

What is Equine Regenerative Medicine?

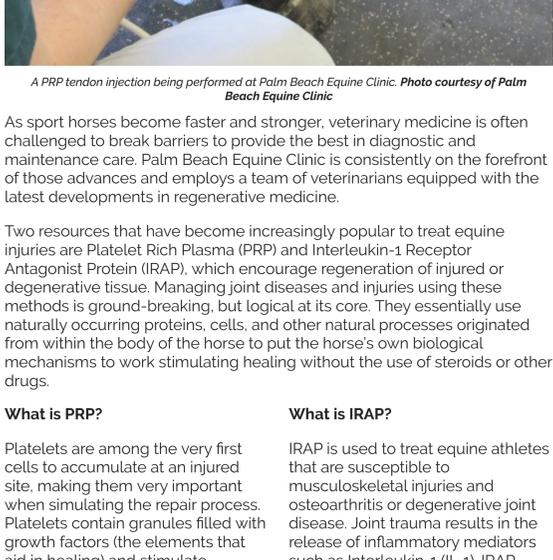


## Fall 2019 Newsletter



### Featured Service:

## Regenerative Medicine Moves into the Future at Palm Beach Equine Clinic



A PRP tendon injection being performed at Palm Beach Equine Clinic. Photo courtesy of Palm Beach Equine Clinic

As sport horses become faster and stronger, veterinary medicine is often challenged to break barriers to provide the best in diagnostic and maintenance care. Palm Beach Equine Clinic is consistently on the forefront of those advances and employs a team of veterinarians equipped with the latest developments in regenerative medicine.

Two resources that have become increasingly popular to treat equine injuries are Platelet Rich Plasma (PRP) and Interleukin-1 Receptor Antagonist Protein (IRAP), which encourage regeneration of injured or degenerative tissue. Managing joint diseases and injuries using these methods is ground-breaking, but logical at its core. They essentially use naturally occurring proteins, cells, and other natural processes originated from within the body of the horse to put the horse's own biological mechanisms to work stimulating healing without the use of steroids or other drugs.

#### What is PRP?

Platelets are among the very first cells to accumulate at an injured site, making them very important when simulating the repair process. Platelets contain granules filled with growth factors (the elements that aid in healing) and stimulate specified tissue to heal at an increased rate. To treat a horse with PRP, the veterinarians at PBEC are able to take a sample of the horse's blood and concentrate the platelets in a high-speed centrifuge on-site. The harvest and processing procedures take approximately 30 minutes before the concentrated platelet-rich sample is injected back into the horse at the specific area of injury using sterile techniques and guided by ultrasound.

PBEC's Board-Certified Staff Surgeon, Dr. Weston Davis, explained PRP use in more detail: "We harvest a large quantity of blood, anywhere from 60 to 180 milliliters, and we process that to concentrate the segment that is very rich in platelets. We get a high concentration of platelets—we are hoping for five to eight times the concentration that you would get from normal blood. Then we take that platelet-rich extract and inject it back into an injured area to encourage a more robust healing response. Whenever you have an injury, platelets are one of the first cells that get there. They will aggregate, clump, and de-granulate. They release granules that are very rich in growth factors and signal the body to start the healing process."

#### What is IRAP?

IRAP is used to treat equine athletes that are susceptible to musculoskeletal injuries and osteoarthritis or degenerative joint disease. Joint trauma results in the release of inflammatory mediators such as Interleukin-1 (IL-1). IRAP uses a horse's own anti-inflammatory protein found within the blood to counteract the destructive effects of IL-1 to slow the process of osteoarthritis. The process works by binding to the IL-1 receptors in the joint and blocking the continuation of damage and inflammation.

"We often see joint damage in sport horses because of the nature of their work, but we try to avoid over-use of steroids in joints because steroids can have long-term effects on cartilage," said Palm Beach Equine Clinic veterinarian Dr. Bryan Dubynsky. "This is a way we can manage joint disease and stop inflammation without having to consistently use steroids. Some of our clients will maintain their horses on IRAP alone for joint injections."



Palm Beach Equine Clinic's high-speed centrifuge. Photo courtesy of Palm Beach Equine Clinic

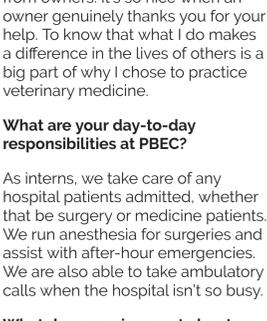
The goal to better serve sport horses that continue to improve athletically is the driving force behind the search for even more developed and precise techniques used in regenerative medicine. And, at PBEC, the work to break new ground is never finished.

"I believe we are learning more about these technologies with more advanced science behind what they do and how they do it," said Dubynsky. "These treatments are natural, drug-free, and competition-safe, and necessity drives the need for regenerative therapies in the sport horse world."

Have further questions about the regenerative therapy programs available at Palm Beach Equine Clinic? Call the clinic today at 561-793-1599 to learn more.

## From The Hospital: Walking Sutures on a Degloving Injury

Palm Beach Equine Clinic is known for trusted and knowledgeable teamwork between its veterinarians. That reputation went into motion when a horse with a degloving injury to its left hind cannon area was admitted to the Palm Beach Equine Clinic hospital.

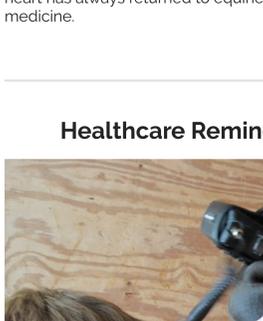


Photos courtesy of Palm Beach Equine Clinic

Several Palm Beach Equine Clinic veterinarians jumped into action to perform these walking sutures! The goal of this approach was to stretch the skin enough to reposition it with the walking sutures. This technique involves a process where each suture is placed first in the deep dermis and then into the deeper tissues, usually fascia, at a point closer to the center of the wound. The effect is to move the skin closer to the closing position with each suture, minimize the dead space between the skin and underlying tissue, and relieve tension on the sutures eventually placed to close the wound edges.

Prognosis? So far, this patient is recovering well!

## Meet Palm Beach Equine Clinic's Abby Berzas



Abby Berzas, 26, Louisiana, just 10 minutes from one of the world's most popular Mardi Gras celebrations. Aside from knowing how to put on a great party, her community was nestled deep within farm country. So, it's no surprise that Abby grew up around horses, a beginning that led her to study agricultural and equine sciences at McNeese State University in southwest Louisiana before attending veterinary school at St. George's University in Grenada. She completed her veterinary studies at Louisiana State University and made her way to south Florida for the warm weather, ocean, and of course, the horses! Abby works at Palm Beach Equine Clinic as an intern, and she has big plans for the future.

Learn more about Abby:

#### How did you first get involved with horses?

My siblings and I grew up around horses! We had quite a few pets and farm animals, but horses were definitely "my thing." We grew up trail riding and exploring the farmland behind our house. We would wake up before sunrise, pack a lunch, and spend the entire day riding. I got involved in rodeo (barrels, poles, and goat tying) and did that through high school.

#### What led you to study/become interested in equine veterinary medicine?

It's something I've always wanted to do. Regardless of the times I thought I might practice mixed/small animal medicine, my heart has always returned to equine medicine.

My biggest influences to pursue veterinary medicine were my parents. They aren't veterinarians, but through their examples I've learned that work needs to be fulfilling. At the end of each day, I need to be happy with what I chose to do with my life.

#### What do you enjoy most about treating horses?

I most enjoy being around them! It's also a challenge. Every day is a learning curve, and every day is an opportunity to become better, despite the obstacles. I also really enjoy feeling appreciation from owners. It's so nice when an owner genuinely thanks you for your help. To know that what I do makes a difference in the lives of others is a big part of why I chose to practice veterinary medicine.

#### What are your day-to-day responsibilities at PBEC?

As interns, we take care of any hospital patients admitted, whether that be surgery or medicine patients. We run anesthesia for surgeries and assist with after-hour emergencies. We are also able to take ambulatory calls when the hospital isn't so busy.

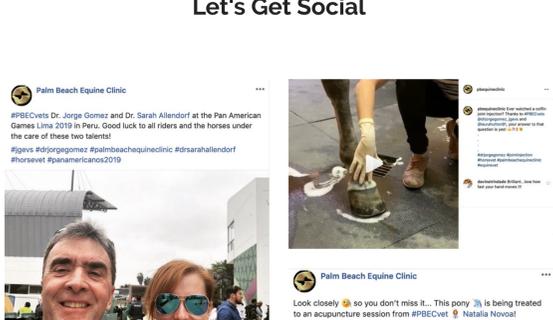
#### What do you enjoy most about being part of the PBEC team?

I enjoy the good energy here! Everyone is cheerful, welcoming, and willing to help. I feel lucky to be able to complete my internship in such a healthy work environment. I am happy doing a variety of things, but I really enjoy internal medicine. Also, I will be certified in mixed-animal acupuncture soon, so I'd love to incorporate that into my practice eventually.

#### What are we finding you doing when you are not working?

Lately, I've been spending days off at the beach with my dog and fiancé. I was recently given my very own kite and kite board, so I'll be kiteboarding whenever the wind is good! I also love hiking and exploring new beaches or parks. I would love to ride in my spare time, but my ponies are in Louisiana with my family.

## Healthcare Reminder: Equine Dentistry



Dr. Tyler Davis performing a dental exam. Photos courtesy of Palm Beach Equine Clinic

According to a study conducted by North Carolina State University, approximately 40% of horses have significant dental problems. What's the answer to many of those problems? Prevention! Dr. Tyler Davis of Palm Beach Equine Clinic states that routine and thorough dental exams can help prevent many issues from ever becoming problems.

On a basic level, dentistry in horses is important because the mouth is the first part of the horse that is taking in and processing food. Horses must grind their food into a finely masticated bolus before swallowing. The combination of a horse's upper jaw being larger than the lower and the fact that a horse chews by moving the jaw from side to side results in uneven wear of the teeth. This uneven wear may cause sharp edges, which hinder efficient chewing and may ulcerate or lacerate the cheeks and tongue. The pain caused by the ulcerations or lacerations can result in incomplete mastication, sometimes leading to problems like colic.

#### What is floating?

Floating is the term for rasping or filing a horse's teeth to ensure an even, properly aligned bite plane. While floating is the physical process, the scope of an equine dental exam is much broader and examines the horse's overall health as influenced by the mouth.

"You can get a rasp and without even looking in the horse's mouth float the points off, and you may be getting the vast majority of the work done," said Dr. Davis. "But a really good dental exam with a speculum, a very good light source, and a dental mirror allows you to see possible problems and prevent those problems from becoming painful and affecting your horse's overall health."

#### The most common signs of dental discomfort in horses include:

- head-tilting and tossing
- difficulty chewing
- bit-chewing and tongue lolling
- tail-wringing and bucking
- drooling and bad breath
- (sometimes) weight loss and spillage of grain

For sport horses, dental care becomes even more important. Much of the connection between horse and rider comes by way of the horse's mouth. If there are problems or discomfort within the mouth, it will be evident in the horse's performance and disposition under tack. According to Dr. Davis, having a horse's mouth in healthy condition allows one to immediately rule out dental issues when trying to troubleshoot a performance problem.

**How often should you have a veterinarian perform a routine dental exam on your horse?** Dr. Davis recommends every 12 months at the very minimum.

Contact your veterinarians at Palm Beach Equine Clinic for more information on equine dentistry or to schedule a dental exam at 561-793-1599.

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