

The Benefits of Barefoot.

To shoe or not to shoe?

Before really delving into what I see at the benefits of barefoot, I think it helpful to add a little information about my own journey as this will give context and set the scene.

I started riding as a child on a school friend's pony. Over the years I went to riding schools, helped out looking after horses and eventually was lucky enough to get my own horse. All these horses were shod, and I never questioned it. It's what the responsible horse owner does after all, right? If I'm honest the rare occasion I came across someone who did have a horse barefoot elicited an eye roll from me and a muttering of tree hugger. So why have I become a "tree hugging" barefoot advocate? Seems like an unlikely U-turn?

Enter Mary, racing name Heavenly Pursuit (now the name Heavenly Hooves suddenly makes sense I hear you cry). I bought Mary aged 3 and half off the track as a retired racehorse straight from the trainer. She is the beautiful girl pictured on my website home page. I could have burst with pride when she first came home and I was determined to do everything right, only purchasing the best feeds (as I thought then) and taking my time re-backing her. Now cutting a very long story short, Mary had a lot of physical issues but the life changer for me was a fractured pedal bone and damaged lateral collateral ligament of the coffin joint. She had 3 months box rest with heart bar shoes to stabilise the fracture (I still advocate shoes in this scenario) and then was due to have 3 months field rest for the ligament to finish healing. When the day came to turn her out, she was to have her heart-bars removed and normal shoes put back on. The farrier cut her feet too short and her sensitive thin soled feet couldn't handle it. That poor horse was so sore she could barely walk out to the field after 3 months confinement. This really upset me and I started to question what was going on. Why was she so sore? Were shoes really helping or part of the problem? She was always losing them anyway so maybe that should tell me something?



Image Above: Me and Mary in 2012 soon after I re-backed her

And so began a journey that has brought me to being a professional Equine Podiatrist / Trimmer.

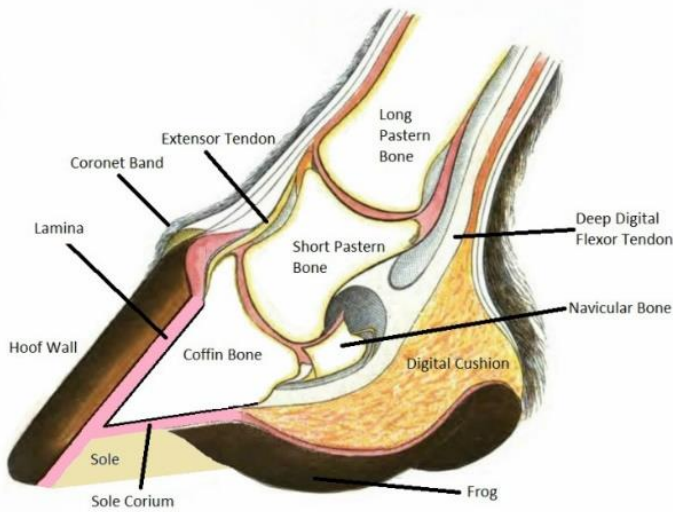
And Mary? Well, she made a slow but effective transition from shoes to barefoot and ended up with really rather good feet. Tragically she had too many other problems and I lost her at the age of 8 to liver cancer. It was gutting and I still miss her, but her legacy lives on and I hope as a result of what she taught me I will be able to help many other horses in her honour.

Now you have a little insight into my "journey", let's get into the interesting stuff – what did I find in that early research and what have I discovered since that convinces me that barefoot is a great way to keep your horse?

First, let's take a look at some of the internal anatomy. The hoof is an amazing structure. Consider for a moment, the strength needed to take the weight of the horse's body, the durability to go across different terrains, the strength and ability to absorb the shock and ground reaction force hitting the floor at speed in a gallop or landing from a fence?

The traction required not to slip on wet ground, the strength in laminae to hold the pedal bone in place despite all the force placed against it?

Incredible, almost unbelievable? But it's all there. And working as nature intended in a healthy foot. Ah, and therein lies the rub – a healthy foot. I'll return to that thought shortly.



http://geoface.info/e5/010b0/the-hoof-capsule-contains-3-bones-the-coffin-bone-the-navicular-bone-and-the-distal-lowermost-portion-of-the-short-pastern-bone_hoof-anatomy-and-fu-on-barefoot-hoof-diagrams.jpg

Take a moment to look at the diagram above. Think about the shape of the hoof. If you have only ever seen the bottom of a hoof with a shoe on then take a look at this foot below. Beautiful yes? And you can see the different layers of the wall – the outer wall – heavily keratinised making that tough casing that protects the inner structures, the inner wall, a less dense structure that helps in shock absorption and the white line that seals the wall and the sole together. Consider the concavity. The hoof shape that allows for flexion and expansion at the heels through the frog and digital cushion above. It's all been perfectly designed.



When a healthy unshod hoof touches the ground, it will land very slightly heel first, meaning the heels and frog will impact first. The frog will dissipate ground reaction force (GRF) up through the digital cushion, the lateral cartilages and onward up into the bony and tendinous structures above. The heels expand slightly, again dissipating the impact forces. As the rest of the foot lands, it will be supported by the sole and more of the GRF will be absorbed by the inner wall, the laminae and again up into the other structures higher up the foot.

With a shoe in place, the heels cannot expand in the same way as they can shoeless, the frog is unlikely to make contact with the ground, often leading a weak atrophied frog and a weak digital cushion. These weakened structures are unable to provide the same shock absorption qualities as healthy structures.

Whereas in a barefoot trim, the inner wall, which is a more flexible material, will take the impact from landing, in a shod hoof this will be sent up the hard outer wall which is less able to absorb shock. Add to this a piece of steel that greatly increase the GRF and shock as the foot hits the ground and you can begin to see why problems such as side bone, ring bone, arthritis, navicular, long toe low heel syndrome.... I could go on.... are commonly occurring issues.

Great – it's easy to see why young horses shouldn't be shod then, yes? But what about the older horse, who has been shod many years and who goes hopping lame as soon as she loses a shoe? Surely she should be shod.

At this point I will refer back to Mary as she is an excellent (and by no means uncommon) example.

When I first took her shoes off, she had very thin soles, she had pancake flat feet, very long toes and heels that were so under-run the heel tubules almost ran parallel to the ground. Her digital cushions were incredibly weak and her frogs were tiny shrivelled sorry little things. Now to be fair, I didn't understand what any of this meant at the time. I had never heard of a digital cushion, never mind thought about what purpose it served and how I could improve it.

I found an equine podiatrist (who even knew such people existed!!) and embarked on a programme of healing and strengthening which also looked at diet and management. I won't talk about these things too much here as transitioning will be the focus of another article but suffice to say, after allowing time and plenty of it, a careful programme, good trimming and changes to management, things began to change. The frog developed which in turn helped with stimulating the digital cushion which began to firm up. The heels then had structures to support them and rather than collapsing they began to come back. The toe came back. The sole thickened. We had working bare feet! If I hadn't seen it myself, I wouldn't have believed it. But there it is. Barefoot works. If you do it right.

So, **some benefits of barefoot** (not exhaustive) in list form for those who have had enough of my ramblings...

- Improved foot function allows proper shock absorption
- Proper shock absorption prevents concussive injuries in the foot and throughout the body
- A hoof transitioned to barefoot will have a less detrimental effect on pre-existing conditions
- Healthy supporting structures can reduce the symptoms of heel pain and navicular syndrome
- A properly trimmed barefoot has far better traction than a metal shoe
- Shock is reduced by not having a piece of steel impacting the ground
- Bare feet will show up problems sooner so they can be resolved before getting worse
- Shoes will often mask problems until it is maybe too late
- Bare feet can be supported with hoof boots when needed either for the rehab phase or for when working on tougher surfaces than the horse is conditioned for.
- Bare feet make the owner understand their horse's hooves better!

For balance, to show it's not all a bed of roses, **here are some downsides:**

- It's more effort to keep a horse barefoot.
- Changes may (in almost all cases will) have to be made to horses diet and management
- Going barefoot can take time. Some horses walk out of shoes sound but most will need a degree of healing and conditioning time.
- It's possible with a shod horse, to push it beyond the limits of what it's feet are capable of. **

** I want to expand on this point. I have put it on the "downsides" as it may mean that an owner has to re-evaluate what they do with their horse. In the short term this can be disappointing or frustrating. However, if we truly value our horses and want the best for them, should we be pushing them beyond their capabilities?

Personally I don't believe we should and very often by doing so, we reduce their working life as concussive injuries are exacerbated by poor hoof structures. Just as every person is not physically capable of being a champion athlete, nor is every horse blessed with feet capable of going round Burghley. Pick the right horse for the job and look at its feet as part of that assessment process!

If you are still not convinced about what horses can do barefoot, look at these pictures below of a lovely mare that I trim who was taken barefoot in her late teens, now in her twenties. She hacks out over all surfaces with no problems. She hunts and manages on poor footing far better than her shod counterparts. I am using her as an example but there are many many more out there! She is not the exception, she is the rule!

