

A COMPLETE GUIDE TO HORSE HEALTH, Lameness & Performance

T.C. SCHELL, D.V.M., CVCH, CHN

# Seeing the Whole Horse

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This publication is produced as an educational piece to assist the horse owner and those seeking to expand their knowledge. The information contained within is not intended to take the place of a proper veterinary examination, diagnosis and treatment.

Seeing The Whole Horse
A complete Guide to horse health,
lameness & performance

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"A horse is a projection of peoples' dreams about themselves

— strong, powerful, beautiful—

and it has the capability of giving us escape from our mundane existence."

Pam Brown (British writer)

## Table of Contents

Chapter 1:	Physical Evaluation of the Horse & First Aid
Chapter 2:	Inflammation: The Problem Behind The Problem.        .11         Inflammation – The Basics        .12         NF-κB and Health        .14
Chapter 3:	Alternative Medicine: What Is It?
Chapter 4:	Herbal Quality, Purity, and Dosing Considerations
Chapter 5:	Seeing the Whole Horse
Chapter 6:	Disease: Acquired or Created?
Chapter 7:	Supplementation: What is the Goal?
Chapter 8:	Vaccination
Chapter 9:	Feeding and Nutrition53Cleaning Up the Diet54The Equine Diet and Picky Eaters56Carbohydrates – Intake and Considerations58Fats – Intake and Considerations62Protein – Intake and Considerations66
Chapter 10:	Stress: Impact on Health and Soundness
Chapter 11:	Lameness Evaluation and ConsiderationsLameness EvaluationWhy Is My Horse Always Lame?
Chapter 12:	Joint Disease and Therapy Considerations.85Osteoarthritis and Joint Anatomy.86Joint Dysfunction; Are Injections the Only Solution?.88Joint Injections: The Good, The Bad, The Ugly.90Joint Therapies: Compliance and Effectiveness.92
Chapter 13:	Back Issues in the Horse
Chapter 14:	The Foot: Health and Soundness105General Anatomy106Solar Abscesses, Bruises, and Thrush107Growing a Solid Hoof; Nutrition and Balance111
Chapter 15:	Navicular Disease and Heel Pain
Chapter 16:	Laminitis

Chapter 17:	The Gut and Impact on Health and Soundness141Leaky Gut Syndrome; Health and Soundness142Probiotics: Are They Necessary?146Gastric Ulcers: New Thoughts149Managing Gastric Ulcers152Colic in the Horse156
Chapter 18:	Easy-Keepers, Metabolic Syndrome, and Insulin Resistance161Managing Equine Metabolic Syndrome and Insulin ResistanceA Deeper Look at Metabolic Syndrome and Insulin ResistanceEasy-Keepers, Metabolic Syndrome and Lameness
Chapter 19:	Cushing's Disease (PPID) in the Horse
Chapter 20:	Allergies and Respiratory Disease
Chapter 21:	Infectious Disease: Lyme and EPM199Lyme Disease in Horses200Equine Protozoal Myeloencephalitis (EPM)202Lyme, Anaplasmosis, EPM: Relapses and Thoughts206
Chapter 22:	Immune Support in the HorseImmune DysfunctionImmune Support
Chapter 23:	Eye Conditions in the Horse.219Equine Recurrent Uveitis220Common Equine Eye Conditions223
Chapter 24:	Tendon and Ligament Injury Management
Chapter 25:	Anhidrosis in the Horse
Chapter 26:	Stocking Up, Lymphedema, and Cellulitis
Chapter 27:	Equine Sports Injury Management
Chapter 28:	Headshaking in the Horse
Chapter 29:	Tying Up or Rhabdomyolysis
Chapter 30:	Behavioral Problems in the Horse
Chapter 31:	Performance Enhancement

#### Dedication

This book was created out of a labor of love with the sole intention of spreading information that may prove useful to horse owners around the globe. This book would not be possible without my wife, who has been by my side since veterinary college, often giving up her own career and life desires, putting them second to my own. She has a heart of gold and is my love and life partner. I would not be where I am without her every day.

To my daughter, my equine companion throughout the past 24 years, you are a true horse woman with no fear and a tremendous amount of knowledge. Thank you for what you have given me and for taking some of those long nights, sitting with foals and other critical cases, so mom and dad could get some rest. Seek your desires and you will find them!

To my son, almost a mirror image of myself many years ago, I encourage you to continue forward with your desires in life and achieve your goals. Just remember that when we seek, we often find, but that which we have found often then leads us in another direction. It is a journey that never ends, but it is a good journey.

To God, I thank you for all that you have blessed me with in this life!

To my patients, clients and colleagues over the past 24 years, thank you! I have learned a lot and together we have helped many patients, learning even more in the process. To those that I have failed, I say thank you for your patience, but apologize for being human as I am a work in progress.

"Ask and the door will be opened for you; seek and you will find; knock and the door will be opened for you" Matthew 7:7

#### Introduction

The road to veterinary college is different for each student. Some come into the program with dreams of grandeur, hoping to be the next great surgeon or a clinical instructor. For others, their motivation is to do what they truly enjoy; interacting with animals while make a good enough living to provide for their family. My path was not too far removed from these, but seemed to take a turn midway through my career. Leading me in an entirely different direction.

I graduated from The Ohio State University, College of Veterinary Medicine, with the desire to strike out on my own and open a practice. With no prior experience, it was not a smart decision by any stretch of the imagination, and I was warned by my professors to reconsider. Despite the warnings and hesitation expressed, something inside of me said that this was the right path and that working for someone else was not an option. I interviewed with several veterinarians who were seeking associates, but it just didn't click. Opening my own practice would be an uphill battle, especially with my wife and a toddler relying upon me.

I did have one clinical professor that provided support. His name was Dr. Frank (Bimbo) Welker, and he ran a satellite large animal facility for the university. As a student, I had spent as much time as I could on rotations with him, as well as other veterinarians on staff. The experience was not like that of the university hospital. We were permitted to do things we normally could not: doing full exams, injections, making medical decisions and even performing some non-routine surgical procedures. Of course, we were under clinical instruction and supervision, but the student ratio was much lower than that at the main campus. There was usually one clinician for 2-3 students, which allowed for more hands-on experience. We discussed cases during rounds, hashed out details and expressed rationale for therapy. We did this on the main campus, however it was somehow different, more personable. Dr. Welker and I formed a bond and he helped me to create a list of needed equipment, supplies, medications, and even a fee schedule to use when I struck out on my own. Even after graduation, he was just a phone call away, always ready to assist with a case when needed. Many times, he would call me just to check in and see how things were going.

The first 3 years on my own were tough. It was hard to gain acceptance by horse and cattle owners in my new residence of North Carolina. People there didn't trust "the new kid on the block" and many were concerned that I was too young. In those days, I had long hair pulled up in a pony tail which seemed strange to them. Eventually, my long hair became too hot in the summer and I shaved it off. My main source of revenue back then was emergency calls, making farm visits after hours when other veterinarians in the area were either tied up or just too tired to go. It wasn't easy, but it did allow me to get a foot in the door, gain exposure, and gradually build my client base. However, it was a slow process and left me wondering if the decision I had made had been the correct one. I was still wet behind the ears, without much experience. I had a lot of book knowledge in my head, but not many road skills. My own confidence was shaky at times, which likely added to the doubts felt by my clients. Some trusted my recommendations, while many others simply did not, even when I was 100% certain the course of therapy was correct. When frustration set in, I remembered the words of Dr. Welker late one night over the phone: "They will only care how much you know when they know how much you care." He assured me that eventually my opinion on a case would be taken at full value, once my clients began to realize how much I cared about their animals.

Over the first two years, my practice grew. I was working out of a 700-square foot storefront which held my desk and supplies, but spent most of my day out on the road. I was on call 24/7, often working 70 plus hours per week and mostly at night. Two years after opening, we took out a small loan, bought a piece of property, and built our existing hospital. It was nothing fancy, but our client load was increasing, as was the demand for our services. In the new hospital, we elected to offer companion animal services in addition to equine and livestock care. The original hospital included a surgical suite for horses, an examination area with stocks, and 4 stalls. After 3 years, we added an additional 9 stalls and expanded the examination area as well as the surgical suite.

The area I practiced in was rural, about 30 minutes from the largest city of Winston-Salem. The closest referral center for pets was 40 minutes away and it was 2 hours to the closest university. For horses, the closest referral was NC State, located 2 hours to the East. Most veterinarians in our area were strictly mobile; one to the south of us did offer surgical and hospitalization care, as we did. Given our location, most of our clients were not willing to make the drive to a university for colic care or a medical/lameness evaluation. They expected us to provide everything that was needed, so we did our best to accommodate. However, we all need to know our limitations regarding time and skills, myself included. There are far better and more skilled veterinarians out there, than I, but to this day I am grateful for the challenges that presented themselves as they helped me to become more skilled and confident in my abilities.

As an equine veterinarian, I did the basics from yearly exams to vaccinations. I also did full lameness evaluations, radiographs, nerve blocks and joint injections. We had our fair share of medical cases admitted to the hospital for things like pneumonia, infections, and colic care. Colics made up a large percentage of our cases and, eventually, I became certified to perform abdominal procedures on horses. Over the years, I performed several colic surgeries of different types. Those were not easy for several reasons. First, most colic cases occurred after hours. Second, going to surgery on a colic required many assistants and it was hard to get staff regrouped that late. Third, there was a lot of time and expense involved which many owners were not willing to compensate us for when their bills came due.

One area that I did enjoy, although very time consuming, was obstetrics and breeding. It was rewarding working with the mares, watching them foal out, or inducing them in high risk cases for a controlled delivery. We delivered many foals in our facility. It was always a beautiful thing to see, but not all foals were up and around by the 2 or 3-hour mark post-delivery. This usually spelled trouble and indicated that it was time to intervene medically. We didn't have a large staff and most of them had families of their own. My wife or I would take rotations monitoring patients through the night, giving medications, tube feeding foals, and changing out IV fluid bags. Many long nights were spent in that hospital, working and trying to sleep on recovery room mats. There was a lot of time spent away from home, my wife, and my children. I am not complaining, just taking note as I get older and look back. They were exhausting nights, but they were times I would not exchange for anything.

In my veterinary career, I saw pretty much everything. We serviced all types of owners and horses, from backyard companions, upper elite-level jumpers and barrel racers. It did not matter to me what your occupation was or what breed your horse was. It was still a horse to me, no matter the chosen discipline. If the owner cared, I cared. I knew practitioners that only worked on sport horses and focused on lameness cases. I also knew some vets that just did breeding, while others just worked on race horses. We did it all, and I always felt that those other vets were missing out given the specificity of their chosen career paths. I remember learning how to palpate mares back in college while working with a friend of mine as a partner. We spoke many years later after graduation and he said he had chosen to work on the race track with

Thoroughbreds. I asked him when the last time was that he had palpated a mare. He responded, "back in college." I thought that was a shame, because it was a skill that needed to be used often or it would be forgotten.

We saw some terrible wounds, including barbed wire wrapped around ankles that cut down to the bone. We saw colics, we delivered twins, surgically removed eyes, applied casts to and surgically repaired broken bones, resected sections of intestine, treated recumbent horses for weeks, and even saw a few foals born with some interesting birth defects. All fascinating things that the average vet may never see or do.

After a few years of practice and injecting hundreds of joints on very young halter-type Quarter Horses and other breeds, I began to question what I was doing. As a veterinarian, I had taken an oath upon graduation to end animal suffering and advance the science. Was I doing this or was I simply applying what I knew to make money? Was I really reducing animal suffering by injecting a 2-year old's lower hock joints because he was being pushed too hard in training at such a young age? Was I condoning it by doing the injection? It would have been different if that horse was older with obvious arthritis, but most of the horses I was being asked to inject were far too young in my opinion. It just did not make sense that such young animals would require joint injections to keep them sound and moving, other than to make money for their owners.

There were other situations as well, which left me questioning if we could do something more for the animal. There were cases of recurrent colic, uveitis, respiratory infections, ongoing lameness...the list goes on and on. As a vet, I applied what I had been taught, not only in college, but also in continuing education seminars. It was not working in many cases, and the horses kept coming back for treatment or we were having to euthanize them. It seemed like we were missing the boat in many cases. I read and read, seeking explanations and options, but there didn't seem to be any. There were no new fixes for tendon conditions, laminitis, respiratory infections or other problems. We were told the conditions would keep coming back and that reality was what would keep a steady flow of money into our business. This was true on both accounts.

One of my biggest personal downfalls was that I cared too much about the animals and the owners. I hated referring owners to another facility and having to make that journey, only to find out the level of care provided was no different than what we had been doing, but at three times the cost. I would refer cases initially, thinking that maybe I was missing something, but I was almost always left disappointed. I expected heroics on behalf of my university colleagues, but they usually came up short.

I remember having a Palomino mare come in with ocular cancer - squamous cell carcinoma. I referred her to the high level equine medical center where they did a laser removal of the eye tumor, discharging the mare with a significant corneal defect that quickly became infected. She was returned to us for aftercare, but it so happened that I was due to leave town at the time for a much-needed vacation. The mare was in bad shape, in a lot of pain and the eye damage was so severe that the only option was to remove the eye. I phoned the facility, but the response I got was one that appeared to not be nonchalant regarding the patient and their level of work. There was no interest or even an offer to have the mare sent back to them for evaluation. I was left doing the surgery myself before I left town. In hindsight, the owner had spent thousands of dollars on that eye, removing the growth, so that vision could be maintained. In the end, they paid me a few hundred dollars so that I could remove the eye. Yes, I said a few hundred dollars. That is what we charged. I could never charge a lot of money for something that only took 20-30 minutes to do. We had clients that depended on us due to our remote location. It was not my personality to take financial advantage of them. I used the skills I had been given to help them and their animals with the end goal that everyone would be happy, and I could put food on my table.

After a few years of heavy stress and endless hours, my own health took a toll, and I was diagnosed with cancer. As part of my recovery, I began to utilize herbs and nutrition, because traditional western minded approaches were not working. I believe those herbs and a change in diet led to my eventual recovery. Therefore I began to explore their use in my patients.

One area of interest in my own recovery was the inflammatory process and what is termed oxidative stress; both contribute to cellular changes on many levels and in many disease courses. Managing these two cellular concepts aided my own recovery, but what is ironic is that these same two processes are involved with most of the conditions that we saw in our equine patients. We generally accept the fact that inflammation is present when we have pain, but we fail to understand that pain does not have to be present to have inflammation.

Inflammation and oxidative stress, which tend to go hand in hand, are present in almost every disease, influencing and creating cellular changes. Sometimes those changes lead to weakened tissue, in hooves or tendons which are then more easily injured and create pain. Once that pain is evident, we tend to think inflammation. Inflammation was likely present BEFORE that pain became a factor and it led to the weakened structure. No matter what condition or case we were treating on the farm or in the hospital, we were dealing with inflammation. Sometimes I knew it and used NSAID medications like flunixen meglumine or phenylbutazone. Other times, I used those medications to assist with pain, but failed to see the 37,000-foot perspective and realize just how deeply inflammation was involved. Even if I truly understood how much inflammation there was, I was limited by the pharmaceutical medications we had available and still am to this day. They may relieve inflammation, but they are limited in their scope of how well they do it and they come with side effects.

Something had to be done for our patients, as cases were becoming not just recurrent, but more severe in nature. We were missing the boat and missing the big picture; as veterinarians, we were not asking questions, but just sticking needles.

As I look back on the first 10 years of my career, I saw cases of metabolic syndrome, laminitis, and colic, but they were not that common. We had maybe 1-2 per week. In the second 10 years, those cases increased in incidence, becoming 6-8 per week or more. Why? The only thing that I can pinpoint is diet. In the first half of my career, the only commercial feed that we had available was a simple horse chow by Purina. Otherwise owners fed privately prepared sweet feeds from local mills. Those sweet feeds were high in molasses, but had between 9-12% protein and were made of whole grains. Over time, we started to see massive advertising for commercial feeds, including special feeds for weanlings, mares in foal, performance horses and even metabolic cases. Could there be a connection?

Back then, I would not have given it a second thought. Now, I see it as a common denominator. I firmly believe that our commercialized feed industry has contributed to more health problems than they have helped. This is true in our human world as well. We have all the advertising with fancy commercials for prepared and processed foods available to us, but our health as a nation continues to rapidly decline. Nothing can replace good whole fruits, vegetables and grains in our diet. It is what nature intended. When we start creating processed horse feeds with ingredients that are not found in nature, we create problems. The intentions may be good, but the rationale is not. In today's equine world, a high percentage of horses, likely upwards of 90% are eating commercial feeds with spray-dried synthetic nutrients. Most of these same horses are also on synthetic based vitamin/mineral supplements, probiotics and other additives to 'boost health'. The irony here is that a lot of money is spent each month on these products, but little is invested in adequate pasture space, high quality hay or forage, and proper farrier care.

Today we see a high number of horses that are afflicted with metabolic issues, laminitis, navicular conditions, arthritis, allergies, uveitis, performance related issues, and generalized soreness. If I was still practicing, it would not be hard to make a good living by accepting those conditions, not asking questions and applying the routine therapies as is being done today. It is shocking to me how much owners are spending on equine veterinary care, compared to what I would have charged. Routine foot lameness cases are being evaluated, not just with standard x-rays or radiographs, but now with MRI's, thermography and other technologies. What is interesting is that in many cases, despite the fancy and expensive diagnostics, the main problem is overlooked. They are focusing on what is a secondary problem. Imagine trying to build a wood deck in a large puddle of standing water. The deck fails year after year. We can diagnose the problem as 'bad boards' and replace them at a high cost; or we can see the main problem as the standing water which causes the board to rot. I have to shake my head when I see invoices from cases that I consult on, especially when the main problem was missed, or the therapy applied was totally off-base. In many of these cases, I discover that the owners are financially drained and not capable of pursuing proper treatment due to their past expenses. Shameful. Is this the fault of the veterinarian, the owner, or both?

I will never say that I am a perfect veterinarian or even the most skilled, but what I do have is the ability to sit back and observe. By doing this, we can often see more things than we did before. I like to put pieces of the puzzle together, find a common denominator, and see if we can make it work. This does not always happen the way we want it to, because sometimes the patient has simply progressed too far in the course of disease. Too much damage has been done. This does not mean we cannot help them. It just may not be to the degree that the owner would like.

In the world of health, both the patient (owner) and veterinarian (physician) play a role. One can advise but the other must implement and apply common sense as to whether the recommended course of therapy is correct. This requires time and knowledge by the owner, i.e., to seek, discover and apply. Most are not willing to do this, so they are left at the mercy of the primary care giver and his or her level of knowledge. That inherent level of knowledge is also dependent on whether that veterinarian is there only as a means to an end, financial gain, or there for the patient. If the latter, he or she must continually seek, challenge themselves and apply new theories. All of us come out of vet school with the same knowledge base, but some continue to expand it and challenge the theories posed to us by our peers at the university level. Sadly, some do not and keep applying the same ideas to patients, year after year, until retirement finally comes. I fall into the first group.

In 2006, we began to apply my personal healthcare approaches to our equine patients by using herbs initially to aid their recovery. Yes, I said herbs. Trust me, they were foreign to me before this time as well. It was not something we were taught about in veterinary school and nothing we would hear about in lecture halls during annual meetings. The truth is that they have been around for centuries with research supporting their usage going back decades. We were just too proud of ourselves, ignoring this science and failing to seek their abilities, but they had much to offer.

In 2006, we published our first study on the use of Curcumin, Boswellia and a few other herbs in alleviating the symptoms of osteoarthritis in the older horse population. It was a small research trial funded by our veterinary hospital. It included mostly older horses with arthritis that were dependent on medications to keep them going on a daily basis. The trial was published in the Journal of Holistic Veterinary Medical Association, because no other journal would even read the results due to herb usage. The findings of the study were that most of the horses significantly improved, with more than 90% of them doing much better than before and without their daily medications. We demonstrated a reduction in inflammatory proteins within the joints, that matched the level attained with traditional medications. The patients did well, not only on a joint level, but also on a whole-body level. They acted younger and became more interactive, often running in the fields, which they had not been capable of before. These were results that we typically did not see with medications.

Given the results of this trial, we began to use our secret herbal formula in our patients, prescribing it like a prescription medication. I would try to discuss it with owners, but they would often refuse to use the formula, because herbs were foreign to them. They wanted an injection or a medication, not herbs. When we would put a prescription label on it and prescribed it, we did not mention the word 'supplement'. It worked, and the owners were very happy with the results. We used this formula not only in our joint cases, but also expanded our usage to include laminitis, navicular, injuries, tendon failure, hoof problems, metabolic conditions, and uveitis. All had favorable outcomes, because of the common denominator of inflammation.

Over the following years, we published a few more research trials on insulin resistance, COPD, weight loss and exercise enhancement. These trials were done using herbs with no medications. All had very favorable results, especially considering that the patients enrolled had failed to respond to traditional therapies. As time went by, I expanded my knowledge base when it came to herbs, becoming certified as a Veterinary Chinese Herbalist, and created newer blends for specific conditions. Inflammation was almost always at the root, but some cases required more additional tuning in their approach.

After the first few years went by, our receptionist began to take more and more calls from horse owners outside of our practice area and our state requesting the supplement we were using. My wife and I were spending more and more time after hours creating the products and shipping them. Finally, we had to make a choice and we decided to step away from our practice. At this time, I am retired from private practice, but consult with owners around the United States helping them to better understand their horses' conditions and discussing therapy options. I am also involved in the ongoing research and product development for our company, Nouvelle Research.

### The Purpose of this Book:

The purpose of this book is to convey to the horse owner, new concepts to consider. Many of the concepts are new and many are old as well. The 'new' concepts are not recently discovered, but rather are a different philosophy and so may be considered 'new'. The old concepts are basic therapies applied decades or even centuries ago that worked, but we gave them up for the sake of technology or perceived advances. In most cases, we need to step back, take a deep breath and really look at the horse, without making assumptions regarding problems and therapy options. This will open the door for new considerations.

What I hope, is that we can take a step back and 'see the horse', not just the problem at hand. By seeing the whole horse, we can begin to put pieces of the puzzle together and understand more clearly why some problems develop. With this understanding and clear vision, we can see better, more beneficial, and more complete therapy options. We need to stop thinking that a horse with a sore back is a horse that needs an injection. The reason can traced back to nutrition, improper saddle fit, poor rider balance, faulty foot balance, a sore joint elsewhere in a leg, or a case of systemic inflammation that impacts the entire body. This is seeing the whole horse. If we inject that S/I joint, we may solve the problem temporarily, but it will return. Until you find the initial causes, you will not have resolution. We need to put aside our egos, realizing that a \$20,000 saddle might be the problem. You, as a rider may have a balance issue, or even though your farrier is a certified journeyman, he may not know what he is doing. I have seen it countless times and until we accept all possibilities we are doomed for failure. The sooner we realize this, the more opportunities there are to intervene.

Never forget that the horse is a living, breathing animal, depending on you to make the right decisions. They did not ask to jump 3 feet or higher or to run barrels, twisting their joints beyond normal dimensions. They do not ask to be kept in a stall all day or kept in a dry lot with few blades of grass. They just want to be a horse the way God intended, enjoy life and provide happiness to you. How you see your horse impacts his future and can either resolve or further propel his suffering and misery. Far too many horses suffer daily or are euthanized for failure to see the options before us. We need to open our eyes now, for their sake and ours. The information and theories presented within these pages may seem complex or even hard to understand, but if we make an effort to grasp even a fraction of it, we can dramatically improve outcomes.

Here is to helping your horses succeed in everything they chose to do and be!