

Surviving a Coffin Bone Rotation...at 28!

by Jen McGeehan

Healing is always possible, even with severe coffin bone rotation in an older horse!

As I stood in total shock, my farrier of eight years said, "If I were you, I'd put him down!" Eight little words no horse owner EVER wants to hear!

Smoke and I had been together, through thick and thin, for over 22 years. Divorce and moving six times—my issues, surgery to remove 10 pounds of stones in his abdomen, his issues. Now, I was like a deer-in-the-headlights. *What should I do?*

August 2010—A Rotated Coffin Bone... What's That?

We had just competed in the final Western Horse Show of the season, taking the High Point blue ribbon. On the following Tuesday, Smoke had his normal visit from my farrier, Craig. By the time I came home from work that night, he was lame. Really lame! My first thought was, "That darn Craig! He trimmed him too short." (This had only happened two times in the course of eight years.) "No biggie. I'll just give him four or five days off to recover." I called Craig with my report, and he concurred. Five days later, Smoke had NOT improved, so Craig came out the following Monday to investigate. Actually, over the course of the next three weeks, I had three visits by Craig, a second opinion by another farrier, two vet visits, a poultice to draw out the potential abscess—but NO improvement! Time for a trip to the equine hospital two hours away...

Six Thousand Dollars later...

I felt I was in excellent hands when I realized that the surgeon who saved Smoke twelve years earlier with stone surgery was still on staff. A series of radiographs (x-rays) revealed the source of his pain. His right front hoof had separated from the coffin bone! A coffin bone rotation. "What the heck is that?" I wondered to myself. I had owned horses for over 47 years, but I didn't have a clue about a coffin bone rotation!

I soon learned that **laminitis** is the precursor to this condition, especially in older horses. The lamellae that holds the hoof to the bone breaks down and can no longer support the hoof. For a human, it would be like your ankle bone crashing through your heel!

Smoke stayed at the hospital for six days, wore a soft cast to support and cushion the hoof, and was on a ton of meds. He was then sent to a recovery boarding facility for ten days. Another visit to the hospital, more meds, and then an extremely hard decision was made to cut his right front flexor tendon. The surgeon explained that this procedure would give him the best chance of keeping the heel down, allowing the re-alignment of his coffin bone to the new hoof growth. My farrier did not agree with this procedure, and even though I totally trusted his judgment, I agreed to the surgery.

Thank God for my Visa credit card. Six thousand dollars later, we were heading home. But, one thing kept gnawing at the back of my mind... *Exactly how would all this damage be reversed?* There has

Photo courtesy Susannella Noble



Defying the odds: with Jen's hard work and dedication, her beloved Appaloosa, Smoke, recovered from founder.

to be more to all of this. But remarkably, the surgeon didn't really have concrete answers!

The Call That Saved Smoke's Life

A month after Smoke came home, and, in my opinion, on way too much Bute for the pain, I began to panic. Appaloosas are said to be the strongest of equine breeds, and I could tell that Smoke was fighting for his life. But he wasn't improving. In fact, he was getting worse! Craig came to check on him, and, with tears in his eyes, he told me again, "I'd put him down." (I had a number of other people suggest the very same thing!) I asked Craig how many clients he'd had over the course of his 15-year career, who had survived this type of trauma. His answer was, "Out of seventeen horses, NONE survived." Needless to say, I was speechless as the reality of the situation sunk into my brain and my heart. Smoke was my best friend and I loved him beyond comprehension. I knew I wasn't ready to make that decision quite yet...

The next day, Craig's wife, Amy, called. We had only met once or twice at social events. She was very cautious with her words, but as I recall, she said, "Jen, have you done blood tests on Smoke?" "No," was my answer. "The hospital never took any!" (In hindsight, that seemed like an unbelievable over-sight.) "Laminitis, founder, coffin bone rotations can happen when horses are receiving an overload of sugar and starch from their diet. This, coupled with a lack of exercise, can create what Smoke is experiencing," she carefully explained. "In essence, they become diabetic. In equine terms, Insulin Resistant (IR). In addition, older horses can develop a benign tumor on their pituitary gland in the brain, causing Cushing's Disease; also know as Pituitary Pars Intermedia Dysfunction – PPID." As I listened to her, I could hardly comprehend all that she was saying. Again, I was like a deer-in-the-headlights, completely

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overwhelmed with what she was telling me. *Now what?* Something had to be done, and quickly! I knew Smoke could not hang on much longer.

STEP ONE – Blood Tests

I called my local vet out, and she did a blood draw, which was then overnighted to Cornell University Animal Health Diagnostic Center. Within a few days, the results were in. She read the report and happily announced that he was NOT Insulin Resistant. But my joy was short-lived. I forwarded the report to Amy, who then forwarded it to her friend, Betty. Betty had seen all of this before and she ran the numbers through a *Glucose to Insulin Ratio Evaluator*. The ratio indicated that he WAS, in fact, Insulin Resistant! Here are his initial numbers:

Glucose – 96 mg/dL

Insulin – 28.83 uIU/mL

G:I (Glucose to Insulin) Ratio – 3.33

A G:I ratio less than 4.5 indicates insulin resistance, and a ratio between 4.5 and 10 correlates with "compensated IR." (2007 Patti Woodbury Kuvik, Kathleen F. Gustafson and Equine Cushings Group.)

In addition, his ACTH Baseline, (Adrenocorticotropic Hormone), which stimulates steroid production and secretion by the adrenal glands, came in at 64.5 pg/mL. A normal reading is between 9 and 35 pg/mL! Smoke was definitely IR and Cushing's. An OMG moment, for sure!

Those blood tests, which cost me \$200, told me more than the \$6,000 visit to the equine hospital, because now I knew a correction had to be made, both externally and internally, for Smoke to not only survive but thrive! The new question was, "How would we get him there?"

On The Fast Track...Education + Networking = ANSWERS

Information was coming at me like bullets shot from a World War II fighter plane! I was instructed to immediately go on-line and join the Equine IR/Cushing's support group founded in 1999 by Eleanor Kellon, VMD. This web site (www.ecirhorse.org for overview, or equinecushings-subscribe@yahoo.com to join) is the foremost provider of information for equine owners searching for answers to the myriad of questions that surface on an **hourly basis**. I could search the extensive "files," post questions, receive quick responses from qualified IR/Cushing's advocates, as well as receive encouragement from others in the same horrific "boat."

I also purchased a very informative book entitled, *The Horse Nutrition Handbook* by Melyni Worth, PHD. The high points include:

- Feeding for maximum health, longevity, and performance
- Evaluating weight and well-being
- Designing a year-round feeding program
- Understanding proper supplement use and resolving nutritional disorders
- Managing pastureland for optimal health, safety, and feed value

This book supported all that I was learning from the IR/Cushing's group.

In a nutshell, this is what I and my support team did IMMEDIATELY after the blood test results were reviewed:

1. Smoke's feed was changed from a combination of alfalfa and three-way, to Bermuda hay exclusively. (Other types of grass hay such as Timothy and Orchard are also good options.)
2. I had my hay tested through Equi-Analytical Laboratories to confirm that the sugar/starch was 10% or less. Otherwise, I would have to soak his hay to reduce the sugar and starch levels.
3. Based on the complete vitamin and mineral analysis, I ordered a special supplement mix from Horsetech.com. In addition, to this ground flax seed mixture, he received two tablespoons of iodized salt (to encourage the drinking of water), as well as 2,000 IU's of Vitamin E, which I ordered from Puritan's Pride at an unbelievably cheap price. (Buy two get three, sometimes four, FREE. What a deal!)
4. In addition to Doxycycline, an enzyme suppressant (for his hoof issues), Smoke started on Pergolide, which inhibits tumor growth in the pituitary gland.

By this time, I had collected so much information that I had to put everything into a two-inch binder just to keep things straight!

On The Road To Recovery

In November 2010, I had a lameness specialist out to evaluate Smoke's right front hoof and take a new series of radiographs. Internally, the alignment of his hoof to coffin bone was improving, but he was still in a great deal of pain. The specialist recommended a partial re-section of the hoof to remove damaged tissue and reduce pressure, another tough decision to make. Thankfully, Craig and Amy stood by me every step of the way, and when the re-section was done, Smoke had six people there to encourage him... and me. We were definitely on the road to recovery.

The specialist suggested a therapeutic boot by Soft Ride Boots (www.soft-ride.com). He felt this boot would give Smoke the cushion he so desperately needed, while the orthotic insert would stimulate blood flow to the frog. I ordered a pair immediately. The owner, Debbie, was willing to let me pay over time when I reluctantly explained that I was **out of money!** I cried on the phone as we sealed the deal, and the boots were shipped. Those boots, in partnership with a med called Isoxsuprine, (a vasodilator which helps blood flow to the hoof), jump-started Smoke's healing process. And by late winter, Smoke was walking with about 50% improvement. In addition, he had dropped about 100 to 125 pounds, reducing the stress on his legs and hooves. He looked great!

The Proof Is In The Pudding – Or, in the Blood Tests!

In February 2011, we did another blood draw to determine if Smoke really was on the right path. His G:I ratio had not improved, but his ACTH Baseline had dramatically dropped from 64.5 pg/mL to 21.9



Amazingly, Smoke just turned 31 years old!

After six months in the Soft Ride Boots, he now had a hoof that he could walk on unassisted! (The boots went into the tack box!) For me, it was like finally placing my child in the backseat of my car and using the regular seat belt rather than the infant car seat!) I slowly decreased the meds to the point where now, he only had the Pergolide. Then, the big day came when we started our hand-walks. Woo Hoo...we were free! Many neighbors cheered us on. Often, I cried as I led him down the road.

In April 2011, I had a new vet come and do another series of radiographs. He confirmed that Smoke's coffin bone had 100% re-aligned and attached to the hoof! It truly was a miracle. By this point, Smoke was no longer wearing shoes, but was in a natural barefoot trim. And we were both thrilled! His hoof was rasped every two weeks, and the program was working. All throughout this process, I would ask Craig, Amy, Betty, all five vets, if they thought I would ever ride Smoke again. They cautiously thought it was possible, but NOT the norm. I wondered, as well. I was more than grateful that he had survived this terrible trauma, but secretly, I wanted more.

The Big Day!

On August 20, 2011, after ordering a pair of Easyboot "Trail" boots (www.easycareinc.com) for traction, Smoke and I rode off the property for the first time in twelve months! I decided to do this with no audience, just in case we had to abort the mission. But, Mission Accomplished! No limping! In fact, it was more than obvious to me that Smoke was grateful to be back to "work."

Epilogue

On September 16th, 2011, I guided Smoke, now 29 years old, into what looked like a three-stall trailer. Gerdie, our Nubian goat, was in the stall next to him. They were bound for the **Big Island of Hawaii**, our new home. And I would be waiting for them at the Kailua-Kona Airport. When all was said and done, Smoke and Gerdie traveled over 19 hours. Once Smoke was safely tucked into his new, yet very temporary, stall on a friend's twenty-acre property, I crawled into my own temporary bed, very grateful that Smoke had survived the unique travel experience... and so had I!

In the course of searching for the right farrier to care for Smoke's

pg/mL, putting him into the safe range of 9 – 35 pg/mL! His Cushing's was successfully under control. As the pain from the coffin bone rotation eased up, Smoke was able to move about more. Increased exercise, coupled with his new feed/supplement regime, would eventually bring his G:I ratio into proper alignment. We would stay the course...

Big Milestones

As the weeks and months plodded by, I could see the new hoof growth. He was limping less, moving more, and eventually graduated from stall/corral access to dry pasture during the day.

very special hoof needs, I found Susanella, a spit-fire of a gal who is as passionate about keeping her equine clients barefoot as I am about Smoke's overall health and well-being. She identified additional needs for Smoke's hooves, taking photos during every two-to-four week visit. She was, and continues to be, meticulous.

Eventually, Smoke, Gerdie, hubby Pat, and I moved to a rented "yurt" on a twelve-acre property owned by our Hawaii realtor. We rented that yurt for fourteen months. Smoke was in heaven as he roamed his acreage, safely grazing in the lush green grasses of the Hamakua Coast. (Much of the Hawaii grass is very safe for IR horses ... how interesting!) We continued to ride and enjoy the stunning ocean views from 1800 feet above sea level. Miraculously, after fourteen months on the yurt property, Pat and I were able to purchase our own home on nine acres, complete with a full ocean view, two ponds and a peacock! On May 12th, 2013, we celebrated Smoke's **thirty-first birthday**... another miracle, considering all he/we had been through. And, we still head out for a ride through our avocado and citrus orchard every few days.

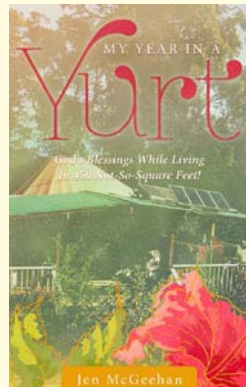
I will always be indebted to the network of equine lovers who came to our rescue, and to the most amazing Palomino Appaloosa who, with a lot of help from his "friends," refused to give up! 🐾

Read more about Smoke in Susanella Noble's article, following.

About the author: Jen McGeehan is a motivational speaker, sharing her often humorous, yet always inspiring stories of God's miraculous healing and restoration. As an accomplished life-long equestrian and nature enthusiast, Jen was able to successfully transition from life in the fast lane of Southern California, to the off-grid, back-to-nature farm life of the Hamakua Coast of Hawaii. She is the Director of Women's Ministry at her church, enabling her to love and mentor God's precious women. As a professional writer for over 35 years, Jen considers it a privilege to now focus her skills on sharing the Good News! She is married to Pat, a retired fire captain. Together, they have raised four children. She can be contacted at: jenmcgeehan1@gmail.com



Photo courtesy Jen McGeehan



Great Springtime Reading...

My Year in a Yurt:
God's Blessings While Living in 450 Not-So-Square Feet!

By Jen McGeehan

Published by Tate Publishing and available in February 2014 (Amazon, etc.)

The God of our universe is still in the business of financial healing and restoration! Travel to paradise as one financially devastated couple, their twenty-nine year old equine, and his Nubian goat pal, take a flight-of-faith, leaving the economically-challenged

mountains of Southern California for the unknown off-grid lifestyle of a rented yurt on the Big Island of Hawaii.

Help at a Glance for IR/Cushing's Horses

Jen McGeehan's handy list:

Hay Testing	Equi-Analytical Laboratories 730 Warren Road, Ithaca, NY 14850 877.819.4110 – www.equi-analytical.com	Therapeutic Boots	Soft Ride Equine Comfort Boots 626 Grand Ave., Bacliff, TX 77518 866.763.8743 – www.soft-ride.com
Mineral Mix	Horsetech, Inc 112 Walnut St., Laurens, Iowa 50554 800.831.3309 – www.horsetech.com	Riding Boots	Easy Care, Inc. 2300 E. Vistoso Commerce Loop Rd., Tucson, AZ 85755 800.447.8836 – www.easycareinc.com
Blood Testing	Cornell University/Animal Health Diagnostic Center 240 Farrier Road, Cornell University, Ithaca, NY 14853 607.253.3900 www.diagcenter.vet.cornell.edu	Publications	TheHorse.com Jan, 2011-The Fight to Conquer Laminitis
Vitamins	Puritan's Pride 4320 Veteran's Highway, Holbrook, NY 11941 800.645.9584 – www.puritan.com	Support Groups	pets.groups.yahoo.com/groups/ equinecushings www.ecirhorse.com
	Pure Bulk www.purebulk.com	Medicines	Vet Pet Solutions Ian, Owner 950 E. Harvard Ave., Denver, CO 80210 303.320.6034



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Smoke: From the Farrier's Perspective...

by Susanella Noble

When I first met Smoke in October 2011, Jen told me that the coffin bone in his right front had rotated in August 2010. The first thing I noticed was that all of his hooves had such poor circulation, they actually appeared to have a blue tint.

The heels were so long and grown forward that I was certain he had negative palmar/plantar angles in all four hooves—the opposite of what I was hearing from his owner. (Here, I'm using the right front as an example of the other three.)

I wanted to a slap casts on all four feet to start raising the back of the coffin bones, but he was abscessing continuously in alternate hooves. My only alternative was to start trimming in the direction I wanted to see his hooves grow, make certain that he was on a zero tolerance diet and that the abscesses were treated with ice water soaks. I did note on my chart that she had x-rays taken, but since I was seeing the opposite of what she was saying, I didn't demand to see if they were available. With perfect hindsight, I can honestly say that I wouldn't have changed a thing about my method.

Now, on the eve of publication for this article, Smoke's old x-rays have magically appeared in my inbox and I'm gobsmacked. In three months (see x-ray photos) the RF appears to have gone from positive rotation to negative!



Smoke's right front x-ray, August 2010.

Had I been the attending hoof care provider in August 2010, and had seen this radiograph, I think I would have been able to pull the shoe and trim him so that P3 was in a normal position, and I'd maintain that angle in a cast for several months. Instead,



Smoke's right front, October 2011.



All photos courtesy Susanella Noble

Smoke's right front x-ray, November 2010.

the pendulum swung too far the opposite direction, leaving him with a negative rotation in all four hooves. Smoke suffered through abscesses on alternating hooves and was very tender-footed for many months. The swelling in his lower legs started to recede and his energy started to increase. Eighteen months after I started working on Smoke, his hooves are not perfect but they are functioning perfectly for him, and it makes him proud enough to show off, all on his own accord, after a trim.

The most apparent improvement is in the color and texture of Smoke's hooves - showing renewed circulation. His heels are still too low and forward, but they seem to have achieved some sort of harmony, while his sunken frogs and heel buttresses have pumped up, there's more concavity in the solar domes, good sole calluses, and only minute separations in the white line (but lots of dirt).



Smoke's right front, May 2013.

Jen has proven to be an exceptional owner. She's researched the EMS diet, allowed me to keep a regular trimming schedule, and



Smoke's right front, May 2013.

utilized constructive suggestions. Best of all, she's riding her beloved Smoke regularly, and they're having the time of their lives! 🐾

Visit Susanella's website at: www.farriergodmother.com