

the ups and downs of club foot

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A horse with club foot has one hoof that grows more upright than the other. The “up” foot is accompanied by a broken forward pastern, that is, the hoof is steeper than the pastern (Photo 1). In a normal foot, the hoof capsule and the pastern align. Radiographs will show that the boney column itself is misaligned, with permanent rotation of the coffin joint (Photos 2 and 3).

Causes of club foot

Club foot has several possible causes: foaling trauma, foal grazing stance, overly fast growth of limbs, injury or even something as benign as over zealous “cosmetic” trimming of the toes of a foal’s hooves.

It has even been said that horses which have a leaning posture or are in fact one-sided, sometimes from birth onwards, can develop club foot.

Whatever has caused a horse to develop a chronic club foot, the outcome is the same, with an over-tightening of the muscles involved in controlling the deep flexor tendon on the affected limb.

The science and management of club foot is a huge subject. This article only considers ‘chronic’ club foot; that which is long-term and effectively a permanent deformity.

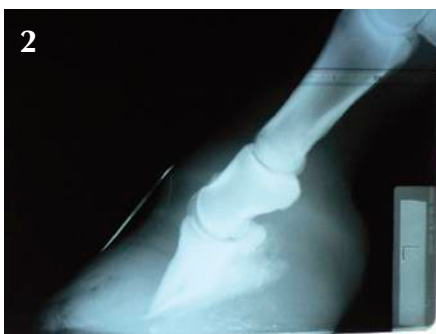
Even though club foot may appear to be very localised, it is a whole-horse problem. It ultimately affects every part of the horse.

With the aforementioned tightness of the affected forequarter musculature, there is a decreased range of motion which eventually changes the horse’s whole body shape. Symmetry is lost.

Enter saddle fit issues!

There is also a strong correlation between club foot and incorrect toe first landing which has serious long term implications for a horse’s soundness because it produces pathologies such as navicular, low ringbone, high ringbone, pedal bone degradation and laminitic pressures.

Club foot can have a huge effect on a horse’s athletic longevity.



Is club foot fixable?

You can’t fix in the hoof what doesn’t come from the hoof. This is the same with club foot.

Much has been written about how to rectify club foot, but from many years of experience “on the tools” the author knows it is a frustrating deformity to deal with, and it should be considered a permanent situation which requires ongoing management.

MANAGING CLUB FOOT

The aim of management should always be to stop a club foot from getting worse, not just for the current competition season, but for the horse’s whole life.

Initially it is advisable to enlist the services of a vet to provide x-rays for a baseline, particularly to see how much rotation and pre-existing damage there is at the tip of the pedal bone.

In terms of hoofcare, there are several aspects that need to be considered.

The Breakover

The breakover balance needs to be kept short, to a normal 2/3 frog to 1/3 sole ratio, even if that means the hoof will be stumpy. It is as it is.

Stimulating the frog

The frog needs to be stimulated so it can develop enough to be constantly ground weightbearing and can play its vital role in concussion absorption.

Heels obviously need to be trimmed back, but only as far as the functional sole plane allows. The heels are high for a reason.

Hopefully the frog has sufficient ground contact when the heels are at the height of sole plane.

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ongoing management.*

If not, the frog needs to be developed and probably the best way to do this is by the 24/7 use of hoof boots with thick soft pads which provide both comfort and stimulation to an otherwise withered up, dysfunctional frog.

Be sure to use the right boot for the situation; one that fits and doesn't rub. Due to the prevailing shape of club feet being narrow and steep it appears that Easyboot Epics are the best option (see www.easycaredownunder.com.au).

Regular maintenance is vital

Regular maintenance trimming of both the heels and the breakover creates a regime of perpetual balance and is very effective. Such a trimming regime would need to be fortnightly, but it becomes a very simple procedure that horse owners can do for themselves.



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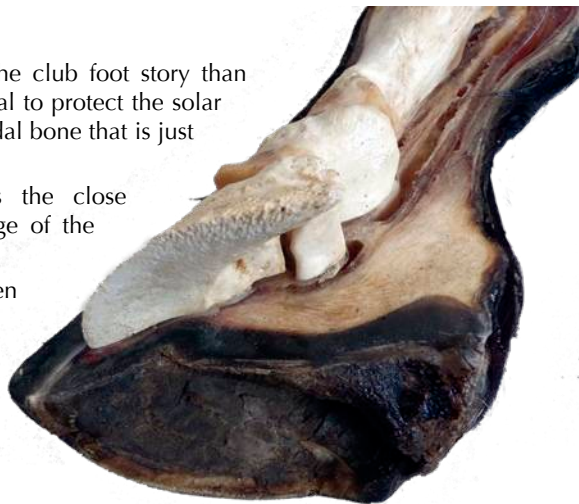
*These photos show top left: an Easycare dome pad, top right:
an Easycare frog support pad and above: a horse confidently
landing heel first in padded boots.*

Careful consideration

There is, however, more to the club foot story than just trimming because it is vital to protect the solar surface of the toe (and the pedal bone that is just within).

This photo on right shows the close proximity of the delicate edge of the pedal bone to the ground.

Again, hoof boots when ridden are an excellent option for toe protection; there is something about putting a layer of soft rubber between a horse and the hard ground that is just right.



In recent years, tips made from laser cut steel have been proving to work quite well on horses that are working in situations when boots are not allowed to be worn, such as dressage competition. They provide wide protection at the toe whilst still allowing the caudal hoof to function as per normal.

What about the other hoof?

Attention also needs to be given to the other hoof which is known as the "down foot" because it will most likely be carrying more weight and will tend to run out at the toe and under at the heels. Regular trimming that pays particular attention to these areas should suffice.

The real secret to success with club foot!

The secret to long term success with club foot management comes not so much from hoof trimming (which is only dealing with the symptoms anyway), but rather from attending to the underlying causative agent which is the tightness in the limb above the club foot.

The secret is body work - stretching to increase the mobility of the affected limb that helps more than anything else.

Fortunately, all the required stretching can be easily arranged with a willing equine partner thanks to that insatiable desire for just one more carrot!



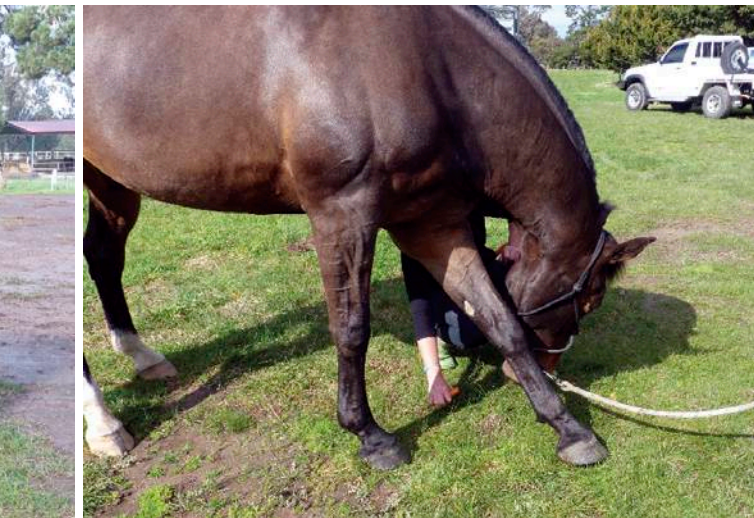
Club Foot Case Study

Photos courtesy of Jill Collins



These photos show the progression of a club foot belonging to "Faleh", an arab foaled in 2000 that began showing the effects of a club foot by as early as a 3yo. The first photo (top left) was taken in mid 2009 when his shoes were removed and shows a totally non-functional caudal hoof with severe contraction and chronic laminitis. Faleh's club foot was severe enough to need some protection at the toe even in the paddock and shoes were only making the problem worse, so it was decided to use the laser tips. The photos progress to the most recent re-fit of tips in December 2011.

When looking at the whole horse, the difference from shod to unshod with tips is nothing short of stark. Faleh is moving very freely and his hooves continue to improve, despite some lingering damage from the old laminitis. When it comes to equine hoofcare, anything can be said or written, but in the end it only really matters what the horse says!



Stretching to increase the mobility of the affected limb helps more than anything else.

These photos show how successful a stretching regime can be with the problematic grazing stance clearly visible at left and then the horse willingly putting the tight leg forward and stretching around it to get the carrot.

What not to do!

Avoid short term solutions that seem to offer an instant fix. You know the old saying... if it sounds too good to be true...

Don't try and match the hooves by cutting down the high heels and letting the toe extend. That is a recipe for laminitic disaster.

Avoid routine shoeing. If nothing else, a shoe always takes the frog away from ground contact. The frog needs to be well grounded if it is to function as required.

The author has been involved with many, many club footed horses over the years, but cannot recall a situation where shoeing led to any long term improvement. Shoeing certainly helps in the short term to protect the toe from over-wearing, but it always leads to further frog contraction and the inevitable caudal hoof failure.

What about surgery?

There are procedures that involve cutting the check ligament that keeps tension on the flexor tendon and also the severing of the deep flexor tendon itself. However, the jury is still out on the long term effect of doing this, particularly with interruption to the correct operation of the stay apparatus.

Can club foot be avoided?

Chronic club foot seems to have its origins in the growing horse, so management of lifestyle factors when a horse is young can possibly help to avoid the problem, or at least keep any deformity to a minimum.

If possible, keep young horses grazing only on longer grass, or tufted rank pasture.

A breeder of long-legged Arabians once did an experiment aimed at combating the high rate of club foot in his young stock. He ensured that the young horses were only ever exposed to long feed (from day one) and avoided the classic foal grazing stance and therefore the development of club foot.

In addition to pasture management, over feeding should be avoided and movement encouraged.