

## **BREAKING TRADITIONS:**

### **A Veterinary Medical and Ethical Perspective on the Modern Day Usage of Steel Horseshoe**

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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.

#### **The horse is a symbol of beauty and strength...**

Man has relied on horses for their strength and speed for the past few thousand years. These cycles of life have continued on, and we are part of those cycles along with the horses that continue to accompany us. Ownership of horses today is still a necessity for some, but is becoming more and more a luxury and a privilege. As our relationship with horses evolves, many modern-day horse owners are becoming more thoughtful, sensitive and caring toward their horses; they are coming to understand that they are not merely owners of livestock, but stewards of these fine animals who serve us so well as companions in our sports and recreation. Those who have come to see themselves as stewards of their horses have become sensitive and responsive to all of their horse's needs. They realize they are personally responsible and obligated to provide what is best for their horses, even though doing so involves challenging many common, traditional horse keeping practices--changes are being made that better respect the nature of the horses we hold so dear.

#### **Becoming students of the hoof--where we have been and where we are going...**

We responsible horse stewards are taking a new interest in our horse's feet. As a veterinarian studying the equine hoof for the past few years, I have found that most veterinarians, farriers, and trainers do not know what a normal horse's foot looks like, nor do these professionals have a full understanding of how a normal horse's hoof functions. From pictures in veterinary references to diagrams in farrier texts, the equine foot is represented as a structure devoid of its most beautiful and functional characteristics. The prevalence of hoof deformities in the general horse population is so common that they are looked upon and thought to be "normal"--the picture of a narrow, upright hoof, complete with a steel shoe, has permeated our modern culture so deeply that it will take decades and generations to fully expose it as the deformity and cruelty it represents and replace it with an image of a full, round, unrestricted hoof that symbolizes the horses' strength, health and vitality. Listening to and depending on veterinarians, farriers, and trainers to tell you what is right and healthy for your horses shows you respect these professionals, but because most of them are not experts regarding horse's hooves, it is critical that you are at least able to recognize what a normal hoof looks like and know a deformed one when you see it. Only after you educate yourself in these matters can you have an intelligent conversation with professionals and make an informed decision regarding their recommendations.

"Do not believe in anything simply because you have heard it. Do not believe in anything simply because it is spoken and rumoured 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

Numerous textbooks, a large number of essays, an increasing number of dissertations and an enormous quantity of clinical evidence supports the position that when steel contacts a horse's foot, damage occurs. As many of us all ready know, most farriers freely admit that the best possible scenario is to have a horse barefoot. Many experienced farriers encourage their clients to keep their horses barefoot for at least part of the year, and many farriers keep their own horses barefoot. Rather than studying and perfecting ways to ensure that the horses fully benefit from what is all ready understood to be "the best" situation, shoeing is spoken of as "a necessary evil". What we now know to be true is that shoeing is only an evil and never necessary once one studies and becomes familiar with the amazing anatomy and fascinating physiology of the hoof. I know that to apply steel to a horse is extremely damaging, and what follows is a synopsis of just a few of the harmful effects of nailing steel on to hooves:

### **We have been looking at our horses' deformed feet for long enough...**

The problem actually begins before a steel shoe even touches the horse's hoof. The preparation of a hoof for the application of a steel shoe is extremely damaging in itself. The natural, life-promoting, energetic shapes of the natural hoof are disrespected and disregarded when a farrier flattens the solar aspect of the hoof for the application of a shoe. The horse's foot evolved as a conical structure, with a set of domes and sets of triangles collected together in a final architecture that is one of the strongest, dynamic shapes in the universe. Flattening the bottom of the equine hoof demonstrably destroys it's ability to efficiently perform all of it's functions, and the subsequent nailing of a rigid steel ring around its lower edges ensures a steady and treacherous progression towards disease in the entire horse. Continuing this shoeing procedure perpetuates a state of physiologic stagnation and predictably leads to hoof deformation. For man's application of steel to the body of the horse, this resultant stagnation and deformation leads to disease, lameness, premature loss of use, painful debilitation and eventual early death in well over half of all domesticated horses in the industrial world today.

### **Steel meets skin...**

Nails driven through the hoof walls allow all manner of bacteria, fungus and filth to enter the foot; the once efficient, natural 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 sudden, extreme changes of temperature to enter the hoof. Multiple holes in the walls of the hoof, especially over successive applications, lead to direct structural breakdown of the hoof walls by causing cracks, breaks, and by physically leveraging the hoof wall away from deeper hoof structures. Sometimes when a steel shoe is pulled off by a horse, the edges of the hoof wall go with it.

The damage caused by 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 only if the hoof capsule is allowed to expand upon contact with the earth, passing concussive forces to the cartilages which surround the more sensitive soft tissues inside the foot. When steel is fixed to the hoof capsule, the hoof can not adequately expand and the built-in shock absorbing structures within the hoof can not do their job. Ground forces that once were directed backward and upward are now primarily directed upward, following a vector determined by the presence of the nails, leveraging the hoof wall away from the coffin bone. This is exactly like lifting on the

end of your fingernail and tearing it off the nail bed at the tip of your finger. Every horse that is shod will have some amount of laminar separation--it is a physiologic certainty. Whether grossly visible or microscopically, every shod foot has separation. This situation sets a horse up quite well for chronic laminitis, or often an acute founder situation after overeating or becoming sick. The sole is held in a vaulted position in a shod hoof, no longer allowed to flatten slightly with footfall, and is now forced to receive a beating from the coffin bone above. All of the joints, cartilages and ligaments higher in the horse's leg, extending further up and in to the back and entire body, must now take up the task of dissipating concussive forces, a job these structures never evolved, nor are designed, to handle. The result is extra wear and tear which produces measurable damage to these areas. Truly, much of many horses' back soreness and leg lameness are directly due to damage from having to withstand concussive forces that they were not designed for--all because the natural shock absorbing function of the hooves has been compromised by the application of steel shoes.

### **So, let's reduce concussion to keep our horses from this damage...?**

Pads fitted to the hoof between sole and steel shoe do not appreciably increase the shock-absorbing function of the hoof, as the hoof is still being clamped together, disallowing hoof mechanism. In actuality, the damage continues to occur, and even a slight increase of pressure on the soles of the hoof through pad material forces the sole up against the immobilized, unyielding solar corium within the hoof, causing bruising and reducing blood flow in these areas. The sole often responds with a "dysplastic" kind of growth. This is an abnormal growth pattern that is thicker but not as strong or durable as normal sole that forms when a horse is allowed natural hoof form in a more natural environment. Farriers often misinterpret this abnormal growth as "healing" and a good thickening of sole, when in fact it signals the early stages of hoof deterioration.

### **We get used to seeing abnormalities, not wanting to believe there is damage...**

This faulty growth does not impress or alarm most farriers because they are accustomed to seeing abnormal and deformed shod hooves and improperly trimmed bare hooves. They work with them every day, and though there are likely many farriers, veterinarians and other professionals that are aware of the differences, many more are unaware of what these changes signify. Thus, when a farrier claims that "none of my clients' shod horses have any problems", they are actually telling the truth. However, once educated in proper hoof form and function, every farrier I've ever enlightened has looked back and been able to point out exactly where many of the deformities exist in a shod 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 bare frogs and soles, impairing the horse's ability to regulate his body temperature and excrete waste proteins through exfoliation.

### **What amount of concussion is just right...?**

There is an important and misunderstood role that concussion plays in providing life-giving stimulation to the foot. The natural hoof has concussion-absorbing 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, 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 concussive stimulation to the hoof, the horse's hooves and legs grow weaker and weaker. When owners attempt to "protect" their horse's hooves with artificial appliances and inappropriate

conditions, they are actually promoting weak and faulty growth and nurturing conditions for disease.

### **"My horse just can't go barefoot..."**

Some owners believe their particular horse, or perhaps some breeds of horses, are intolerant of being barefoot. No doubt, these people have had experiences with horses that get sore feet or whose feet deteriorate whenever they are allowed to go barefoot. What is likely the case here is that these owners are seeing horses whose feet are weak, chip easily, are always bruised and lame because they have a history of having been shod, improperly trimmed for a long time, or disallowed adequate movement on appropriate terrain from the day they were born. It isn't being barefoot that these horses are intolerant of--rather it is an intolerance to being shod, improperly trimmed and/or inappropriately managed. The further claim that the "horses have had the hooves bred right off of them" is also an excuse that certain ones need steel shoes to do their "jobs"...in actuality, it is the mismanagement of horses from the moment of their birth, and even before birth, that sentences them to a life of mediocre hoof and leg quality.

### **Creating more problems in the whole horse...**

One of the greatest damages that occurs because of the application of steel shoes to the horse's hoof is the greatly reduced circulation within the hoof, and the diminished return of blood back up toward the heart through the veins of the lower leg. Shoes interfere with the hoof's natural blood-pumping mechanism. The natural hoof expands and contracts with each step, letting blood in as it spreads upon impact with the ground, and squeezing blood up and out of the hoof as it contracts when it is not bearing weight. 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 steel shoes.

I have read that the horse's hoof "pumps much more blood than it needs to perform its functions", thus the amount of lost circulation due to nailing a steel shoe on it is of no consequence. Now, what kind of retarded excuse is this that justifies the use of the steel shoe? Why was a hoof designed over such a monumental amount of time--to assist circulation to the degree it does, so that man would be able to nail a rim of steel to it? Such a presumption is an example of the ignorance that is so prevalent and been allowed to flourish around horses for the last thousand years. In the long run, the reduced circulation in the foot and leg of the horse through the application of steel shoes harms the horse's entire body. The damage adds up over time, taxing the body with its attempts to heal, and gradually stressing it beyond its capacity to mend. Not just the feet are taxed, but all the organs and all metabolic processes. Damaged cells and tissues are able to heal only so many times, 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. 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 ignore the natural design and functions of their feet. Our arrogance in believing we can improve on nature causes them great harm. What we as stewards must accept, and try to get others to realize, is that horses' feet have great strength and durability and perform optimally when proper, bare hoof form exists and when they are kept in the most natural lifestyle possible.

## Seeking out the information and getting help...

Numerous published books have straight forward instructions on proper hoof trimming techniques and guidelines, and there are additional sources on the internet. There are programs for training owners, and re-training farriers in the natural way of trimming hooves if they are willing to go the distance and pay the price, but even with the support and guidance of all available sources, turning around everyone's attitudes toward shoeing, and changing how we provide good stewardship for our horses to provide what they really need (including lifestyles and diets), is going to be a real challenge and take some concerted effort by all of us who care for our horses. My original mentor on the subject, Martha Olivo, has herself evolved over the last few years, developing an easily understandable format with which to approach the horse's hoof and trim it successfully. She has developed United Horsemanship, an organization that lends itself as the solidarity vehicle for the barefoot movement worldwide. We are "horsemen helping horsemen become better horsemen."

A veterinarian such as me easily understands how the presence of a steel appliance on the bottom of a horse brings harm. When other veterinarians, other equine professionals, and stewards come to discover the true workings of the horses' hooves they will cease to perpetrate such harm, and will not stand idly by while others do so. When they better understand how the horses' feet are constructed, function, grow, offer protection and allow proper and vital sensation for the horse to interact with their environment, these good people will have gained a very powerful new tool. They will no longer ignorantly resort to or demand the use of a nailed on appliance or a confined lifestyle for horses. They will stop unknowingly causing pain and premature deaths for the horses they care about.

I understand this now, and I can no longer keep it to myself, for I took The Veterinarian's Oath oath nine 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."

*(Adopted by the American Veterinary Medical Association House of Delegates, July, 1969)*

## A word (or more) about integrity and strength of conviction...

To begin, this is just "facts of life" kind of stuff, and here's a fact that you can count on: I will not ever ask you to consider shoeing your horse with steel. I have conviction in my belief about this and it is unwavering. If I was to cheat by saying, "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 very keen sense of integrity. I do not sit on the fence or beat around the bush on this issue. Steel shoes cause harm to horses, and I simply can't abide that. Some folks can advocate both shoeing and going barefoot, but I cannot. I have read and understood the Veterinary Oath.

## **Some additional thoughts and feelings...**

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".

Once in awhile, you'll run across somebody with absolute conviction and rock-solid integrity, practicing what he believes in, because those beliefs are what keep him strong. Such a person may be unpopular, disliked, and even ridiculed, because he is likely to call attention to those who are wavering, misinformed or don't quite have the knowledge or understand the information presented. I know this happens, from experience, and it's often due to such adverse reactions from others that a person with strong convictions about a new way of thinking and a different way of doing who is willing to speak out and try to convince others is more and more a rarity in our world.

I'm keenly aware of how I impress some people as a "know-it-all", or seem to be "it's my way or no way" sort of guy, but that's not true. I do disdain shoeing horses, and that is a practice near and dear to a lot of people. I call into question the things they've spent their entire lives working on. Naturally, they're likely to have an initial, negative reaction, but often, when I get the opportunity to go beyond the initial reaction and enter into an in-depth exchange with these same men and women, I encourage them, sometimes rather forcefully, to examine their beliefs and their practices based on them. It can be a painful process. I've had friends and other people who have put shoes on horses for decades who break down and sob when the truth of what they have been doing hits them. This is real and it is powerful. I know: I was on the receiving end of the same process not too long ago. I am extremely grateful to have come in to this knowledge of the horse's hoof.

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 tasks and the skills it requires: the careful attention to detail, the ability to work well with your hands, working around a naturally shy but powerful animal and a caring attitude. But when "the rubber meets the road", 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, and nothing beyond these things makes shoeing a horse the right thing to do. When something is wrong, it's wrong. Steel hurts horse's feet, period.

Gradually more farriers are realizing that we have better options. Some already encourage people to let their horses go barefoot "as much as possible", but they and the owners are still not fully convinced or educated and they go along with the conventional wisdom that horses need shoes nailed to their feet for "protection" or "support" when they are participating in activities like jumping and dressage, competitive trail rides, and other demanding sports or use. But we now know that any kind of shoe nailed to a hoof damages that hoof. Every time, all of the time, 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 don't need "support", even if there was some way to get it from shoes, which there isn't. In fact, the more extreme of a horse sport you participate in, the more important it is for your horse to have natural, hard-working, properly-functioning feet...think about it.

## **Reaching our destinations with our horses...our partners...**

So in spite of the resistance meet, I am dedicated to help with the "wake up call". I feel that farriers and veterinarians and trainers and horse people everywhere must learn the truth and tell their clients, friends, and colleagues that shoeing horses damages them and robs them of years of their lives. I want everyone to know that steel on a horse's hoof is not acceptable. It is the horses that especially want and need this knowledge to become mainstream.

I particularly want farriers to learn the truth and then be held accountable for the damage they cause if they fail to inform their clients that shoeing is not necessary. They need to learn what is going on inside the horse's foot and learn how to trim a foot to achieve a healthy hoof form. They need to help educate horse owners who rely on them for guidance about how to help their horses become healthier and more serviceable for a longer time, through better hoof care. They need to know about and talk-up the judicious use of hoof boots so owners know they have a way to provide real hoof protection without damaging their horses' feet. Farriers are important professionals in the equine world and horses and stewards count on them.

Farriers are in the ideal position to learn about proper, natural hoof form and function: they have the clientele with horses, the love for the horses and they know how to use hoof trimming tools. What more is needed is the willingness and the dedication to study more thoroughly and apply more carefully the natural hoof trim, and learn to counsel their clients on more natural means of horse care and management-getting horses out of stalls, feeding them fewer rich foods and more grass in their diet, and letting horses be together in herds where they naturally belong. For a farrier, retiring the anvil and hanging up the hammer leads to being part of an inevitable change for the better and championing a noble cause, and they can rest assured that what they will be doing is founded on solid knowledge gained from careful study of the biology and physiology of the horse.

Farriers, if you let people know that you are dedicated to the welfare of the horse, you will reap great rewards. The monetary rewards will still be there, in fact they'll probably be even better, and with less strenuous work; good people everywhere will be more than happy and willing to pay for proper trimming and guidance in keeping their horses healthy, and if you become knowledgeable and practiced enough, you will be able to save the lives of many laminitic horses others ailing from hoof problems that would not be able to heal if they were treated only with conventional methods, such as so-called "therapeutic" shoeing. Money aside, the personal rewards are terrific.

"Barefoot-friendly" veterinarians are a rare breed, too; more are very badly needed. As of now, in a huge percentage of equine veterinary schools and clinics the world over, the highly effective therapy of natural lifestyle and the natural barefoot trim are not even mentioned as treatment options for lame and foundered horses. This is highly unacceptable and is a disservice to the horses we love. It is an omission that serves the egos of those who use horses as tools, rather than as the companion animals that serve us so willingly.

As time goes by, veterinarians and other equine professionals will be unable to ignore 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. A few all ready accept this, and yet there are those that can not help but prescribe driving nails in to the hands of horses even after being told that what they are doing is causing damage. Whether from ignorant stubbornness or an addiction to working with steel or whatever the reasons, they will be held accountable if they continue once this knowledge becomes more widespread.

There will be more and more veterinarians picking up on this 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 that they are. Seeing one with steel plates nailed to its feet will draw criticism from those that know better and who respect and love the horse.

### **A professional plea...**

Veterinarians...my colleagues: recommending shoes for a horse before you became aware of the overwhelming evidence against such a practice is forgivable, but if you continue that practice once you've been alerted to its dangers and understand the concepts, you're courting contempt. As recently as three years ago, I was prescribing egg bar shoes, pads, impression material and other bizarre procedures--I can't do that anymore. I deeply regret that many horses died at my hands because I didn't know what to do to save them. Now when I see horses with similar conditions, I can treat them without prescribing shoes, indeed often without anything more complicated than proper trimming of their hooves, movement, and diet. Most of these horses are better in a short time. Better yet, by keeping clients' horses out of shoes all together as they mature, the typical, super-prevalent hoof problems will largely be a thing of the past. I encourage all veterinarians to become students of the hoof and experience the huge degree of personal satisfaction that is attained by saving that "hopeless" case, and see the relief in the eyes of owners when they realize they'll never have to shoe their horses again--the gratitude and admiration I continue to receive from these folks begins a journey from ownership to stewardship.

I implore all veterinarians to learn about the much better ways we have of truly protecting horses' feet with alternatives to steel shoes--the natural trim based upon the rediscovered and continually-improving understanding of the workings of the equine foot, and a myriad of different hoof boot designs with more coming all the time. Boots allow a horse's feet to have vital mechanism with every step, and can completely protect the feet. It's really hard for me to even fathom using a steel shoe at all because these devices are simply not offering anything beneficial to a horse...only harm. We can't continue to apply them and feel good about it.

This is a plea to equine professionals everywhere. People around the world are beginning to grasp some very fundamental concepts of horse care and the care of their feet, and they will need your help in implementing what they want for their horses. Some are doing it themselves in their own back yards, taking hoof knives in hand and saving their own horses, out of a desperation born from an inability to garner professional help. It is up to 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. By doing so you will become an integral part of improving the health and welfare of horses everywhere. The fact is that truth and knowledge are destined to win out, in spite of weeping and wailing and gnashing of teeth.

*"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*

Coming into the knowledge of the horse's hoof is a powerful thing. I encourage those who have acquired this knowledge to use it, but to tread lightly! Speak with conviction, but maintain an open ear to the concerns of others. Listen as they express their insecurities and ignorance concerning the use of steel shoes; remember, that is all they have ever known. Be honest about the time and effort it will take to undo the harm shoes have caused. Learning how to enlighten and influence those that have a difficult time seeing and/or admitting what it is best for the horse is our goal.

I am continuing to learn every day as I listen to people and their concerns. 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 consult with others who know more than I do. It has never caused an erosion of the base of truth concerning the horse's hoof, rather, it allows me to further strengthen that base for my convictions.

### **The power of truth...**

The nature of the horse tells us what we need to know about the horse. The truth speaks for itself without me having to sell you anything tangible. This is the hallmark of dealing with the truth. It's difficult confronting the mainstream and trying to turn the tide, 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!