WHY HORSES MISBEHAVE

For many of us owning a horse is a dream come true, but often times our initial dreams and expectations do not coincide with reality.
We may have gotten into this relationship with an expectation of mutual pleasure, joy and fun things to do, but often reality turns out quite differently.

Being one of those people whose earliest child hood dream was to own a horse, I have been there and had to struggle my way through situations I never dreamed of. I have spent now over 45 years with horses, most of those years as an owner, and horses have been and still are a most important part of my life. Throughout these years, I have tried to learn as much as I can about them, but it seems that the more I learn the more there is I still don't know about them. But also, the more I learn about them, the more fascinating and intriguing my relationship with them becomes, yet also the more realistic.

I would like to share with you some of my experiences, so I can hopefully help you sort out some of the problems you may have with your horse, or may experience in the future.

What used to puzzle me a lot about horses was who they really are, what they really feel and understand and their capacity to love another species like us humans, for example.

Dogs were always easy to relate to for me, they show affection or other emotions much more clearly, they find it easy to make us the center of their universe. Horses on the other hand seem a lot more aloof, they are not very affectionate if at all, and as long as their physical needs are met they don't seem to care if the owner is present or not.

In my mid teens, after riding, driving and working with horses for several years, I had to start revising this view

point.
My mother had bought me a Haflinger filly I had fallen in love with, and she and I played the most wonderful games of chasing and catching, we groomed each other and we went on long walks together, the filly running free. She grew up with other horses, but I was her center of the universe. She had no other foal to play with, and when she saw me or heard me she screamed and came running.
When we moved (she was about 1 year old), I had to keep her with cows as this was the only place I could find where she did not have to live in a stall. This seemed to even deepen our relationship. Lack of her own species seemed to intensify her need for me. Most daily, I used to ride with a friend on her horses, and my filly would run along free, investigate the surroundings, but every time I called her she would come, just like a dog, and when I gave her the signal, she would run off again.
What I learned from this was that if we would spend the time with a horse that we spend with a dog, and if the horse had no other suitable play companion, he would come just as close to us as a dog.
At age 3, I put her in driving training, only to get her back as totally ruined to a vehicle. I don't know what this man did, but she had an accident and he said she was nuts. Anyway, I trained her myself, and although she was so afraid that she trembled like a leaf at first, she would do it for me. Nobody could hitch her or drive her but me for more than a year. Eventually she became so good that I could tie the reins on the dash board and just tell her what to do.
What this taught me was that horses can place incredible trust into a certain human, although they mistrust all others. A relationship based on mutual love and connectedness can endure the most difficult situations.
When she was 5 years old I could no longer keep her as I could not afford a horse and go to college. It was a most heart breaking decision for me. I found her a good home with another Haflinger gelding. 3 weeks after selling her, I went to visit her. She was in a large field with her buddy, and when I called her she came running, but after a few minutes she walked back to her friend and seemed totally happy and content with him.
This taught me about the importance of a horse having another horse. So what I learned from all this: they are highly emotional beings , they can have a very intimate relationship with us, but their first priority is still a friend of their own species.

Companionship


Although I could not afford an own horse for several years, I rode almost every day, usually “problem” horses that owners could not deal with themselves. Since I knew no fear, and unconditionally loved every horse, even mean and dangerous horses were no problem for me.
This taught me that they do respond to our love and desire to interact with them. That they can and want to trust given a chance.
It also made me curious to find out what made them “bad” like that in the first place.

Over the years, I became confronted with lots of unexplainable behavior problems, overnight resistances, slowly developing “attitudes”, mysterious drops in performance etc.

To sum up my experiences:

There is always a good reason when a horse suddenly does not perform like he used to, that he develops an “attitude”, that he “acts up”. Horses do nothing to spite us, they don't mean to do things to us, they are not just being obnoxious or belligerent to annoy us. They just can't help themselves, they don't know what else to do when we ask things of them. We humans can complain, we can describe why we can't or don't want to do what is required, but horses don't have that ability. They only can refuse to do what bothers them or they can't or do not want to do.

There are 4 general reasons why horses don't do what we expect of them:

1) they don't understand
2) they don't respect us
3) they are physically or emotionally not capable
4) they hurt

In the following, I will talk briefly about the first 3 reasons, and will take a bit more time for the fourth reason, as I feel that there are so many not understood or misunderstood variables, and that the most serious problems usually develop due to pain.
I have not mentioned fear as a separate point, as it is an integral factor of 1), 3) and 4). Any time relaxation, understanding and comfort are lost, fear develops, and with it the output of adrenaline. And since horses by nature respond to fear by going into flight mode, they can become very unpredictable as all they can think about is leaving this scary situation. Often the trainer responds to this with an increase of force, which will only make the situation worse. Creating and maintaining relaxation is one of our most important tasks as leader and teacher.

LACK OF UNDERSTANDING

Horses are by nature very willing and observant animals, but most anything we ask of them is very alien to them, often even totally against their nature. So we need to find a good base for communication, and we need to be patient and compassionate in calming their worries and doubts.
Here I would like to point out that there is a great distinction between training an animal and educating one. Training is done quite easily, it is mostly a punishment and reward system, and can follow quite simple preset rules. But it can also lead to a physical power struggle between horse and trainer if the trainer has not enough knowledge, and beware if the horse learned that he is stronger than the human.
Educating, on the other hand, demands intelligence, integrity, imagination and a more gentle touch, mentally, vocally and physically.

The most significant difference between training and educating lies in the matter of emphasis. It depends whether one places emphasis on the mental or the physical part of the horse. Conventional training places the emphasis almost entirely on the physical aspect. It is satisfactory when the horse looks good and obeys orders promptly. It assumes that the horse is an animal with limited intelligence, feeling and emotions.
Educating a horse, on the other hand, means to place emphasis on the mental and emotional aspects. This type of teaching assumes that the horse's appearance and actions are only the outward expression of his mind. It assumes that the horse has high intelligence, character and emotions. It may take quite a bit more time to educate a horse than to train him, but when his mind is in agreement, his body will be as well, and this is where our safety lies, not to mention the pleasure of the interaction.
Horses are very good at recognizing intent, they are excellent body language readers, and they are always trying to read us like they would a herd mate. But if we are not able to communicate in their language, or manage to teach the horses about our language, a lot of misunderstanding will come about.
Most problems develop because we humans cannot read them properly and understand where they are at at any given moment, physically or emotionally.
And often we fail to break down our demands into small enough steps that the horse can grasp.

We need to learn to correctly interpret their responses to our requests. It really is not so difficult as horses always clearly display how they feel, but it does take some practice. Most horses do not exhibit their feelings in a very obvious way, much of it is expressed with just a worried eye or a certain position of the ears.

Face Studies

But there is one unfailing indicator: Any lack of understanding the horse experiences creates anxiety, insecurity and with it tension and fear. Just like in us. And this is not all that difficult to read. But when this happens, the horse often gets blamed for all kinds of attitude problems. Often the general believe is that the horse just doesn't

want to, that he fully understands but just wants to annoy us etc.
Horses do not function that way. If the horse really understood and does not do what we asked, then he does have another good reason, but it is not to just annoy us. This is one of the features that horses do not share with humans.

LACK OF RESPECT

By genetic code, horses are herd animals, and there always exists a very distinct hierarchy in any herd. It usually is decided by who can dominate whom, who is stronger, who is smarter, who makes a better leader.
Down to the last horse, each will find his place. Some horses may not like it and keep challenging the horse above them, but usually they quite gladly accept their position as it creates peace and comfort.
When we interact with a horse, we better make sure that we are the top horse, otherwise the horse will not respect us, submit to us and do as we ask.
It is not necessary that we "dominate" the horse, but we do have to make sure that the horse understands that we are in charge and determine what is going to happen. This can happen on a friend ship basis, but the lines need to be drawn clearly.
If we cannot accomplish that, the horse will disregard us, push us around, drag us around, run right over us, even become aggressive. Usually the horse does not enjoy this role, although there are some horses who will keep trying for it, even with an accomplished handler. Just like with humans, there are some types who are more driven to lead than others.
A horse will do what is necessary to feel safe and taken care off. If we cannot fill this job for him he will try to do it himself. Most horses are not good leaders and are glad when someone takes over, as long as that someone is trustworthy and reliable.
In my lecture "Driving from the Ground up" I will talk a lot more about this, and I also would like to refer you to this web site www.kbrhorse.net/misc/fb-wha.html. It is a great site with lots of good advice.

LACK OF ABILITY, PHYSICAL AND EMOTIONAL

If the physical ability is lacking, it usually creates an emotional problem as well. Like the old saying goes: A healthy mind in a healthy body.
There are lots of reasons why the horse can lack physical ability:

a) age
b) conformation
c) overall physical condition
d) current state of knowledge

To a) Horses do not mature physically until the age of about 6, geldings even later, and emotionally until the age of about 8. Please read www.equinestudies.org/knowledge_base/ranger.html. There are other excellent articles on this site as well.
Asking an immature body to work too hard can quickly lead to physical over demand, and many situations may be too difficult to deal with emotionally for a young horse.

To b) The way the horse's body is put together can have great influence on what is hard or easy for him. Just to assume that he can do what any other horse can do may lead to conflict.

To c) If the horse lacks overall physical fitness, he may get tired very quickly and quit, and if his basic horse needs of movement and companionship are not met he may be mentally very unstable.
A major reason for this is the traditional way of keeping horses in stalls or small turnouts by themselves.
Horses are highly social animals, they prefer living in small herds, they are by nature browsers, designed to cover large distances each day in the search of food, which they have to take in pretty much around the clock to keep their fragile digestive system in healthy working order. They don't have a night and day rhythm like we humans, a lot of their feeding and roaming takes place at night.

They require company and physical contact with at least one other equine, be it horse or pony, mule or donkey, and they require lots of movement to keep their joints lubricated and their circulation at an optimum. Horses have a very small heart and need their muscles to aid in moving the blood around the body.

Keeping them in stalls, which are basically nothing but a cage, and a very small one at that, and which in essence are equal to solitary confinement, turning them out in a small paddock by themselves, often only for short periods of time, feeding them lots of concentrates and little roughage, and so on, is totally against their nature and can cause many physical and emotional problems.

These problems will manifest themselves in pent up energy, anxiety, or even aggression, and in physical health problems like stiffness, lack of muscle tone and strength, weak back from poor stance in the stall as the horse keeps trying to see what is going on and keeping his head high for much of the day, and hoof problems. In order to stay healthy, hooves require lots of movement. And of course respiratory problems from the bad air, and digestive problems from inadequate roughage, too much time between feedings and stress from confinement. When a horse's stomach is empty for more than 3 hours the lining of the stomach walls will begin touching and creating ulcers in the process.

Horses do survive in amazingly inadequate conditions, but to be their best, they also have to live their best.

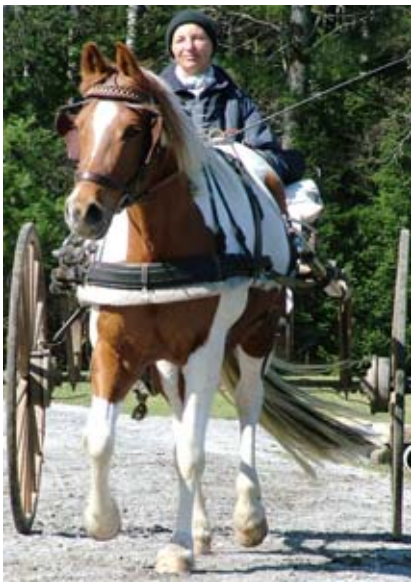
To d) We need to be able to correctly assess the current state of knowledge and understanding of the horse we are working with, and understand how our demands affect the horse.
Use of training devices also needs to be considered. Many training devices have forceful effect and do not contribute to physical and emotional advancement and well being.

PAIN

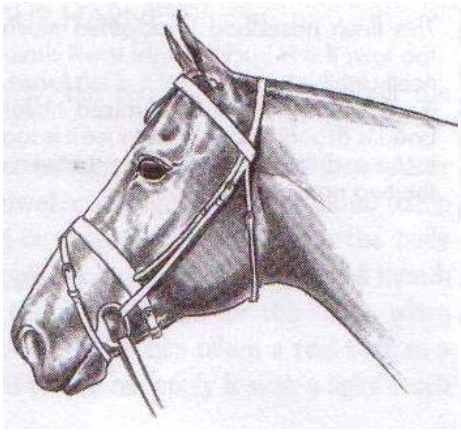
There are so many factors that can contribute to pain, that I will not be able to mention them all. But here are some of the most common ones:

Tack
Ill fitting bridles like blinders too close to eye; too short brow bands; too tight nose bands; nose bands too low, impairing breathing; improper bitting

Blinders



Nosebands



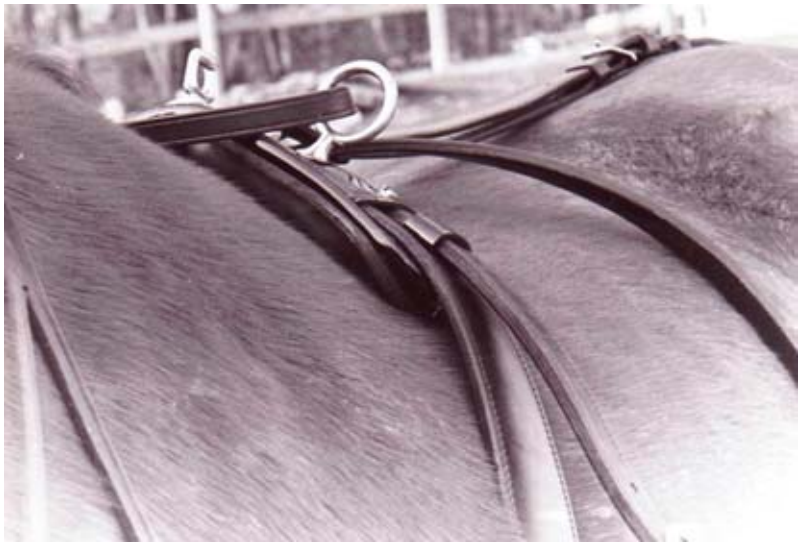
Breast collars too narrow, placed too high or too low
Neck collars being to tight or too loose

Breast Collar

Neck Collar

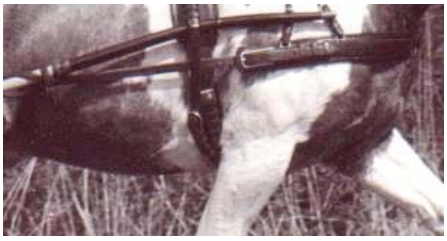
Harness saddles contacting the spine, too narrow, digging into the back

Saddle Problem



Girths being too bulky and hitting elbows at every stride

Girth Problems



Breeching too tight, inhibiting movement

Breeching Problems

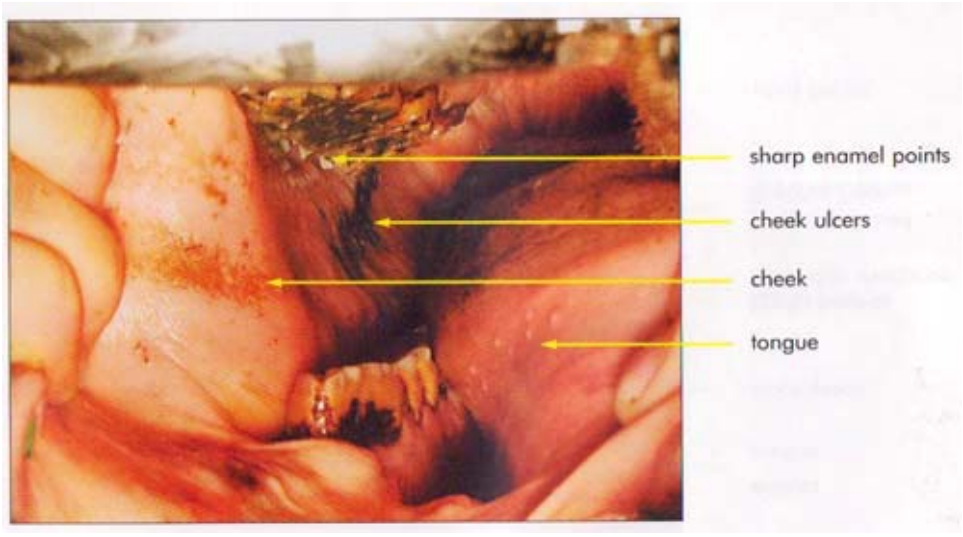
Traces too short in pair, so collars do not contact chest

Traces Too Short

use of check reins prohibiting relaxation

Teeth
Sharp points on the teeth contacting cheeks

Sharp Teeth



Sharp Teeth

Tooth alignment problems prohibiting proper movement of the jaw
Wolf teeth interfering with bit
At least once a year, better even twice a year, an equine dentist should be consulted. Unfortunately, not all of them are good and skillful. I have had huge problems with poorly floated teeth.

Mouth problems

Due to irritation from forage, leading to slobbers, ulcers,
horse may have bitten his tongue
bruising from bit
tongue over the bit
new teeth growing in

Vaccines

Vaccinating can lead to sore injection sites for weeks at a time
It can also lead to an overall impact on the immune system, making the horse feel low and weak

Feeding

Poor feeding practices of inadequate roughage, too much grain, too much time between feedings, can lead to painful hunger, stomach ulcers and even colic symptoms
An estimated 90 % of all competition horses suffer from stomach ulcers.
Poor mineral balance can lead to muscle weakness, skin problems, behavior problems

Injury

It is usually the invisible injuries that create the biggest problems. Horses can fall, can twist a leg, can pull a

tendon, can rupture a ligament,can dislocate their spine, and the list goes on.
If lameness is present, we can at least understand why the horse would not perform, but if nothing is really evident, it becomes a huge puzzle. This is most often the case with dislocations.

Physical development

Just like with us, horses' bodies need to be gradually developed in a physiologically correct manner. As a teacher, we need to understand what a horse can do presently, we need to have a training outline, and we have to be a good judge of what is appropriate and what is too much. Just like we, that can get very sore muscles, which can knot up and cause major problems. They may need regular massage, chiropractic or acupuncture to relieve work related issues.

Diseases

There are some diseases that are becoming quite frequent, and are very difficult to pinpoint, esp. in the initial stages
The most common ones are :
Lyme disease
The most common symptoms are lameness and behavioral changes. The lameness is usually associated with larger joints (not the foot), and frequently shifts from limb to limb. The horse may appear to have a generalized stiffness. Fever may or may not be present. Occasionally, laminitis (an inflammation of the tissues inside the hoof wall) has been associated with Lyme disease. Behavioral changes associated with Lyme disease are difficult to categorize. As well as an unwillingness to work (which may be associated with musculoskeletal pain), owners frequently observe increased irritability and a changed attitude in these horses, which quickly return to normal following treatment.

EPM
EPM is an infection of the central nervous system of horses. The neurological signs that it causes are most commonly asymmetric incoordination (ataxia), weakness and spasticity, although they may mimic almost any neurological condition . Some of the signs cannot be distinguished from other problems, such as lameness. Airway abnormalities, such as dorsal displacement of the soft palate (snoring), or airway noise of undetermined origin may result from protozoa infecting the nerves which innervate the throat. Apparent lameness, particularly atypical lameness or slight gait asymmetry of the rear limbs are commonly caused by EPM. Secondary signs also occur. Upward fixation of the patella (locking up of the stifle) is among the most common findings among horses with neurological disease. Another common side effect of EPM is back soreness, which can be severe.

EPSM
Symptoms include abnormal hind limb gait, poor muscling, poor performance, lack of energy, tying up, episodic colic, attitude problems.

West Nile Virus
Some minor clinical signs include loss of appetite, loss of coordination, fever, stiffness and muscle weakness, all signs that could be confused with other reasons.

DSLD
This disease is very hard to diagnose and often is at first misdiagnosed as EPM or West Nile.
Symptoms include: Recurring unexplained lameness, stumbling, enlarged suspensory ligaments, laying down

frequently, reluctance to move, horizontal pastern, skin allergies, reluctance to go down hill, and lots more.

Hoof problems

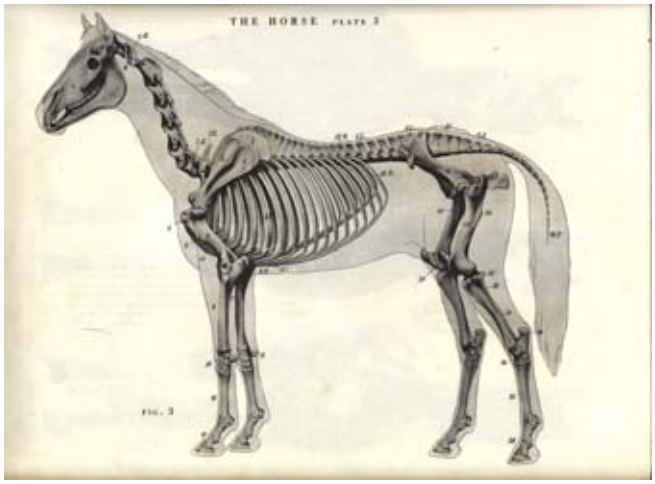
These problems are so wide spread and so misunderstood, that I will go into greater detail:

THE HOOVES, BASIS OF ALL MOVEMENT

Hooves have to support the horse's weight, aid in traction, absorb impact shock and protect the vulnerable inner structures. They also need to aid in circulation as there are no muscles below the knee, and blood needs to be returned up the leg via a mechanism similar to hydraulics. There is a saying that a horse has 5 hearts.

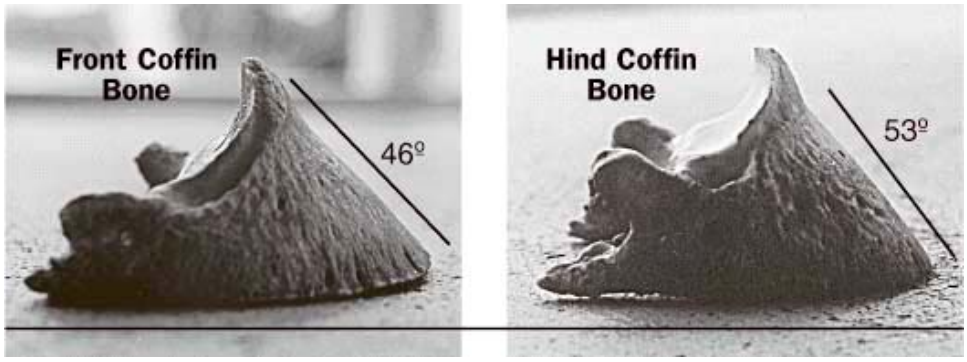
In order to be comfortable and move to his best abilities, the horse's hooves have to be in perfect balance and health.
As they are at the very base of the horse's skeleton they have tremendous impact on the entire structure above. If they are not balanced correctly toward the ground, all the rest of the horse will be affected.

Hooves As Support Of The Whole Body



It begins with the fact that nature designed the horse with a steeper angled coffin bone in the rear vs. the front, usually by about 5 degrees.

Front And Hind Coffin Bone



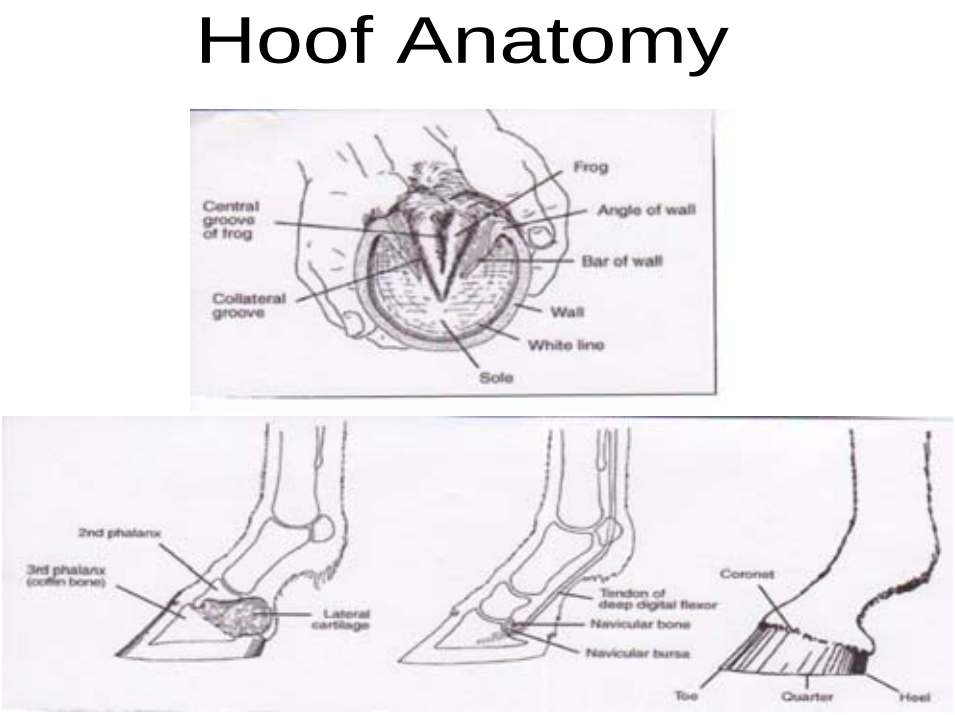
This is due to the fact that front and hind legs have very different function for the horse: the front legs are mostly for weight support during forward motion while the hinds are the engine. The hind feet are also more triangular for this reason, with an almost pointy toe, so they can dig in better, while the front feet are more round, to accept the weight better.

Front Hooves Hind Hooves

When artificially raising hoof angles in front by either allowing heels to grow too tall or applying wedge pads, this balance gets disturbed and has far reaching consequences, esp. on the shoulders and pelvis of the horse. I am not sure what mechanism causes this, but whenever front angles get too steep, hind angles in response get shallower. The whole base of the horse is thus changed.

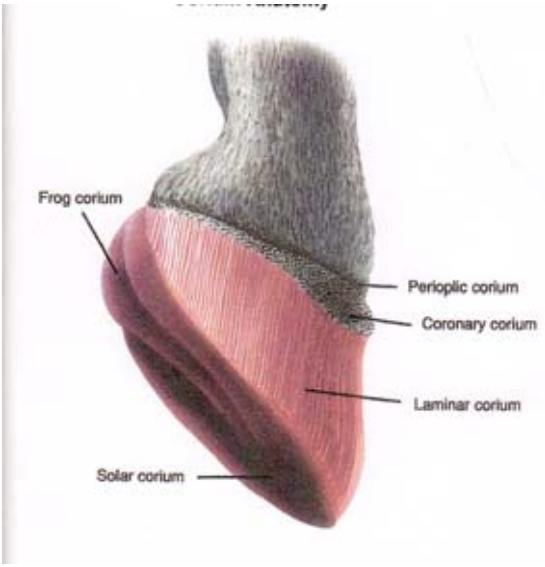
Basic Anatomy

To really appreciate the complexity of all this, one needs to understand a few basics about the anatomy of the hoof capsule.



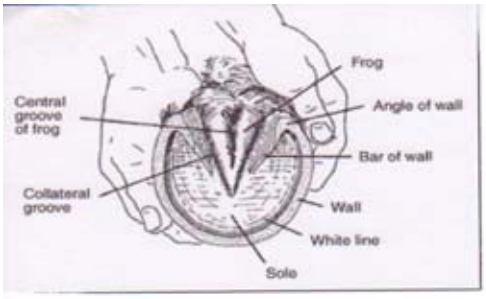
The visible part of the hoof, the hoof wall and the sole and frog, are a protective covering for the complex structures inside. There, in this relatively small space, one finds the coffin bone, navicular bone and part of the short pastern bone. And as an extension to the coffin bone the lateral cartilages on each side of the foot. Aside of this, the large extensor and flexor tendon insertions, and numerous ligaments which keep the joint capsule together. One also will find a huge amount of blood vessels, a "blood sponge" called the corium which surrounds the entire outer surface of the coffin bone and lateral cartilages, and from which the inner part of the wall grows, and on the bottom of the foot the sole and frog. The outer part of the wall grows down from the coronary band. There are of course lots of nerves, and last but not least a structure called the digital cushion which fills a large part of the hoof capsule below the frog.

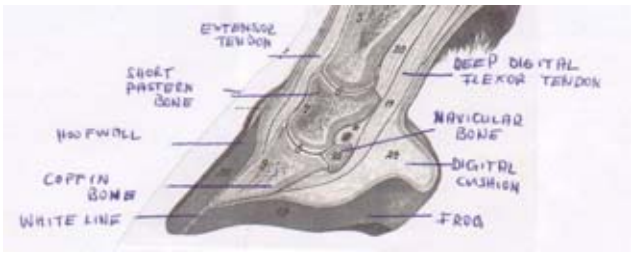
The Corium

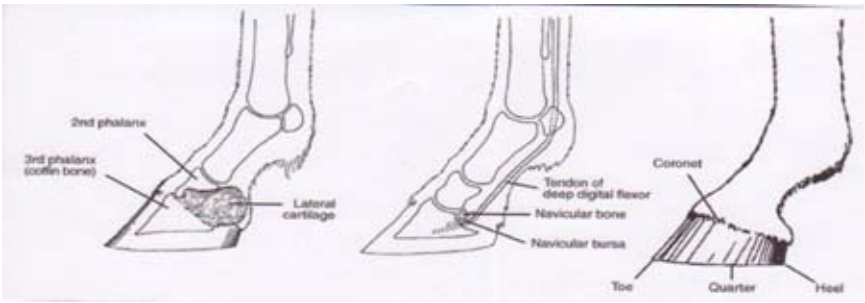


The Corium

Hoof Anatomy







Basically, the front half to two thirds of the hoof are relatively static, while the remainder is relatively deformable. I say relatively because there is no part in the hoof except the bones themselves that is not deformable to a certain degree, or which is not also responsible for support or protection.
The reason why the front part is more static is that the hoof capsule is tightly connected with the coffin bone. In the rear part, it is connected to the lateral cartilages which are quite deformable, and in the heel area the hoof capsule is open, the ends returning toward the center of the sole and thus forming the bars. The rest of the heel area is filled out with the heel bulbs and the frog. Both these structures are highly deformable. So the only horny and truly firm and supportive part in the heel area are the corners that the hoof wall creates.

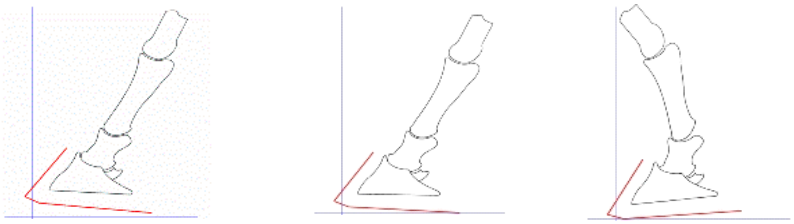
So it makes sense that the rear part of the hoof is designed to absorb impact shock while the rest of the foot is there to support the weight in general.

Heel First Landing

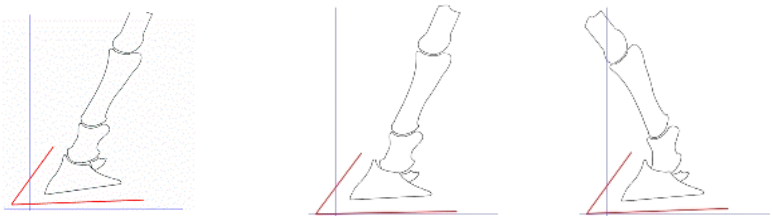
This means that the horse must land heel first on all 4 feet if impact absorption is to be optimal. The entire movement sequence of the limb is set up this way. If the horse lands toe first, a totally different loading sequence needs to happen, over stressing ligaments of the joint capsule and the deep flexor tendon.
On the other hand, a horse will always land toe first going uphill and heel first going downhill, he has no other choice for as soon as the knee straightens and locks into the extended position, the hoof has to hit the ground where it falls. It is really only on a level surface that one can make an accurate observation.

The better balanced the hoof the more correctly the horse can load it. In other words, the longer it is possible for the horse to land heel first, even going uphill, and the sooner the toe area can leave the ground again, the less stress on the structures. This is especially important for a driving horse as the load of a carriage increases dramatically the steeper the hill, putting that much more weight onto the hooves.

Heel First Landing (with optimum break over)



Toe First Landing (with delayed break over)



Break over

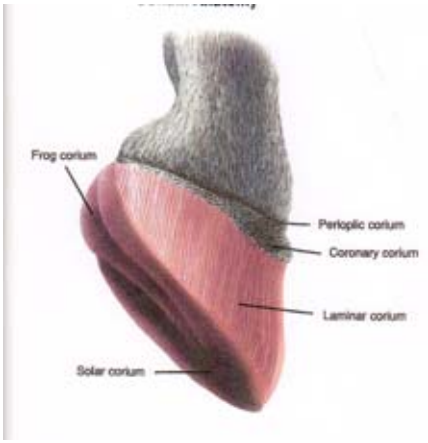
Break over should occur when the extended line of the front surface of the coffin bone would hit the ground. Often this is not the case as too much toe has been allowed to grow, thus delaying this moment. Often one can tell only with a good x-ray where the exact location is, as hooves can become very deformed and contorted by wrong trimming or shoeing.

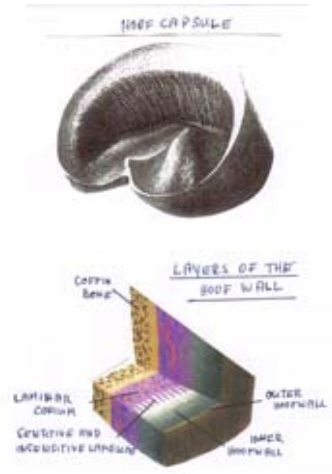
Break Over

The Suspension System

The coffin bone itself only weighs a few ounces, is pretty much triangular from every view point, and has a very sharp bottom edge. It would be impossible for this small bone to withstand the enormous weight from above if it was not for the ingenious suspension system that holds it literally in space.
Before I mentioned the corium, the blood rich soft tissue that surrounds and is tightly attached to the bone and cartilages. Where the hoof wall is produced it looks like lamellae on the underside of a mushroom. These lamellae keep producing horn around themselves, thus creating a mirror like horn structure and connecting it to the wall that pushes down from the coronary band. It is sort of like a velcro connection, and through this immensely strong but also somewhat flexible connection the coffin bone suspends itself within the hoof capsule. When viewing the hoof at sole level, one can see this juncture as it grew down to ground level. It is called the white line and is quite narrow all the way around, about 1/8 inch or less, in a healthy foot.
So the bone itself is never truly loaded or stressed on impact. It is all soft tissues that disperse impact energy. The bone really is only the base where all the soft tissues can attach to.
This can change dramatically when wrong stresses affect the hoof capsule. As strong as this “velcro” connection is to shearing forces, it is also very vulnerable to wrong lever forces acting upon it, like too long walls, too long toe walls or too high heels. Like velcro, it can quite easily be pulled apart sideways, thus weakening the suspension of the coffin bone and not seldom allowing it to actually drop to ground level.
Needless to say that this will make the horse very sore, one reason why many horses “need” to wear shoes.

The Suspension System





Failing Of The Suspension

Coffin bone detached from hoof wall

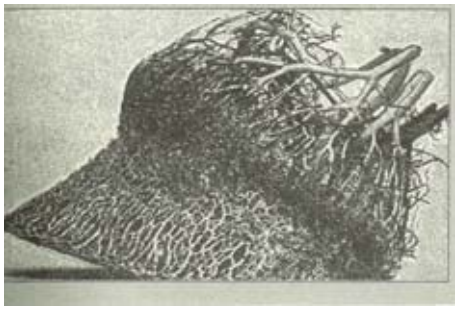
Tightly suspended coffin bone

The Hydraulic System

Equally ingenious is the way the initial impact is absorbed in a heel first landing. When the foot is in the air, blood rushes down into the hoof capsule.

On impact, this blood is forced through tiny micro vessels in the heel area of the foot, acting like a hydraulic system. There are no valves in these vessels so the blood can move where ever it is pushed to. Then, on complete landing, soft structures within the hoof capsule become compressed, empty out the arterial blood, the venous complexes collect the blood and through the enormous interior pressure that has been created blood will be pushed back up the leg.

The Hydraulic System



Function of the Frog

Another important factor to understand is the role of the frog.
Aside from aiding in the flexibility of the hoof capsule and better traction, its main purpose is support of the coffin bone joint.
When the horse loads the foot, the fetlock joint gets pushed down, which in turn pushes down onto the joint connection of the short pastern bone and coffin bone. While the deep flexor tendon limits how far this joint can be stretched, it relies on support from the frog from underneath. As mentioned earlier, below the entire frog area and back part of the hoof, the digital cushion fills the hoof capsule. As the coffin joint descends, it can sink into the forgiving structure of the digital cushion without any harm. But if the frog is not touching the ground, and act as a counterforce, limiting this descent, the digital cushion itself cannot totally absorb the descending weight, the sole and inadequate frog get pushed toward the ground and the deep digital flexor tendon gets overstretched. This puts too much strain onto the tendon, the navicular bursa and the navicular bone itself, and also stresses all the ligaments of the joint capsule.

Cross Section Of Hoof Capsule

Deformation of the Hoof Capsule

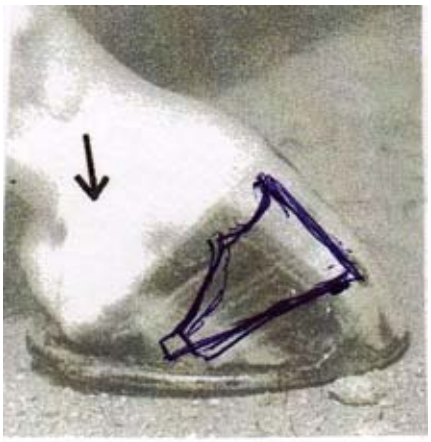
Since the hoof capsule is so flexible, it can also easily be deformed by wrong pressures.
One of the most common deformities is contraction. This is a state where the rear part of the hoof capsule becomes compressed, often to a point where the frog is only a thin and weak structure that no longer can fulfill its job. It often also goes hand in hand with underrun heels.
Contraction is mostly caused by too long toes. As the hoof capsule is a cone shaped structure, the too long toe gets too much pressure, esp. also from toe first landing, and the entire structure becomes narrower and longer.
It is also very commonly caused by shoes, for the same reason as just mentioned, but also when shoes are applied too tightly, are left on for too long or the horse is shod at a young age.
Coffin bones do not mature until the age of 5, and when horses are shod earlier the coffin bones cannot grow to their full potential.
In many cases, the bone gets deformed so the hoof will never be able again to reach its full potential.

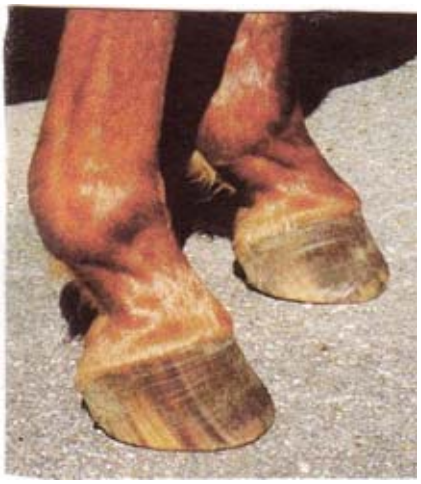
Underslung Heels

Contraction

Good front foot

Low Heel High Heel

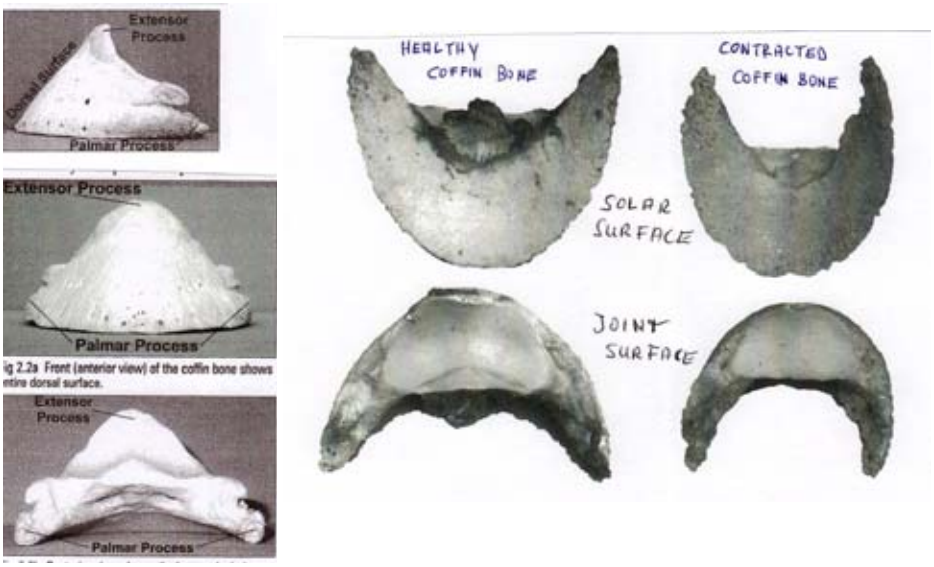




High Heel And Neglected

Long Toe

Coffin Bone



This is only a VERY brief overview. I would like to encourage you to go on line and educate yourself some more.

There are countless websites by now with wonderful information.

To get you started, you may want to go to:

www.hoofrehab.com

www.hopeforsoundness.com

www.barefoothorse.com

www.tribeequus.com

You will find many other links on these sites, and you can always use the search engine.