse feed, but it is getting more attention recently for a number of reasons. The way we think about feeding horses is evolving as we learn more about the problems that plague them. One change is the attention being paid to the effect of

high carbohydrate meals or "hot feeds" on horses. Grain has a high glycemic index. That means it raises the blood sugar and insulin levels quickly and dramatically. Feeds with a high glycemic index are not recommended for older horses, horses with Cushing's disease, horses with HYPP, or horses which "tie-up." Feeds with a low glycemic index can also have a calming effect on horses, making them ideal for horses recovering from an illness or injury. Furthermore, grain ferments into volatile fatty acids in the stomach and plays a role in equine gastric ulcer syndrome.

Beet pulp is considered a high fiber/low protein feed. While nutritionally similar to grass hay, beet pulp contains more calories. Beet pulp is easily chewed and digested, making it an ideal feed for older horses with dental problems. It is not a complete feed and lacks many vitamins and minerals needed daily. However, it is an excellent supplement for a horse requiring more roughage, and calories. Horses normally fed grain can be fed much less grain if beet pulp is added to the feeding regime.

There are benefits to your horse's gastrointestinal tract of feeding a high quality fiber. Horses fed beet pulp will drink more water and have more bulk in the intestinal tract. This may decrease the chance of getting impactions and other forms of colic. Beet pulp works like bran mashes in this function but has a higher nutritional content than bran. Possibly because it stimulates intestinal microbial fermentation, horses eating beet pulp are also thought to absorb more nutrients from the hay they eat.

Because it is soft and molds easily, beet pulp comes in a dried or pelleted form. While it is not necessary to soak beet pulp prior to feeding, soaking makes the food more palatable, and horses prone to eat too quickly will not choke on soaked beet pulp. To soak beet pulp, add twice as much water as beet pulp to a bucket, and let it sit for at least a couple of hours. Warm water may decrease the time needed to absorb all of the water, but avoid hot water, which will decrease the nutrient content of the feed. To avoid having the feed spoil, do not soak more than one feeding ahead of time. Most horses will eat beet pulp, but it may be more palatable when mixed in with some grain or other tasty feed. Beet pulp is relatively inexpensive and easy to find locally. As with any change in feeding regime, make the change slowly. Add only a

small portion to your horse's diet and increase the amount over at least two weeks until the desired amount is reached.

## REMARKABLE PATIENTS



### BROKEN LEG NOT A DEATH SENTENCE FOR PEMA

Until recently, a horse with a broken leg was a tragedy, but not so for Pema. At only 6 weeks of age Pema broke her cannon bone. Thanks to the excellent

care she received before referral by Dr. Angel DePuy of Adobe Animal Hospital, the limb was splinted and Pema was in stable condition when she arrived at the clinic. The fracture was surgically repaired with a bone plate and screws the following day at S.C.E.C. During her long stay at the clinic, Pema never lost her sweet nature or engaging personality. The surgery was in June and Pema is now a weanling and is thriving at home.

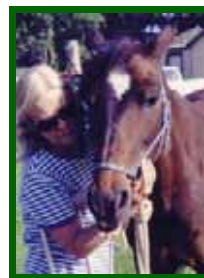


### GERIATRIC SURGERY A BIG SUCCESS FOR TELIF

A 27-year-old California native, it was not a surprise to find abdominal stones (enteroliths) on radiographs of colicky Telif's abdomen. However, what was a surprise was to discover during surgery that the stones were not the cause of Telif's immediate pain. In surgery, a fatty tumor on a stalk (lipoma) was discovered wrapped around a section of small intestine. The stalk was wrapped around the intestine so tightly that the affected portion of intestine had completely lost its blood supply and would need to be removed. This worsened the prognosis for Telif considerably. A small intestine resection has many more possible complications than removing enteroliths from the large colon. The stones were removed so they wouldn't cause a problem in the future, and 3 feet of dead bowel was surgically removed. Telif did wonderfully, not only did he handle the 5 hour anesthesia like a champ, but he recovered and went home in record time. Today he is back to enjoying his retirement on the California coast.

### A VERY SAD GOODBYE TO LITTLE BIT

The story of our most remarkable patient this year sadly does not have a happy ending. Many of you met Little Bit during his extensive stay at the clinic. Originally referred to us for both colic and a rectal tear, Little Bit quickly became part of our family. He bravely endured colic surgery. Then a few hours later, he had colostomy surgery to bypass the torn portion of his rectum and allow it time to heal. Two months later he had another long surgery to reverse his colostomy. The bravest horse we have known, Little Bit recovered well from all of his surgeries. Sadly, two months later, Little Bit had abdominal pain again. This time an adhesion had torn away from a section of bowel, and there wasn't a treatment possible to help him. We mean it from the bottom of our hearts when we say that we lost a member of our family. Our hearts go out to Marsha who is as brave as her horse.



## Horseman's Day



Not only do we believe in continuing education for ourselves, we believe in it for our clients, too. On May 10, 2003, Steinbeck Equine hosted its first Horseman's Day. The full day of events began with a continental breakfast at San Benancio Middle School at 8:30 am. The morning talks began at 9:00 am and included; The History of Steinbeck Equine, Colic in Horses, Mare

Reproduction, West Nile Virus, and Traumatic Joint Disease in Horses. During the lunch break, everyone enjoyed wonderful bag lunches from Portobello's while soaking up spring sunshine in the courtyard. You could shop for yourself, your horse, or for more information at the booths set up by drug companies and local vendors. Thanks to the generosity of our drug companies, nearly 1/3 of the 150 horse enthusiasts present went home with a door prize. The afternoon talks included Advances in Diagnostic Imaging and Equine Conformation: Form and Function. After the afternoon talks, everyone was invited back to the clinic for a self-guided tour and wine and cheese reception. Because this was our first try at a day like this, we were particularly excited to see the evaluations filled out by the attendees. The responses were overwhelmingly positive; however, we did learn some things. We'll try to have the next Horseman's Day earlier in the year before everything gets quite so busy, and we'll look for more comfortable chairs. The two most requested topics for future talks were nutrition and shoeing. We're looking for dynamic speakers to fit the bill. The next Horseman's Day is likely to be in February. You will be notified as soon as we narrow it down to a specific date.



All of the veterinarians at S.C.E.C. are members of the American Association of Equine Practitioners. The American Association of Equine Practitioners (AAEP) is the world's largest professional association of equine veterinarians. The AAEP's mission is to improve the health and welfare of the horse, to further the professional development of its members, and to provide resources and leadership for the benefit of the equine industry. The AAEP puts on many continuing education meetings each year. The largest is a week of lectures and wet labs in November. Our veterinarians will return just before Thanksgiving with the most up-to-date information available for your horse's health.



## West Nile Virus Update

West Nile virus has reached California. To date, no horses or humans have been diagnosed with West Nile virus in California. However, our early detection systems have worked to let us know that the virus is in California. Because chickens are particularly susceptible to certain encephalitis viruses, they are used to monitor the presence or absence of the viruses in the state. There are flocks in both northern and southern California. Recently flocks in southern California have tested positive. Mosquito pools are also tested regularly, and some southern California mosquito pools have tested positive. Even more recently, a dead sparrow and two dead crows reported to the WNV hotline tested positive for the virus. As of Oct. 1, 2003 the virus had been detected in Los Angeles, Riverside, and Imperial Counties.

In 2003 there have been 4827 confirmed cases of WNV in humans in the United States; there have been 93 deaths associated with the disease. The state with the highest infection rate this year is Colorado with 1542 cases. Nebraska is second with 788 cases. Most people become only mildly ill with flu-like symptoms. The biggest risk factor for developing more serious disease is age. People over 50 years old seem to be more heavily represented among the more severely infected group. As with horses, mosquito protection and elimination are the best defenses against the disease.



15881 Toro Hills Ave.  
Salinas, CA 93908

# MONTEREY HORSE PARK

**WHAT IS IT?** The Monterey Horse Park is a nonprofit corporation formed in 2001 to develop an international equestrian competition, training and education center on approximately 340 acres of land set aside at the former Fort Ord between Monterey and Salinas and adjacent to the riding trails on thousands of acres managed by the BLM. The Horse Park is being developed in conjunction with BASOC (the Bay Area Sports Organizing Committee).

**WHAT WILL IT PROVIDE?** When fully built, the Horse Park will be able to host breed shows and local, national and international competition in all seven FEI disciplines (dressage, driving, endurance, eventing, reining, show jumping and vaulting). The Horse Park is also working in conjunction with the SPCA of Monterey County, which plans to build its horse rescue/adoption facility at the park. In addition, the California State University Monterey Bay (CSUMB) plans to make the Horse Park the home of its future equestrian team. Attached is a map of the facilities being planned.

**WHO IS BEHIND IT?** The Directors and other volunteers behind the Monterey Horse Park are equestrians with a variety of experience and skills from diverse parts of California who are committed to building the best equestrian center in the West. Since we are all volunteers, we depend upon your help and donations.

Directors: Linda L. Allen, Steve Chidester, Anne Warner Cribbs, Derek di Grazia, Philip Marshall Durbrow, Tim G. Eastman, Robert V. Enea, Myron E. ("Doc") Etienne, Jr., James T. Hendrick, Loris A. Henry, Barbara I. Higgins, Rodney E. Hisken, Mark P. Jordan, Rose-Eve Lewis, and Charles L. Lloyd, III.

**WHAT NEEDS TO BE DONE?** We are in consultations with the County of Monterey planning staff regarding acquisition of the designated land, the facilities to be built on that land and funding for acquisition and construction. We currently need (1) funding to finance the professional design services needed for detailed planning and (2) people with good ideas to help us make the Horse Park, located as it is in a beautiful part of Central California with perfect climate and footing, every equestrian's dream come true.

The Monterey Horse Park is a 501 (c) (3) non-profit corporation. Tax ID is #77-0575982 If you are interested in making a donation you can do so at the SCEC or at the website [www.montereyhorsepark.org](http://www.montereyhorsepark.org).

