

Breaking Traditions:

A Veterinary Medical and Ethical Perspective On the Modern Day Use of Horseshoes

Tomas G. Teskey, D.V.M. Hereford, AZ, U.S.A.
tteskey@c2i2.com

Twenty-three centuries ago, in *The Art of Horsemanship*, Xenophon stated, "The same care which is given to the horse's food and exercise, to make his body grow strong, should also be devoted to keeping his feet in condition." This is as true today as it was thousands of years ago.

A deeper respect for the horses under our care

We have relied on horses for strength and speed and utilized these attributes for thousands of years. Our relationships with horses continues to evolve, and with the ever-increasing knowledge surrounding horse health issues, we become more personally involved in all aspects of their care. In developing a deeper respect for the nature of the horse, many of the modern, traditional horse-keeping practices are being abandoned in favor of ones that honor and nurture the inherent strengths of the horse.

Becoming students of the hoof

Responsible horse stewards are taking a renewed interest in horse's feet. As a veterinarian studying horses for the past few years, I have discovered that there is a relatively small amount of information about the foot versus the other anatomy. Perhaps this is why many veterinarians, farriers, and trainers do not know what a normal horse's foot looks like nor do they have a full understanding of how a hoof functions--the information is not especially easy to find. Hoof deformities in the general horse population are so common that deformed hooves are thought to be "normal". From pictures in veterinary references to diagrams in farrier texts, the equine foot is incorrectly represented as a structure devoid of its most beautiful and functional characteristics. This information has not been "mainstreamed" by any means. When horse owners listen to and depend on veterinarians, farriers, and trainers to tell them what is right and healthy for their horses, they don't realize that most of these professionals, for whom they have a great deal of respect, are not experts regarding horse's hooves.

Those of us who want to be good stewards must become aware of the normal and abnormal characteristics of hooves. Educating ourselves allows us to have intelligent conversations with professionals, and together make informed decisions regarding hoof care.

Numerous books, articles, dissertations, and an enormous quantity of clinical evidence support the position that *when steel is nailed to a horse's foot, damage occurs*. Some farriers are aware of this, and they freely admit that the best possible scenario is to have horses barefoot, referring to shoeing as "a necessary evil". Other farriers encourage their clients to keep their horses barefoot for at least part of the year, and many farriers keep their own horses barefoot. In spite of the overwhelming evidence that shoeing is *only evil* and is *never necessary*, many farriers continue to nail on shoes. This evidence becomes self-evident when one studies the amazing anatomy and physiology of the hoof.

"Do not believe in anything simply because you have heard it. Do not believe in anything simply because it is spoken and rumored by many. Do not believe in anything simply because it is found written in books. Do not believe in anything merely on the authority of your teachers and elders. Do not believe in traditions because they have been handed down for many generations. But after observation and analysis, when you find that anything agrees with reason and it is conducive to the good and benefit of one and all, then accept it and live up to it." ~ *Buddha*

I and others know that to apply steel to horses feet causes harm, and what follows is a synopsis of just a few of the harmful effects of nailing steel shoes onto horse's hooves:

The horse's hoof has evolved as a conical structure, with domes and triangles arranged into one of the strongest and most *dynamic* constructions in nature. Harm comes to the hoof before a steel shoe is applied when the hoof is prepared for its application. The life-promoting, energetic shapes of the natural hoof are disrespected and disregarded when a farrier flattens the bottom for the application of a shoe. This flattening destroys the hoof's ability to perform vital functions, and nailing a rigid steel ring around its lower edge further ensures its steady deterioration and deformation, providing for a state of disease in the entire horse. It is the steel shoes that perpetuate a *state of physiologic stagnation and direct damage*, leading to deformity, disease, lameness, premature loss of use, painful debilitation, and early death in horses.

Nails driven through the hoof walls allow all manner of bacteria, fungus and filth to enter the foot. The efficient, physical barrier to these invaders is breached when the hoof wall is pierced. The conductivity of the nails and steel shoe allow concussive forces, vibrations, and changes of temperature to enter the hoof. Multiple holes in the walls of the hoof over successive shoeings lead to their structural breakdown, resulting in cracks, breaks, and separation of the hoof wall from deeper hoof structures. (Imagine lifting up on your fingernail until it tears away from the flesh under the nail.) Every horse that wears steel shoes suffers varying degrees of laminar separation. A horse always attempts to heal itself, but these persistent forces often lead to the more serious condition of chronic laminitis, progressing to founder if the horse overeats or become sick. Sometimes when a steel shoe is pulled off by a horse, large portions of the hoof wall go with it.

The damage caused to the horse due to decreased shock absorption within the shod foot is well documented. The horse's hoof is designed to handle most of the shock absorption required for traveling over any terrain. This is accomplished when the hoof capsule moves and expands upon contact with the earth. When steel is fixed to the hoof capsule, the hoof cannot adequately expand and the built-in shock absorbing structures within the hoof can not do their job. As a result, the joints, cartilages, and ligaments higher in the horse's leg, back, and entire body must now dissipate concussive forces they are not designed to handle, resulting in extra wear and tear which produces measurable damage to these areas.

In a properly functioning hoof, the sole slightly flattens as hundreds of pounds of weight come to bear on the hoof capsule. Shoes prevents this action, instead holding the sole in a non-weightbearing, vaulted position and the rest of the hoof capsule in a contracted state. The sole is unable to escape the now-punishing blows of the coffin bone above, and the forces coming down in to the foot are now allowed to crush the sole and coffin bone together, causing bruising with every step. There are many other malfunctions that also occur in a shod hoof, contributing to dysfunctions that cause atrophy, or a decrease in size, constricting sensitive structures within. When shoes are removed, many horses can no longer walk comfortably on their own feet. There is one similar human example that is particularly representative of causing such damage: the binding of women's feet in the older traditional Chinese culture. So damaging to the feet was this practice that dancing and running was impossible and walking was unwieldy--this practice kept women subservient and powerless, and though outlawed in 1911, it continued for decades. This practice was only given up recently, so there are still plenty of living examples of these crippled

women. Large quarter horses of today with size 00 feet are a direct comparison and a shameful reminder of what we continue to do to the modern day horse. How long will we continue a practice that harms horses' feet and robs them of their power?

Pads only make it worse

Many different materials are used to pad the bottom of the horse's hoof in an attempt to protect the sole and decrease concussion, but in actuality these materials bring further harm to the horse. The presence of pads often brings on a "dysplastic" kind of growth--this is abnormal growth that is thicker but not as dense or as durable as normal sole. Farriers often misinterpret this abnormal growth as a healthy thickening of the sole, when in fact it represents a deterioration of the hoof. The use of pads also increases the presence of moisture next to the horse's soles, providing a breeding ground for hoof-rotting bacteria and fungi that soften the soles into a cheesy consistency devoid of durability. Pads also prevent normal respiration and perspiration that occurs in frogs and soles, impairing the horse's ability to regulate his body temperature and excrete waste proteins through exfoliation. Through complete denial of exfoliation, a critical stimulant for strong, normal hoof growth is stifled.

That amount of concussion is "just right"

The role that concussion plays in providing life-giving stimulation to the horse is extremely important, but misunderstood. The natural, properly shaped, bare foot has concussion-dissipating properties appropriate for each horse on its home terrain--it's that simple. When we apply artificial materials and/or conditions to horse's hooves, such as steel shoes with pads, plastic "repairs", soft footing in riding arenas, and bedding in stalls, our interference reduces concussion to a level *below* what is appropriate, preventing the vital stimulation needed for the production of durable hoof tissues, healthy cartilage and ligaments, and strong bones. Without appropriate concussive stimulation to the hoof, the horse's hooves and legs grow weaker and weaker. Conditions such as overgrown, poorly shaped feet, shod feet, and housing horses on extremely hard surfaces such as concrete results in *excessive* concussive stimulation to the hoof--as a result, structures such as lateral cartilages, joints and ligaments become ossified, arthritic and sprained, and bones become inferior in their role of supporting the horse. Attempting to "protect" horse's hooves with artificial appliances and inappropriate conditions is actually promoting weak and faulty growth and nurturing conditions for disease.

Circulation is of paramount importance

For the presence of steel on a horse's feet, we observe profound damages due to stagnation of blood within the hoof and diminished return of blood to the heart. Shoes interfere with the hoof's natural blood-pumping mechanism. The natural hoof moves blood with each step as it expands and contracts. If this sounds familiar, like the blood pumping mechanism of a heart, that's because it is--natural hooves perform a critical function as supplementary "hearts". This vital heart-like mechanism is greatly restricted by immobilizing the hoof with shoes.

Reduced circulation through the feet and legs of the shod horse results in reduced circulation to the entire body. This poorer circulation starves the entire animal of oxygen and all the nutrients it needs to perform. This stagnant state of circulation, along with numerous other damaging afflictions such as sidebone, ringbone, arthritis in ankles, knees, hocks and spine, adds up over time, taxing the body with its attempts to heal, gradually stressing it beyond its capacity to mend. Damaged cells and tissues are able to heal and divide so many times, and put up with insults so many times. Animals die when cells and the organs they make up are no longer able to divide and repair damage. A slow deterioration of normal structure with associated debilitating pain and premature death of horses is the result when we fail to trim hooves properly and/or nail on shoes.

We create problems for our horses when we defeat the natural design and functions of their feet. Our traditional beliefs and attempts to "improve on nature" causes them harm. What we as

stewards accept is that horses' feet have great strength, performing optimally when proper hoof form exists and when management provides for movement.

Integrity and strength of conviction

Here's a fact that you can count on: I will not recommend that any client of mine consider shoeing their horse. If I was to say, "Well, this time I guess...OK, go ahead and nail shoes on", or, "Gee, I guess this horse can't do it..." I would be compromising my integrity. I do not sit on the fence on this issue, because shoes cause harm to horses, and I simply can't abide that. Some folks can advocate both shoeing and going barefoot, but with an understanding of normal hoof form and function and my respect for the Veterinary Oath, that's not likely to happen anytime soon.

Spreading the word and convincing others

Many folks aren't eager or accustomed to expressing their views about what they've learned to be true, let alone professing them in a way that shows absolute conviction, so it's no wonder that some of these same folks find it distasteful or rude or egotistical when someone else proclaims that they are possessors of the truth. Some folks will suggest that, "we should all just try to get along", or "you're entitled to your opinion, and you should respect mine", or "it's a big tent, room for everybody!", or even, "we'll just agree to disagree". Those are just ways to avoid facing the facts surrounding the issue.

Once in awhile, you run across folks with conviction in what they believe and the integrity to back it up. These folks may be unpopular, disliked, and even ridiculed, because they are likely to call attention to those who are wavering, misinformed, or don't have the knowledge or quite understand the information. A willingness to speak out to educate others is more and more a rarity in our world. In spite of the resistance we meet, I along with others are dedicated to help with the "wake up call". Farriers, veterinarians, trainers and horse people everywhere that learn about normal hoof form and function end up telling their clients, colleagues and friends that shoeing damages horses and is a direct cause of loss of use and premature retirement or death. Everyone needs to know that steel on a horse's hoof is damaging and unacceptable. We need this to become common knowledge to save horses from debilitation and early death.

The role of the veterinarian

When veterinarians become more aware of natural hoof form, they will cease to prescribe shoes that bring them harm, and will not stand idly by while others do so. When they better understand how the horses' feet function, grow, offer protection and allow proper and vital sensation for the horse to interact with their environment, the knowledge will become a powerful tool. They will no longer resort to the use of nailed on appliances or stall confinement for horses when they understand the power of the natural hoof and it's healing potential.

I understand this now, and I can no longer keep it to myself, for I took The Veterinarian's Oath ten years ago:

Being admitted to the profession of veterinary medicine, I solemnly swear to use my scientific knowledge and skills for the benefit of society through the protection of animal health, the relief of animal suffering, the conservation of livestock resources, the promotion of public health, and the advancement of medical knowledge. I will practice my profession conscientiously, with dignity, and in keeping with the principles of veterinary medical ethics. I accept as a lifelong obligation the continual improvement of my professional knowledge and competence.

(American Veterinary Medical Association House of Delegates, July, 1969)

As of now, in a huge percentage of equine veterinary schools and clinics the world over, the highly effective therapies of natural lifestyle and natural hoof care are *not even mentioned* as treatment options for lame horses. This is unacceptable and is a disservice to the horses we love. Sometimes it is an omission out of ignorance, and other times it is an omission that serves the egos of those who use horses as they would inanimate tools, rather than as the companion animals that serve us.

Recommending shoes for horses when unaware of the overwhelming evidence damning such a practice is not a good excuse for doing so, but will likely remain forgivable for a while longer. I was in a situation just five years ago that demonstrated my ignorance of the hoof and its healing power. This earliest example came in the form of a big quarter horse gelding foundering to the point of protruding coffin bones. I observed his treatment using nothing but the principles of a natural hoof trim (not even boots were used) and he was being ridden sound six months later. Another was a three year old thoroughbred mare with a fractured coffin bone, who eight months later was jumping at three-day eventing competitions barefoot. My own gelding, foundered at two years old in the left front due to "club foot", now travels soundly over the roughest rocky terrain after two years--he does it barefoot and without any evidence of ever having a club foot. The changes seen on radiographs from horses with ringbone and sidebone reduce over several months when proper trimming is used...no other "treatment" that uses shoes or pads can show this. The examples go on and on. I have never had such a powerful tool at my disposal as is this knowledge of how the equine hoof works and how to bring such rapid healing to lame horses.

Also just a short five years ago, I was prescribing egg-bar shoes, pads and impression material for any number of lamenesses, but since seeing first hand the *further* damage caused by these appliances, I have discontinued such prescriptions. No matter who the farrier was, none of these horses ever reached a point of soundness where they could walk comfortably on their own feet, and now I deeply regret that many horses died at my hands because I didn't know what to do to preserve or save them. Now when I see horses with severe foot problems, I treat them without prescribing shoes, often without anything more complicated than proper trimming of their hooves, appropriate movement, and a natural diet. There have been a number of horses that I have brought to full soundness after I was called to euthanize them. Their owners were told by their farrier, friends and veterinarian that there was nothing that could be done for navicular disease or founder or quarter cracks. Most of these horses are better in a short time. The personal satisfaction I get when I help save a "hopeless" case or the relief in the eyes of owners when they realize they'll never have to shoe their horses again, and the gratitude and admiration I receive from these folks is heartwarming.

What has become of our idea of what a "normal" horse's foot is? Why has it strayed so far off course from what we know is healthy? As animal health professionals, veterinarians have a responsibility to point out what is good and bad for animals. We warn clients about dangerous fencing, counsel them on appropriate diet and encourage them to keep horses clean and exercised. By prescribing special "corrective" shoes, or allowing farriers to just come along and "fix the problem" using steel shoes, problems are aggravated and perpetuated in the long run. Veterinarians are concerned about the health of the animals, so failing to offer people and their horses this knowledge that will bring honest healing to their horses is a grave oversight. By recommending that horses stay out of shoes altogether as they mature, the super-prevalent hoof problems we are so familiar with will largely be a thing of the past. Rehabilitating horses is rewarding, but as with anything in this world, it often takes longer to fix things than it does to wreck them.

Herd health issues are the specialty of many large animal veterinarians. Besides shoeing, we should recognize that it is critical horses not be stalled, kept in as large an area as possible, feed primarily grass forage and keep a herd setting to encourage movement and a healthy mind. When you think about it, it's pretty amazing how most of the common problems we deal with on a

daily basis are directly related to confining horses too tightly. Being mindful of "herd health" takes on lots of new meaning when we think about how horses should be managed.

There will be more and more veterinarians coming to appreciate the harm done by shoeing and the benefits of going barefoot and proper trimming, and the horses of the world are going to be healthier, happier, and more serviceable than ever. We will look at the horses in the future and see them as the magnificent specimens of power they naturally are. Seeing one with steel plates nailed to its feet will be recognized as abnormal and draw criticism from those that know better and respect the horse.

The role of the farrier

Being a farrier is hard work. I shod at least a few horses of my own every few weeks during my younger years, so I can relate to the pain and strain that comes with the task, the skills it requires and the satisfaction of a job well done. The attention to detail, working with your hands, handling a naturally shy but powerful animal, and a caring attitude--these are good attributes, but no matter how hard you've studied to learn how to shoe a horse; no matter how hard and demanding the work is; no matter how much money you've spent getting that education; no matter how traditional the practice is; none of these things or anything else makes shoeing a horse the right thing to do.

Farriers are in the ideal position to learn about proper, natural hoof form and function: they have the clientele, most of them like horses, and they know how to use hoof trimming tools. Their willingness to study the attributes of the natural hoof, and learning how to educate clients about care and management will bring honest relief to horses.

More farriers are realizing there are better options than shoes. Some already encourage clients to let their horses go barefoot "as much as possible", but they and the owners are still not fully convinced that horses can walk on their own feet when working. Conventional wisdom is strong: "horses need shoes for "protection", "support" or "traction" when they are participating in activities like jumping, dressage, competitive trail rides, and other demanding sports or use. What we now *know* is that any kind of shoe nailed to a hoof damages that hoof- one-hundred percent of the time. Every minute that steel contacts a horse's foot, damage is being done. Steel shoes do not protect hooves, and hooves certainly should not be "supported", unless we wish to weaken their laminar connections. Most farriers know that the coffin bone is suspended inside the hoof capsule, not supported from below, yet there is much talk about "supporting" this bone. Traction is reduced when a shoe is fitted, and only damages the horse, stressing everything from the hoof capsule to nearly every tendon and ligament and joint up the legs and in to the body. The natural hoof has the best traction possible on its home terrain or for what it has been conditioned to do. Common sense tells us that *the more demanding the job or sport, the more important it is for the horse to have natural, properly functioning feet.*

Farriers should improve their professional knowledge and competence as well. Learning how the hoof functions, how to sculpt it to achieve healthy form, and educating clients who need professional advice in hoof care is the future of farriery. The judicious use of hoof boots allows owners a way to provide honest hoof protection without damaging their horses' feet. Farriers are important professionals in the equine world and people rely on them to know and do what is best for their horses.

For a farrier, retiring the anvil and hanging up the hammer leads to being part of an inevitable change for the better. Farriers can rest assured that what they will be doing is founded on solid knowledge gained from intense study of the biology and physiology of the horses' hoof.

Farriers that are dedicated to the welfare of the horse will reap great rewards. More money can be made with less strenuous work. I know that working with and nailing on steel can be addictive

for some, but stewards will be more than happy and willing to pay for proper trimming and guidance in keeping their horses healthy. In addition, becoming knowledgeable and practiced enough *will* allow the lives of many horses to be saved. Treatment for laminitis and founder is especially rewarding and efficient using natural hoof care techniques. Money aside, the personal rewards are terrific.

The role of the trainer

Trainers and instructors have a profound influence on their clients and largely control what they do with their horses. Being open-minded and receptive to this emerging evidence, becoming informed, and working with veterinarians and farriers allows them to make wise decisions for the horses in their care.

Many trainers believe that particular horses, or even some breeds of horses, can't go barefoot. They have experienced horses that get sore or whose feet deteriorate whenever they don't have shoes on. These are generally circumstances that involve horses being shod over a long term, and whose feet have grown weak. Horses that are shod, or whose feet have been improperly trimmed, will have hooves that chip and bruise easily. The added insult of living in small pens or stalls prevents freedom of movement from birth, which we know is critical for stimulating good hoof growth. When horses have feet already damaged by shoes, the transition to healthy, barefoot hooves will take time and a great deal of commitment by their owners and trainers.

The questions then become, "Is it possible?", and "Will it be worth it?" These are hard questions to answer, and it is up to the trainer, working knowledgeably with the owner, to decide the best course to take in each particular case.

The benefits of sound hooves are enormous. They include a healthier, more serviceable horse, less lameness, fewer sore backs, better movement, greater stamina, less resistance to demanding work, fewer veterinary bills, and a longer and happier life. But when hooves have been damaged and deformed, and particularly when this has caused additional problems in the horse's structure, it will take time and effort to recapture that health and restore the horse to soundness. It may also be very difficult to get the right kind of help from other equine professionals.

Trainers should most importantly insist that young horses in their care or under their tutelage never be shod and be properly trimmed from birth. It is much easier to prevent damage to horses' hooves rather than rehabilitate them. Trainers that question conventional wisdom and become informed become heroes to their clients and the horses on whom they depend for a living. The horses are depending upon them for their well-being, and even their very lives.

Finding information and getting help

Numerous published books have guidelines and instructions on trimming hooves to achieve proper form. There are classes for horse owners, trainers and farriers who are willing to go the distance and pay the price, and there is a tremendous amount of information regarding the natural trim and lifestyle on the internet.

Soon, equine professionals will not be able to dismiss the mountain of clinical and scientific data related to the harm done by the use of the horse shoe and the astounding benefits of natural lifestyle and natural hoof form. There will be many ex-farriers who will excel at performing a natural trim, and there will be many more horse owners and trainers who recognize a healthy hoof and know what a deformed one looks like. Right now, especially in certain parts of the world, it can be difficult to find this information and get help, but the age of information and rapid communication will provide most everyone the means to help themselves.

My mentor in relation to natural hoof care is Martha Olivo. She travels around the country giving clinics and classes on the natural trim and has trained hundreds of hoof groomers, some of whom now trim professionally. They are listed on her website, which has a lot of additional information. Go to www.unitedhorsemanship.org.

For other websites, run an internet search for "barefoot horse". You may also email me directly at tteskey@c2i2.com.

A plea to equine professionals everywhere

People around the world are embracing some fundamental concepts of horse and hoof care. These people need your help in implementing what they want for their horses. I urge you to look at the available data, evaluate it critically, relate it to the anatomy and physiology of the horse, and apply it to the horses in your care.

The power of truth

The knowledge of how the hoof is shaped and how it works is powerful. I tend to speak with conviction, but maintain an open ear to the concerns of others. Those interested in this information should make the truth their own--far be it from me to tell someone what they should believe. Listening to others' concerns about the "necessity" use of steel shoes, we should be mindful that this is all they have ever known. Be honest about the time and effort it will take to undo the harm shoes have caused. Our goal is to educate everyone, not just horseowners, about proper hoof form and function, and lend support to all who advocate this for the horses.

I am continuing to learn every day as I listen to people's concerns and work with their horses. I'm learning what is best to say and how best to say it. Sometimes I don't know the whole answer, and it's actually helpful when that happens because it forces me to learn more, dig deeper, and confer with others who know more than I do. It's difficult confronting the mainstream, but once you become enlightened a powerful energy will be yours to embrace: the power of the truth; the power to heal; the power of the horse!

"All truth passes through three stages. First, it is ridiculed. Second, it is violently opposed. Third, it is accepted as being self-evident." ~ *Arthur Schopenhauer*