Lessons from the barehoof 'rehab' centre

By Andrew Bowe, BAppSc, Master Farrier Photos courtesy of Mayfield Barehoof Care Centre

Quite some years ago (circa 2002), we began to rehabilitate horses with hoof problems at our home farm 'Mayfield', which is tucked into a valley at the foothills of the iconic high country in north-east Victoria. This was also about the same time we began to look at the possible benefits of keeping horses barefoot, rather than the more traditional approach of corrective shoeing. In the years since, we have set up quite a substantial facility at Mayfield, and many horses have passed in and out of our gate, successfully rehabilitated from serious hoof pathologies; some that had previously been considered hopeless cases. All but a very few have been rectified.

Whilst we deal mainly with serious acute laminitis cases, we also see an endless procession of horses suffering from a range of chronic lameness conditions, such as navicular, ringbone, sidebone, pedal osteitis and, of course, chronic laminitis. There have also been horses with lameness and/or loss of athletic performance, due to chronic imbalance or hoof deformity, and plenty of patients with hoof infections, including seedy toe, white line disease, thrush, pedal bone infections and canker. We've had horses with fractured pedal bones and torn apart hoof capsules of varying severity. We even had one little patient who ripped his entire hoof capsule off and came to us with just a bare pedal bone protruding from the stump of his hind leg (and fortunately left us walking on a new hoof).

Judging by the ever growing flood of emails that we continue to receive asking for help, there must be an enormous number of horses 'out there' with hoof problems. There must also be a growing awareness amongst horse owners as to the merits of barefoot rehab as an alternative treatment regime.

No doubt there are still many horse owners who haven't heard or seen that there are new ways to treat old problems. So, our message to anyone who has the misfortune of managing a horse with chronic lameness issues is, if traditional treatments haven't worked, don't give up, there just may be other options for fixing recalcitrant problems.



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LEFT: Veterinarian 'Poss' Thompson discussing the finer points of a laminitis diagnosis and proposed treatment with Equine Podiotherapy students at Mayfield.

BOTTOM LEFT A & B: For seriously broken apart hooves such as those with penetrating laminitic pedal bones, the stay may be as long as 6 months. Out with the old and in with the new: Photo (A) is on arrival and Photo (B) shows just two months of hoof growth.

BELOW: The rehabilitation facility itself is certainly not very high tech. It is centered around a large open sided shelter $(20m \times 10 m)$ that is paved with bricks on a sand base and has a large $(8m \times 5 m)$ soft rubber mat in the centre.



Why share our experiences?

Back at the start, we were quite unknown to the broader industry and, in any case, we were probably thought of as being too far to the left of mainstream to be taken seriously. As a result of this, many patients have come to us as a last resort. Some have been too far gone to save and others have survived, but with permanent damage courtesy of the duration of their chronic pathologies. Hopefully, when this information disseminates more widely through the equine industry, horses may be sent to barefoot rehab centres much earlier in the disease process; not just as a last resort.

Unfortunately, however, we can only accommodate and rehab a small number of horses at Mayfield; just a miniscule portion of the broader industry. Besides, Australia is a big country and lame horses shouldn't be made to endure long float trips to distant rehab facilities.

By documenting what we actually do at the rehab centre and also showcasing some of our success stories along the way, maybe we can inspire others to set up similar ventures. Each patient has given us unique learning opportunities; lessons that can't be learnt from text books. But, what use is learning if it is not shared? It is pointless to horde knowledge. This is why we will follow up this article with a series that will document some of the more useful lessons we have learned from the barefoot rehab centre.

Before this piece proceeds any further, however, we had better get the obligatory disclaimers out of the way so we can tell the Mayfield story candidly, without stuttering in the attempt to remain politically correct.

The equine hoofcare industry is delicate at times and it's not hard inflame the centuries old turf war between farriers and vets, but we are not operating as some sort of poor man's alternative to veterinary science. Far from it, we basically act 'after the fact', after horses have been diagnosed and had veterinary treatment initiated, so we can set about the business of growing better hooves than the diseased, deformed and broken ones that patients coming to Mayfield arrive with. Hooves are our business. Diagnostics, disease and injury are the vets' forte, but we all share some middle ground when it comes to the recovery process.

Often, the required veterinary procedures are implemented at Mayfield where 'our' vet is a constant visitor. We are fortunate that she travels the highway past our place every other day and doesn't mind a late finish. She is right on the same page with us in regard to the principles of barefoot rehab and is refreshingly open-minded, but she also brings to the table exceptional diagnostic abilities to ascertain underlying pathologies that are so often elusive. She is very experienced in equine lameness but, being a true professional, she will seek advice from her network of consulting specialists whenever we present her with a case that has obscure origins she has not yet encountered. Mayfield would not have developed and sustained like it has without veterinary assistance.

Much of what we do at Mayfield (and beyond) is not mainstream and, so often, the parameters of barefoot rehab that we apply to the hooves contradict the parameters of traditional farriery. This hasn't always been well received by the 'old guard'. In fact, we seem to draw no end of unfriendly fire from the safe bunkers of social media whenever we publish information like this article. But, the simple truth is that we would not have had the success turning around so many serious cases had we rigidly held to our old paradigm of corrective shoeing. Like it or not, but supersession always shadows tradition.

What is barefoot rehab?

Barefoot rehab basically involves the regrowth of fully functional healthy hooves to replace dysfunctional hooves, no matter whether they are diseased, deformed or physically traumatised. Out with the old and in with the new.

In practice, it is based on maintaining hooves within the parameters of normal physiological functioning; parameters aligned to the research findings of Prof. Bowker (see Navicular Syndrome article on Page 56).

In an over- simplified explanation, this translates to a hoof that is weightbearing on its entire ventral surface (frog, sole, laminar line and inner wall), but not the outer wall, which remains nonweightbearing. Such a hoof also has a short breakover and is three-dimensionally balanced according to the contour of its solar plane. In practice, rehabilitative hoof management simply involves removal of any excess hoof material which is impeding function, with the addition of a fully supportive ground surface, which is provided by padded hoof boots.

Even though the hooves that arrive at Mayfield are a long way from normal, recovery is usually straightforward, because equine hooves are physiologically programmed to return to their default position of function. Simple, but it does take time.

The usual length of a stay at Mayfield would be one-two months, rarely less, but often longer (it takes on average four months to grow new hoof from coronet band to the ground surface at the heels). For seriously broken apart hooves, such as those with penetrating laminitic pedal bones, the stay may be as long as six months.

Sometimes, patients are only needed for as long as it takes to reset their lifestyle factors (diet and hooves), and for their owners to implement changes in their living quarters to continue the recovery process back at home and prevent the same problems from reoccurring in the future.

The facility

The rehabilitation facility itself is certainly not very high tech. It is centred around a large open sided shelter $(20m \times 10 m)$ that is paved with bricks on a sand base and has a large $(8m \times 5 m)$ soft rubber mat in the centre (See photos). When needed, nests of hay or straw are constructed for those patients that need to lay down to get off sore hooves. Of course, such nests are sometimes solely used for urine and manure collection; but - hey - whatever it takes to give a patient all the comforts of home!

Apart from a retaining wall on one side that is used to strategically position feed bins and hay nets for angled feeding ramps, the shed is fully open-sided and has a high roof. Horses like open, airy spaces. So often we see an immediate improvement in the disposition of a patient just by changing from closed stables to our open shed. Horses just don't like to be locked in caves.

The rehab shed can be partitioned off into individual cubicles that do not obstruct the overall sense of open space, and most importantly still allow contact and grooming with equine neighbours. Of course, the partitions are solid enough and high enough to prevent injuries if political discussions get too rowdy.

There are also two rubber floored laneways (each one is approx. 200 m long), several loop paddocks that range from about 600m to several kilometres in length, and numerous paddocks that range in size from glorified day yards right up to about 50 acres. The entire farm is about 700 acres, of which about 400 is suitable for equine turnout, which gives us great flexibility to find areas the right size and layout for individual patients as their needs change during the rehab process.



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TOP: Approx. 400 usable acres have been divided into numerous paddocks that range in size from glorified day yards right up to about 50 acres, as well as loop paddocks of various lengths and rubber floored laneways.

MIDDLE: Horses like open, airy spaces. Often we see an immediate improvement in the disposition of a patient just by changing from closed stables to our open shed.

RIGHT: The rehab shed can be partitioned off into individual cubicles that do not obstruct the overall sense of open space and most importantly still allow contact and grooming with equine neighbours.



HOOF CARE hp







Time and work

High tech is not needed for rehabbing bad hooves. What's needed is time and a lot of work. A lot of hard work. The author must 'fess up at this point and admit that he is usually missing in action at his day job or away teaching, so it is Nicky and the kids who do the bulk of the day-to-day chores at Mayfield. During peak times, when there may be a dozen intensive patients, plus another mob out in low intensity 'minimum security' rehab, there are extra employees.

Work necessarily starts with cleaning up the usual mess generated by 'caged' horses, which just happens to be amplified at Mayfield because patients are routinely provided with an adlib supply of grass hay (such a feeding regime is a cornerstone of our success at Mayfield). A constant throughput of hay means way more output than average. We have never been able to work out the logic, but for every extra unit of hay that goes into the equine system, it seems that multiple units of manure come out of the system. How does that work?! Anyway, anyone who is seen to be standing around with nothing better to do at Mayfield is issued with a scoop and a wheelbarrow. Anyone!

Successful rehabilitation of diseased, deformed or broken hooves requires constant labour input, which starts with daily cleaning and checking, and application of topical agents to control pathogens. If the patient is wearing hoof boots, these need to be taken off and cleaned, and the hoof cleaned and allowed to air out for a while and then the boots put back on again. It never ends.

Record keeping

Adding to the workload, meticulous records are required for the duration of a patient's stay. This way, if a patient regresses or recovery stops, we can look back at any slight changes we may have made that could provide an answer, but we can also draw upon such records to formulate conclusions as to what has helped to fix patients. Every little act of husbandry that is done will be recorded, including medication, change of treatment and every hoof trim. Detailed records, including photos, are a good thing.

In addition, basic observations that are taken may include changes in heart rate, relative hoof temperatures, strength of digital pulses, movement, posture and any changes in the duration of recumbence (lying down to get off sore hooves). Notice is also taken of a patient's feeding pattern, especially how slow it eats or if it is managing to sift out certain supplements











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(horses are incredibly gifted at that) or, indeed, if it is simply not eating its hard feed and just wants hay.

The gathering of information actually begins before a patient arrives, with the owner writing a full history of relevant events leading up to the present situation. Obviously, this aspect of rehab is more important for horses suffering from metabolic issues than it is with patients presenting with only localised hoof issues, but one very pertinent lesson learnt so far is that hooves affected by localised trauma or infection have invariably been metabolically weakened to begin with. Healthy, tough hooves rarely break apart or let bugs invade. We have so often been able to send horses home with better hooves than they had prior to the onset of their current problems because we have been able to improve their lifestyle factors.

Quite a bit of detective work is sometimes required to get right to the underlying causes of some lameness problems which makes it necessary to interview the owner of each new arrival. It's not that they are trying to withhold sensitive information (horse owners are usually quite honest about owning up to any mistakes or misadventures that may have resulted in their horse coming to Mayfield), it is more that they may not consider certain details to be relevant to their horse's current situation.

When a patient settles in for its stay at Mayfield, it is vital that we don't become robotic and slip into auto pilot. The hooves, diet and movement requirements of rehab patients are always changing, and we have to consciously take the time to stand up and stand back, and consider the big picture and make adjustments to treatment and management on an asneeds basis. Equine patients all recover differently. Everyone who works with the rehab horses at Mayfield soon develops a keen eye for subtle changes.

LEFT: Something that can't be measured on the bottom line of a table of numbers is the ongoing pleasure that restored horses bring to their jockeys and knowing that we have played at least a small part in their story. Since we started taking horses at Mayfield for barefoot rehab, there has never been a day we have not had at least a couple of patients staying with us. Not only is the work constant, but the reality of dealing with horses that have life-threatening chronic lameness and pathology is that they don't all make it back home again.

Equine lameness rehab can get quite mentally draining at times. It would be great to one day do ourselves out of business and never see another horse with problematic hooves, and maybe just go farming. Farming would surely be easier. But, every time we think we have seen the end of the current season's crop of hoof disasters, a stranger's horse float is coming down the drive with another special delivery.

Why do we continue to do it? It is certainly not for the money, nor could it possibly be an ego trip (this author can never understand why the equine industry is so ego driven, because every time we think we have all the answers we need, a horse will blindside us just to show that we got it wrong in their case). Horses don't do egos.

The rehab centre has become a fantastic teaching resource for our students who are studying the Diploma of Equine Podiotherapy which, as the name well suggests, is heavily slanted towards managing problematic equine hooves. Whenever they are studying at Mayfield, they get exposure to many of the problems they will be confronted with when they are out and working in the real world.

Even more than this, whenever we get to see the ongoing pleasure that restored horses bring to their jockeys and knowing that we have played at least a small part in their story is something that can't be measured on the bottom line of a table of numbers.

We still hear from some horse owners years after their horse has been successfully rehabilitated at Mayfield. We get letters and even occasional Christmas cards telling us how the old patients are going. That's priceless.

Besides, the kids are growing up fit and strong from pushing around wheelbarrows in the early mornings. I'm sure they will thank us one day!

Stay tuned for future articles documenting some of the more useful lessons we have learned from the barefoot rehab centre.

