



PALM BEACH EQUINE CLINIC

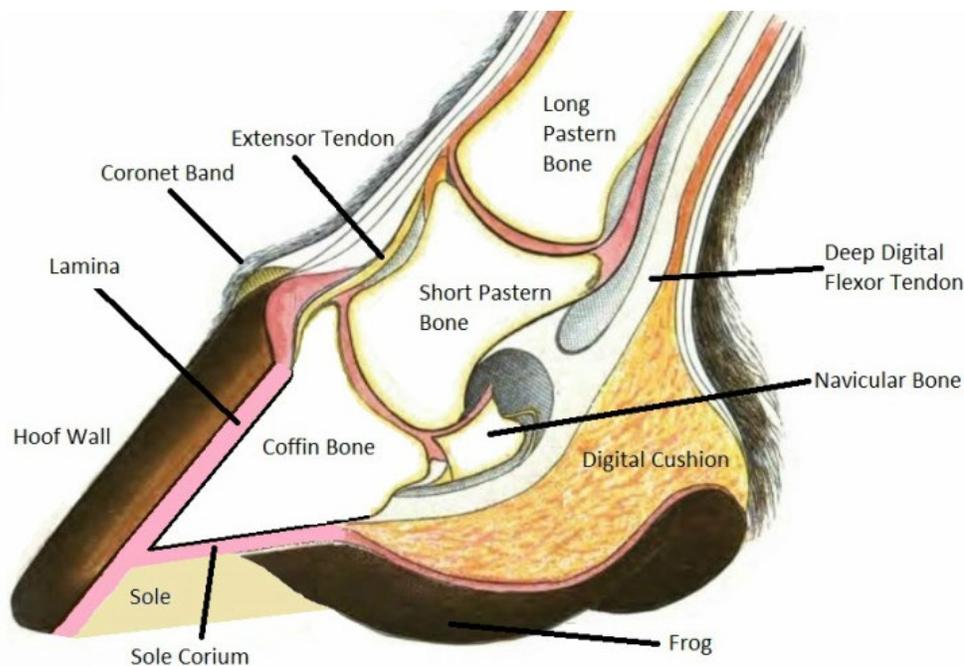
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PBEC's Dr. Samantha Miles Discusses Equine Laminitis

by Lauren Fisher, Jump Media



Laminitis is a frightening word for horse owners. The causes are many, the treatment is difficult, and the prognosis is uncertain. While laminitis can present as common lameness or discomfort, the best action at any sign of distress is immediate intervention and early treatment from an experienced veterinarian. Palm Beach Equine Clinic's Dr. Samantha Miles recently discussed some of the causes, treatments, and outcomes of this disease.

What is Laminitis?

Laminitis is a complicated disease of the hoof that can develop for a variety of reasons. The lamina is a connective tissue that suspends the pedal (coffin) bone in the foot, and holds the whole hoof capsule together. If there is inflammation of the lamina, that suspension breaks down and the coffin bone becomes very unstable. The bone can tip forward and rotate, causing the hoof to "sink". The deep digital flexor tendon (DDFT) also attaches to

the coffin bone and pulls on it. When the DDFT pulls against the lamina, it can increase the downward rotation of the bone and have very painful and devastating results. In severe cases, the bone will rotate through the sole of the hoof, causing irreparable damage that leads to euthanasia.

What Causes Laminitis?

How laminitis develops is a difficult and multi-factorial question. One of the major causes understood more in recent years is metabolic disease. Horses that develop insulin resistance have decreased blood flow that can cause a laminitic episode in the foot. Obesity, insulin resistance, and subsequent laminitis form Equine Metabolic Syndrome. It is most commonly seen in ponies, but can affect any equine.

Though not a common problem in South Florida due to the poor quality of grass, most of the country sees a rise in laminitis cases during

the spring seasons. Due to high levels of sugar in lush grass, many horses develop metabolic issues during these times that add to insulin resistance and decrease insulin sensitivity.

Another cause of laminitis is steroids, but Dr. Miles emphasized that this is really horse dependent. Some horses do not tolerate steroids well, and other horses can take a lot of steroids for various medical issues with no complications. Ponies seem to be the most sensitive to steroid induced laminitis. It is not the most common cause of laminitis, and Dr. Miles emphasized that this is not a reason to exclude the use of steroids in many cases.

A very serious and fast acting cause of laminitis is any illness that causes gram-negative bacteria to die off in the horse, such as colitis (severe diarrhea). When the gram-negative bacteria are dying, it can cause the release of endotoxins that will damage the lamina. These cases are a big concern for treating veterinarians because the horse can develop laminitis very fast, and early intervention is the only chance for prevention. However, these cases can be challenging to treat and can end in fatality.

Dr. Miles stated, "Sometimes laminitis just happens randomly, and we can't find a reason unfortunately. It can happen in just one foot and be severe, and we just don't know why it came about."

What are the Symptoms?

"Laminitis presents itself in many different ways," Dr. Miles noted. "Usually the horse will not want to walk or move forward. Sometimes caregivers will think the horse is showing signs for colic because he/she will not get up. It usually presents with immobility."



This pony had an acute episode of laminitis coupled with metabolic disease that caused one foot to rotate fairly rapidly with the other foot intact. The line of the pedal bone should be parallel to the hoof wall line, but it has rotated so that there is a larger space between the tip of the coffin bone and the hoof wall versus the coffin bone at the coronary band and hoof wall. Photo courtesy Palm Beach Equine Clinic.



This horse had severe rotation of his pedal bone through the sole of the hoof, very close to the ground. This is a chronic case with an acute episode that triggered the rapid rotation.

Another major sign is increased digital pulses in the feet. The veterinarian will often hoof test the horse and find sensitivity in the toe with hoof testers (depending on how severe it is). Shifting lameness is often seen, where the horse shifts from one front foot to the other front foot, and back and forth.

If a horse founders in all four feet, which is usually seen in more severe cases like colitis, they will lean their hind end against the wall, almost trying to dog-sit against the wall because they are trying to get the pressure off their hind feet, but their front feet are also sore. Horses find ways to compensate and relieve pain.

Changes in the feet will develop in either severely acute or chronic cases. In chronic laminitis cases, the horse will develop rings in the hoof, which can only be seen over a long period of time. Rings can also develop with nutritional deficiencies and other causes, but one can see a difference in rings caused by laminitis. Called "divergent rings", the laminitic rings tend to separate towards the heel, so there is a bigger space between the rings at the heel than there is at the toe.

With severely acute cases, when the hoof sinks, a shelf or indentation may become visible on the coronary band, but that usually will not be seen right away.

How is Laminitis Diagnosed?

How quickly laminitis develops depends on the cause and how quickly the owner/veterinarian takes steps to slow the progression will depend on the treatment steps. Metabolic causes tend to be more insidious in onset. Colitis cases can progress in a matter of 24 hours to rotated or sunken if severe.

At Palm Beach Equine Clinic, the advanced imaging capabilities are extremely helpful in diagnosing and tracking the progress of laminitic changes. The veterinarian can take side view x-rays of the feet that show the shadow of the lamina. In these images, the veterinarian is able to see where the bone sits and if there is any rotation present. In some cases, the veterinarian may also take MRI images of the foot to track any changes.

"We measure angles and see what degree of rotation is present, and then we can track that over time to find out if a horse has stabilized or is still actively rotating," Dr. Miles explained. "It usually takes a few days for rotation to occur from the onset of pain, so we take baseline radiographs because we want to see the deviation from the normal radiographs on day one as the disease progresses. We take another set of images a week after that to see if it has stopped rotating. We will take a set every week until we know that it is stable."

What is the Treatment?

In acute cases, the horse will have all feet iced for at least the first 48 hours to decrease inflammation. Dr. Miles noted that icing is only really useful in acute cases. In the chronic cases that have been happening over time, the veterinarian would want to increase the blood flow to the foot, and icing is counterproductive to that.

Other treatments include administering Acepromazine, which decreases anxiety in horses and dilates the blood vessels, which increases the blood flow to the foot. A similar drug called Pentoxifylline also increases blood flow to the feet.

Horses are generally put on Phenylbutazone (Bute) for pain management and anti-inflammatory effects. In some acute cases, the horse will also be given DMSO, which binds to any free radicals or bi-products of inflammation that are circulating in the body that can cause more damage, and assists to excrete the bi-products in the urine.

The next step is to elevate the heel. PBEC has created its own frog support pads for the temporary acute stages that seem to be very successful in relieving some of the pain. When the foot is more stable and has stopped actively rotating, the horse will then receive more advanced corrective farriery for long-term foot support.

"I think the thing about laminitis is that it is very variable and it is a day-by-day process," Dr. Miles stated. "There is no prediction, unfortunately, on how it plays out. People always want to know how bad it is, and if the horse is going to be able to perform again, and the fact is we do not know until that time comes. It is one of those horrible diseases. We have had some weird cases this year, some really tragic looking ones, that have come back, and other ones that did not look that bad that didn't make it. My best advice is to call the vet as soon as any lameness or discomfort is recognized. Early intervention is the best option because the condition can deteriorate so quickly. The earlier the intervention, the better off the horse will be."

Palm Beach Equine Clinic provides experience, knowledge, availability, and the very best care for its clients. Make Palm Beach Equine Clinic a part of your team! To find out more, please visit www.equineclinic.com or call 561-793-1599.

Educating Horse Owners: Symptoms, Diagnosis and Treatment of Colitis

By Emily Riden, Jump Media with Dr. Selina Watt

It's no secret that in nearly any medical condition, early diagnosis can mean a better prognosis – and Colitis in horses is no exception. The inflammation of the colon that defines Colitis can be fatal, but fortunately, with the proper detection of symptoms, immediate treatment and monitoring, a positive outcome and full recovery far outweigh a negative ending.

Understanding what Colitis is, what symptoms can indicate illness, how it is diagnosed, and what treatment plans can help in avoiding or recognizing future problems. With that in mind, Palm Beach Equine Clinic's Dr. Selina Watt has helped provide the basic information that horse owners and managers should know about Colitis in horses.

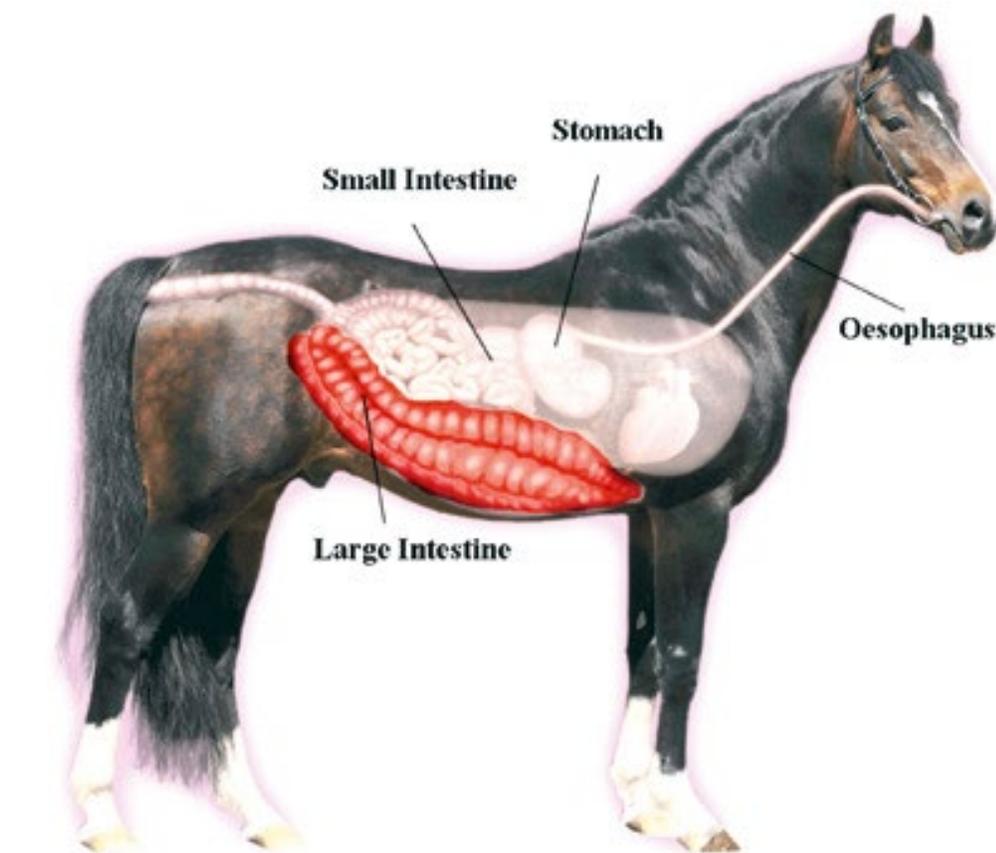
Understanding Colitis and Its Causes

Located in the horse's hind gut is the large colon, where microbial digestion occurs. Also, where water and a large portion of the resulting nutrients are absorbed. When this large colon becomes inflamed, the horse is diagnosed with Colitis.

While the general definition of Colitis is simple and straightforward, the causes can be more broad. However, two of the most prevalent causes occur because of a bacterial infection or overuse of medication in a very specific type of colitis called Right Dorsal Colitis. The infectious, Bacterial Colitis is often caused by agents such as Salmonella, Clostridium difficile, or Neorickettsia risticii (Potomac Horse Fever); the non-infectious, Right Dorsal Colitis is often related to the use of non-steroidal anti-inflammatory drugs such as phenylbutazone (Bute).

No matter the cause, each form of Colitis leads to the similar inflammation of the large colon, which is where problems begin. The inflamed colon now causes the horse to have diarrhea, as the colon is unable to properly perform its job of absorbing the water and nutrients from the intestinal content.

As Colitis progresses, because of the leaky membranes of the colon, the horse can also begin to release toxins into their blood stream or lose protein from the blood into the colon; ultimately causing laminitis, founder or protein



deficiencies, and a greater risk of complications or lack of a complete recovery.

Symptoms and Diagnostics

Proper detection makes the severe cases far less prevalent. The first and most conspicuous symptom of colitis is diarrhea. If the diarrhea persists, horses can also begin to show signs of dehydration or protein loss, due to the volume of fluids and nutrients excreted.

Upon noticing consistently unusual stool and diarrhea from the horse or other signs of lack of energy or appetite, it is recommended not to wait and see what develops, but rather to contact a knowledgeable veterinarian for proper diagnostics right away.

Once the horse is in the veterinarian's hands, one of the first things that should be done is bloodwork. In the case of colitis, bloodwork will show decreased white blood cells and decreased protein levels – the severity of the results helps

to indicate how advanced or severe the colitis may be. The horse will also generally present with an elevated temperature, and a diagnostic abdominal ultrasound will likely show thickening of the colon wall.

Following the initial diagnosis of colitis by Palm Beach Equine Clinic, a diarrhea sample is sent to a lab for analysis and testing for numerous types of bacteria to aid in determining whether the colitis case is infectious or non-infectious. Non-infectious cases can also be diagnosed based on the horse's history, such as if the horse has been administered Bute for a prolonged period of time.

Treatment and Prognosis

Horses affected by Colitis generally require hospital admittance, as they will need to be managed with IV fluids, as well as gastro protectants to aid the colon wall. Treatment is started immediately following the initial

diagnosis, but should the Colitis be determined infectious, the patient will also need to go on antibiotics to treat the infection. If the bloodwork indicates low protein values, due to the lack of absorption and the protein loss through the diarrhea, plasma therapy is a necessary treatment in addition to the implemented IV fluid therapy.

At Palm Beach Equine Clinic, the intensive care management team includes a veterinarian on-call and hospital staff present 24 hours a day, seven days a week, which can be necessary when battling colitis. Horses with colitis cannot be simply hooked up to fluids and left to improve, instead they generally require careful monitoring around the clock. If the primary veterinarian at Palm Beach Equine feels the case is severe, the horse will be closely monitored round the clock, in which a veterinary technician would perform requested evaluations and assessments each



hour. This can be of the utmost importance, as colitis cases can often decline rapidly without proper veterinary monitoring.

Utilizing medications cautiously and with a veterinarian consent can help decrease the risk of non-infectious Colitis. Additionally, the use of a probiotic may aid in the overall health of the hind gut and the large colon. However, unfortunately there is no foolproof prevention plan for Colitis.



With early detection, diagnosis, and proper treatment, equine colitis patients present a positive prognosis. To ensure the health of your horse, the veterinary team at Palm Beach Equine Clinic is available 24/7. Horse caregivers are encouraged to contact the clinic at the first sign of a problem or suspicion.

Health Care Reminder

The Importance of Hydration

As the summer heats up around the country and especially in Florida, Palm Beach Equine Clinic reminds all equine owners to keep their horses well hydrated. The average horse drinks between 5 to 10 gallons of water per day. It is important to provide clean, fresh water at all times and be aware of increased water requirements during extremely hot days.

Sodium in the horse's diet is essential to maintaining proper hydration. Providing a salt block or supplementing with electrolytes can help ensure that the horse is meeting its sodium requirements and encourage drinking.

Especially in extreme summer heat, it is important to observe the amount of sweat the horse is producing. Anhidrosis, or the inability to sweat normally, can be a common challenge for our equine partners in the summer months, particularly in hot, humid climates. A horse with Anhidrosis is often called a "non-sweater."

In addition to lack of sweat, signs of Anhidrosis can include increased respiratory rate, elevated temperature, areas of hair loss, or

dry, flaky skin. If any of these signs are noticed, contact a veterinarian immediately.

The treatment of Anhidrosis includes a few simple changes. All horses should have access to shade and cool water throughout the day. Any exercise should be scheduled when the temperatures are lower, usually earlier or later in the day. Turnout should be limited to the night or cooler portions of the day. Fans can be provided indoors during extreme heat and the supplementation of electrolytes can be very helpful. Another common treatment for Anhidrosis is adding dark beer to their feed, such as Guinness. Some cases require more significant treatment, and commercial products are available to help as well.

Contact one of the veterinarians at Palm Beach Equine Clinic to learn more about effective treatments for dehydration and Anhidrosis.

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more, please visit www.equineclinic.com or call 561-793-1599.

Meet PBEC Veterinary Technician Cassidy Hoff

by Lauren Fisher, Jump Media



Cassidy Hoff (26) is the veterinary technician and assistant to Dr. Richard Wheeler of Palm Beach Equine Clinic. Originally from Middletown, CT, Cassidy joined the team at PBEC in April of 2015.

What is your background with horses?

I started riding and taking lessons when I was seven years old. I always had a passion for it. I went to Centenary College (now University) in Hackettstown, NJ, and rode competitively as a student. I graduated in 2012 with a Bachelor of Science in Equine Studies with concentrations in Riding Instruction and Therapeutic Riding Instruction, receiving an additional PATH certification (Professional Association of Therapeutic Horsemanship International).

How did you start at PBEC?

I moved down to Florida directly after graduating college in 2012 and landed my first college graduate employment as the head instructor with a local therapeutic riding center. I worked there for about three years. Through that experience, I realized that I really liked the veterinary side of the equine industry. Dr.



Greenfield was the primary veterinarian for the riding center and she was really easy to work with which piqued my interest in veterinary care. I decided to try something new and I applied for a job at Palm Beach Equine Clinic. As a result, the timing was perfect to work for Dr. Wheeler.

What is your typical day like?

We usually work six days a week, but during season, seven days a week is more likely. Typically, our hours begin around 8 or 8:30 in the morning until whenever we are finished with our client calls. I am responsible for keeping the truck stocked and organized, replacing the medications that we use throughout the day, and keeping the syringes and the needles stocked. Dr. Wheeler performs many lameness cases, and I assist by scrubbing many joints for injections. We complete many pre-purchase exams that I help with in jogging horses and holding plates for radiographs, as well as final pre-purchase exam documents with the findings. We send out reports with discharge instructions and aftercare at the end of every call for our clients. I am responsible for typing up all of the necessary paperwork and billing.

What do you like about your job?

I love being able to see the horses in the



barn and watch their progress from a veterinary and competitive standpoint. It is cool to take care of the horses in the barn and then go watch them perform at the horse shows once they have improved. Some of the horses are showing in the Saturday Night Lights Grand Prix classes at the Winter Equestrian Festival. You get to watch the tough competition in those big classes which adds to the excitement because you know the horse and their whole team. I feel lucky to be working with Dr. Wheeler and horses at the top level of the sport. We are lucky that all the riders, owners, trainers and managers are all amazing to work with. It takes a village to get a horse to the ring and it is really exciting to be a part of that.

What do you do when you are not working?

I still try to find time to ride, which will always be a passion of mine. It is a little bit easier when it's off-season/summer months. I also like going to the beach, hanging out with friends, and reading for pleasure.

PBEC Pharmacy Product Feature



Palm Beach Equine Clinic SilvRx MC Shampoo

SilvRx MC Shampoo is an antiseptic cleansing soap-free shampoo with proven Antibiofilm Complex. This fantastic product helps support healthy skin and management of dermatological conditions responsive to Miconazole and Chlorhexidine. Sold at the clinic in 16 oz. bottle for use on horses, dogs, and cats.

Where in the World are PBEC Vets for June

Dr. Sarah Allendorf will be at the Tryon International Equestrian Center until June 11. She will then spend two weeks at the Kentucky Horse Park before returning for three more weeks in Tryon.

Dr. Selina Watt will be at the first two weeks of the Spruce Meadows Summer Series in Calgary.

Dr. Alex Emerson will travel between between Lexington, KY, and Chicago, IL, in June.

Dr. Richard Wheeler will be available in Tryon, NC, starting mid-month.

Dr. Natalia Novoa will be in Kentucky for the first two weeks of June and then Tryon at the end of the month.

Monthly Giveaway

The Palm Beach Equine Clinic Monthly Giveaway is back!! On the beginning of each month PBEC will announce a special prize that will be given away. Participants will have the whole month to register [HERE](#). At the end of each month we will draw a random winner and announce the winner on Facebook.

The prize for June is a Palm Beach Equine Clinic First Aid Kit Value: \$155

The kit includes:

- Saline wound wash spray
- Synbiont Wound Wash Foam
- Hydrogen peroxide
- Triple antibiotic ointment
- Ophthalmic triple antibiotic ointment
- Eye wash
- 1 roll of Elasticon
- 1 roll Vetwrap
- 5 nonadherent pads
- Betadine Solution
- Animalintex Poultice
- Aluspray
- Biozide Gel

