

FOAL FOOT CARE

A FOUNDATION FOR FUTURE ATHLETIC PERFORMANCE

In this series of articles we will look at the importance and aims for trimming your foal's foot and then look at some of the more serious flexural and angular limb deformities that can be encountered and that may require more specialised trimming techniques, farriery or even surgery.



Among the many factors that dictate the success of the foal as a sales yearling or a mature athlete are decisions and management concerning feet and limbs during the first four months of life. This is the time when hoof care helps to produce a foundation for his/her future athletic career while influencing the growth and angulation of the limb above the hoof.

Another often-overlooked goal of trimming is to provide protection to the immature structures contained within the hoof capsule and to prevent any form of pain response. This pain response may be responsible for the various flexural deformities encountered (but more about that next month).

Therefore the importance of hoof care during the foal's first year of life cannot be overemphasized!

Evaluating the Foal: The standing foal should be examined from the front and from the side. Good record keeping is important, especially if you are evaluating a number of foals. Foals should then be observed walking. Watching the young foal walk is difficult so be patient, walk the mare and let the foal follow. Observe the foal as it walks toward you and as it walks away from you on a flat surface.

What to look for: What we are looking for is any lameness, the arc of the foot flight, how the foot breaks over at the toe and especially, how the foot contacts the ground.

All four feet should point forward and toe-out just a little. The knee and hock should be in line with the rest of the leg, from the point of the shoulder and the pin bone at the haunches to the bottom of the hoof. Foals are often cow-hocked and knock-kneed, which is normal to an extent. A foal's hoof looks just like an adult's, except smaller.

When examining the feet and limbs, an imaginary dot system works well. Starting at the ground surface of the foot, an imaginary dot is placed on the toe, coronary band, fetlock, top of cannon bone, carpus (knee), top of carpus and top of forearm (Figure 1.) In the ideal situation, the dots should form a straight line.



However, you must also be careful to assess the presence of any rotational deformity (both knees face outward leading to a toe out or splay-footed conformation, yet when the dots are connected they still form a straight line).

Next the coronary band is observed to see if it is level or parallel with the ground (a good indication of balance), the hoof/pastern angle is noted from the side to determine if it is aligned and not broken forward (flexure deformity) or broken backward (Fig 2.) Any swellings along the limb or involving the joints are also noted. Each deformity can be scored on a scale of 1-5. Grade one is very mild whereas grade five is severe. The above examination enables us to evaluate the feet, limbs and movement in a systematic manner.

Taking care of any deformity or twist in the limb or foot early is important. For this you will probably look towards professional help from a farrier or veterinarian. A joint venture between a vet, using their

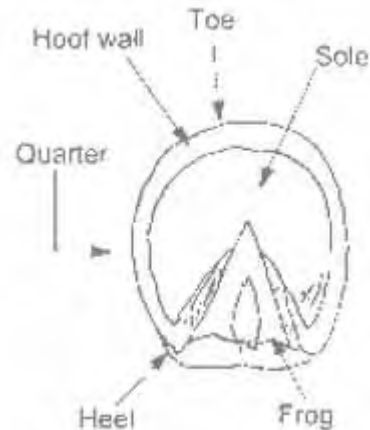
knowledge of anatomy and medicine, combined with the technical and practical background of a farrier will usually yield a favourable result.

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Trimming the foal's foot: Handle foals from day one. All four feet can be picked up daily, inspected and cleaned. Then when it comes time to trim them it won't be a fight!

In the first few months of life attention is directed toward developing the structural integrity of the foot (foot mass). The important factors here are to promote the growth of thick, durable hoof wall, to ensure maximum sole depth in order to protect the tender, vulnerable white line and developing third phalanx (coffin bone) and to establish a strong heel base. Keeping in mind that mass of foot—which is defined as strong hoof wall, adequate sole depth and a solid heel base—is vital for future soundness, very little horn wall should be removed from these foals in the first few months. You really only need a hoof pick and a rasp to trim foals that are kept on a monthly schedule (Figure 3).



By having the foal walk entirely on the hoof wall, the hoof wall is consistently loaded, which makes it become thicker and more durable. This is achieved by not removing as much hoof wall length from the foal, and allowing the margin of the horn wall to project just beyond the sole. Young foals that are trimmed very short tend to develop thin fragile hoof walls.

The foot is cleaned with a hoof pick and loose, shedding areas of the frog are removed. Otherwise, the frog is left untouched. The unaltered frog acts as a protective mechanism because it has the ability to absorb and dissipate concussive forces better. The surface of the frog should be level with or below the heels of the hoof wall, not above them.



Likewise no sole is removed from the foal's foot with a hoof knife. The sole in a foal is extremely thin and all the protection possible is needed to protect the immature developing structures above.

The health of the foot throughout the animal's life is based on a good solid heel base. The heel base includes the hoof wall at the heel, the bars (which together form the angle of the sole) and a nice wide frog. The bars are needed for support and to establish this strong heel base. The heels are trimmed flat and the hoof wall at the toe and quarters is then lowered as necessary using a rasp placed at a 90° angle just in front of the white line. When the desired amount of hoof wall is removed, the outer sharp edge of the angle is removed by running the rasp around the front of the hoof thus creating a nice rounded edge. This will help to prevent cracks and chips in the hoof wall (see fig. 4).

This method of using the rasp also leaves the hoof wall a little higher than the sole causing the hoof wall alone to bear the bulk of the weight when the animal moves. This stimulates the wall to grow thicker and become stronger (foot mass).

As we discussed earlier, our aim is balance, i.e. that the foal's foot lands flat. If the foal's foot does not contact the ground evenly, we may want to adjust the anterior-posterior balance (front to back) or the lateral to medial balance (side to side). If one lowers the inside or outside wall past balance (level), it should not be any more than 2-3 millimeters at one time. Trimming at **two-week intervals** may be useful in this situation. This is why the initial examination is so important to determine where the deviation originates

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Foals are born with a hoof angle of up to 60°. There does not appear to be any reason why we have to be in a hurry to lower the heels unless a conformational fault exists. The heel is trimmed with a rasp until the outer wall and the bar are above or level with the frog. Again, our objective from the start is to create foot mass-strong hoof wall, depth of sole and a good heel base.

I recommend starting to trim foals at one month of age. All that may be necessary at this time is to square the toe to force the foal to break over in the centre of the foot.

Next time we will look in more detail at rotational, flexural and angular limb deformities and what we may be able to do to help in these cases.

JASON LOWE BVSc, Cert EP.



JASON LOWE

Jason hails from sunny Blenheim and graduated from Massey University in 1993.

After 18 months at a mixed animal practice in Gore, Jason took up a position with Rossdale and Partners in Newmarket, England specializing in all aspects of equine medicine. During Jason's time abroad he gained extensive experience in stud and racing work, foal intensive care, surgery, diagnostics and nuclear scintigraphic imaging.



A further 5 years in a hospital based equine referral practice in Leicestershire in the British Midlands saw Jason gain a Certificate in Equine Practice through the Royal Veterinary College in London.

Jason returned to New Zealand in late 2003 with his English wife Karen and is now based at the new Matamata Veterinary services Equine Hospital in Matamata.



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