

# HORSETALK

Winter 2006 **Horse Talk is a publication of CCF Ltd, Main St, Clynderwen, Pembs** Volume 5, Issue 4

## Investigation of Lameness.

by John Edwards MA Vet MB Cert EP MRCVS

Lameness is the single biggest cause of poor performance, time off and loss of use. Lameness has a major economic impact on the equine industry and is estimated to cost racing alone at least £50 million per annum in days lost, as well as being extremely frustrating and worrying for all horse or pony owners.

The investigation of lameness aims to achieve an accurate diagnosis of the cause so an appropriate treatment plan can be made and a realistic prognosis given. Sometimes the cause can easily be determined, for example a penetrating injury of the foot, whilst other causes can be very difficult to identify and require specialised techniques such as nuclear scintigraphy (bone scanning) or magnetic resonance imaging (MRI).

The initial step in a lameness investigation is determination of the affected limb (not always as easy as it sounds!) and a detailed clinical examination of the limb. Unless it is severe, lameness is more easily seen at trot compared to walk or canter. This is because the trot is a two-beat gait in which the limbs move as pairs and the head acts as a counter weight. Lameness often appear sound at walk and canter and only lame at trot – in fact they are lame in all three gaits but it is much less noticeable at walk or canter.

Head movement is important especially in diagnosing forelimb lameness – the classic ‘head nod’. The head nods down when the sound limb strikes the ground and is lifted up when the lame leg strikes – this transfers weight to the hindlimbs when the lame leg is weight bearing.

Hindlimb lameness can be less obvious to the eye since head-nods only occur with more severe lameness. Signs to look for include dropping of the hip on the affected side as the horse tries to reduce weight on the limb during weight bearing, reduce foot flight

– often noticed as a horse dragging or ‘clicking’ its toe as the limb moves forward, and a failure to track-up normally.

Lameness is usually graded out of fifths or tenths, a 1/10 lameness is the least that can be seen consistently whereas a 10/10 lameness is non-weight bearing and would indicate a fracture, dislocation, septic joint or most commonly pus-in-the-foot (gravel).

Some subtle lamenesses become more obvious when the horse is lunged in a circle – the inside limbs bear more weight in a circle whilst the outside limbs have to move in a larger arc, so different lamenesses either show up more on the outside or more commonly on the inside of a circle. Comparing the lameness on hard and soft surfaces can also be useful sometimes.

Flexion tests are sometimes used to artificially increase the pressure in the joints of a limb – the limb is held up in a flexed position for 1 minute and then the horse is immediately trotted off. If joint pathology is present the lameness is usually made worse by flexion. Whilst flexion tests are classically used to identify joint disease sometimes a positive response is seen with soft tissue injuries too, such as suspensory ligament damage, which only serves to confuse the investigation!

After identifying and grading the lameness a thorough examination of the limb is essential. This involves checking the limb for any heat, pain, swelling or effusion (filling) of the joints. The range of movement is checked and the tendons picked-up and thoroughly examined. The presence of digital pulses indicating increased blood flow to the foot can be useful although they should be checked before the horse has trotted and raised its heart rate too much! Hoof testers are useful to squeeze the foot and try to identify painful areas.

After this examination of the limb the causes of many lamenesses become apparent or at least a suspicious area is identified. Sometimes no obvious abnormalities can be found and identification of the affected area requires regional analgesia – nerve or joint blocks.

Lameness is usually caused by pain (occasionally by mechanical restriction). By blocking the nerves serving a particular area using local anaesthetic the site of pain (and therefore cause of lameness) can be identified. Nerve blocks usually start at the foot and work up the limb in a series of systematic steps. If the horse remains lame then the area blocked can be ruled out as a site of pain. When the horse goes sound after injection of local anaesthetic then the source of lameness must lie between the last nerve block and the one previously performed.

This allows an area to be accurately identified as the source of the problem and allows accurate further investigation to occur.

Joint blocks involve injecting local anaesthetic directly into joints, if the joint is the source of pain then the lameness should disappear. This is more specific than nerve blocks which usually block several structures by desensitising an area rather than just one joint. Other areas commonly blocked are the navicular bursa and the tendon sheath.

Once the area causing the lameness has been identified further techniques are often employed to make a definitive diagnosis.

X-rays are commonly used to assess joints and bones, identifying arthritis and fractures for example but they are not very useful for soft tissue lesions.

Ultrasound is the imaging tool of choice for soft tissue injuries, especially tendon or ligament injuries and can be used to assess the surface of bones but it will not pass through bone and so is not as useful as x-rays for investigating bone and joint problems.

More specialised techniques in-

clude nuclear scintigraphy or ‘bone scanning’, this involves injecting a radioactive isotope linked to a bone specific marker into the horse and recording the radiation emitted from different areas. Areas where bone is metabolising faster take up more marker and thus appear more radioactive to a gamma camera – a bit like an x-ray in reverse with the horse emitting the rays! Scintigraphy is useful to investigate areas which cannot be x-rayed such as pelvic injuries or back problems. Scintigraphy is not very useful for identifying soft tissue problems however.

The latest imaging technique that is used in lameness investigation is magnetic resonance imaging or MRI. This is expensive and potentially difficult to perform but allows investigation of both bone and soft tissue problems. It is brilliant at identifying soft tissue problems in the foot in particular since the hoof capsule prevents satisfactory ultrasound scanning of the area. A few standing MRI units especially for horses exist now and allow investigation in the standing, sedated horse – the early centres used adapted human scanners which were both costly and required a general anaesthetic.

Thus it can be seen that the investigation of lameness is a systematic process – identify the lameness, identify the area causing the lameness and investigate that area to identify the exact cause. Unfortunately lameness can still prove frustrating and a definitive diagnosis is not always made but with new techniques such as MRI both our understanding of complex conditions such as navicular syndrome and the accuracy of our diagnoses is improving leading to better treatment and management of lameness and hopefully a speedy return to work!

### COTTS FARM EQUINE CLINIC

Veterinary Surgeons

J.G.T. Edwards MA Vet.MB Cert.EP MRCVS  
G.S. Fowke MA Vet.MB MRCVS  
Consultant :- R.P. Davies BVSc MRCVS  
Cotts Farm Equine Clinic- Telephone 01834 860871

## Progress with Pro-Feet

By Kate Jones BSc(Hons) Nutritionist at NAF.

As horse owners we're all familiar with the frustration of a lost weekend's riding because our horse has lost a shoe. Bad feet are a common problem. So is it all just down to farriers or can we, as owners, help support strong feet? David "Slim" Symons, FWCF Hons, Head of Farriery at Hereford School of Farriery certainly thinks we can, by providing the optimum diet for strong feet. Slim says "For your farrier to do the best job he can of shoeing your horse, he needs a quality foot to work with. If the diet is lacking the quality of foot is likely to suffer. This is when a correctly formulated feed supplement can be so helpful." So why should we choose *new Pro-Feet*?

Biotin is, perhaps, the most important single nutrient in supporting healthy hoof growth. Historically research had showed 15mg daily sufficient for foot growth. But more recently research shows that actually the figure is more likely 15-30mg daily, with the size of the horse being significant. Trials on horses around 450kg found 20mg necessary for healthy feet, but with an increasing trend for much larger horses (600kg+ is not unusual in warmbloods) then it's clear more adjustment is necessary. As a unique liquid supplement the feeding rate for **Pro-Feet** is easily adjusted from 15mg biotin daily for ponies, up to 29mg for large horses.

Of course biotin doesn't work on its own and **Pro-Feet** combines it with all other essential nutrients for hoof integrity, including a rich sulphur complex of methione, cysteine and MSM; minerals including calcium and zinc; and a broad spectrum of naturally sourced amino acids and essential fatty acids.

Perhaps the key difference between **Pro-Feet** and competitors is the unique, scientifically verified, antioxidant complex. Why should

antioxidants be important to the feet? Well the hoof is simply a form of keratin – just like the coat, mane and tail, and together they form the "dermis". The dermis itself as the largest organ in the body is the first to reflect general health – therefore poor hoof condition is often simply a reflection of a stressed system and this is where antioxidants come in. Just as we should eat fruit and veg daily to flush out toxins, the same applies to our horses. By supplying some of his "five a day" in Pro-Feet's concentrated antioxidant complex you're taking a holistic approach to foot care – not only using targeted ingredients like biotin, but also supporting whole system health.

**Pro-Feet** is launched with a fantastic "2 for 1" offer, making now the best time to make the switch to stronger feet.

For further information or advice please call the NAF Freephone Advice Line 0800 373106 or e-mail [info@naf-uk.com](mailto:info@naf-uk.com)

## COMPETITION

CCF have a twin pack of NAF pro feet to give away, simply answer the following question.

How much biotin does Pro-Feet provide daily for large horses?

Please send your answers to CCF, Horsetalk Competition, Main Street, Clynderwen, Pembs. SA66 7NW

We also have a w torch to give away . Simply answer the following :

How many branches does CCF have throughout Wales? Please send your answers to the address above (answer is in our catalogue)

GOOD LUCK

Closing date 01/12/06

## WINTER IS LOOMING ARE YOU PREPARED

The nights are drawing in and the temperature is dropping , winter is definitely just around the corner. Riding in the rain, wet rugs, frisky horses! Winter we all love it. We all know its relentless, the best we can do is be prepared.

Get all of your rugs out now make sure they don't need repairs and that they still fit . If you discover that you do need a new rug , ask in your local branch we will happily order in for you anything from the Shires or Masta range. Check your first aid kit, a knock or scrap in the winter always seems to be a bigger deal due to the joys of mud. If your horse suffers with mud fever make sure you have the creams and positions that work for you ready. Alternatively there is now a range of equi chaps available to help protect your horse from the mud. Please phone 01437 563441 and ask for Emma for more information. If like most your horse stands in more in the winter and gets very excited when ridden out, try looking at how you feed him. Keep his diet as low in starch and protein as possible, and include as much fibre as you can, remember horses are trickle feeders which means little and often. If your horse tends to lose condition during the winter, try and catch it before your fighting to put condition back on without heating , as much as possible bulk up with good quality hay, fibre and amusement in one.

**COMPETITION WINNERS**  
Congratulations to Miss F Gallagher from Llandisilio who won the Blue Chip baseball cap and Mrs J Thomas from Aberystwyth who wins the Equest umbrella from the Horsetalk Summer edition. Well done and good luck in the winter competition.