AUTUMN/WINTER EDITION 2011

XLVETS EQUINE - BETTER TOGETHER

Equine MATTERS

www.xlvets.co.uk

Inside this issue:

Featured... **Equine Physiotherapy**

xLvets
Excellence in Practice

Practice Focus

In each issue of **Equine Matters** we feature a brief insight into a selection of the XLVets Equine Practices. Featured in this issue are Ashbrook Equine Hospital, Northvet Veterinary Group and St Boniface Veterinary Clinic...

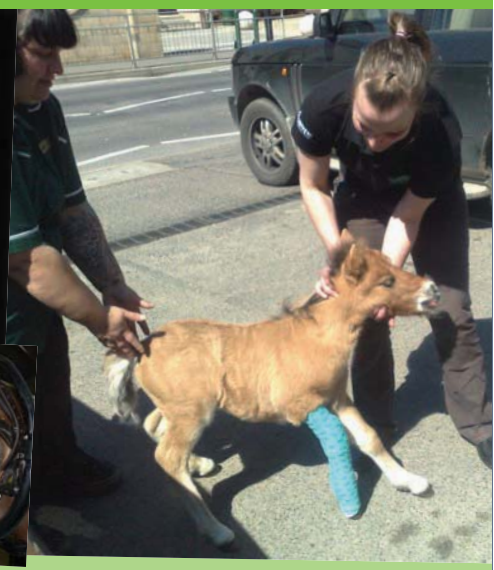
ASHBROOK EQUINE HOSPITAL

Knutsford, Cheshire

Ashbrook Equine Hospital, part of Willows Veterinary Group, is based near Knutsford in beautiful Cheshire countryside, between junctions 18 and 19 on the M6. Our team of dedicated equine-only vets are experienced in all aspects of equine work. We travel throughout Cheshire, Lancashire, North Staffordshire, Greater Manchester and The Wirral on a daily basis to visit, examine and treat horses. For more complex conditions, horses may be brought to our state-of-the-art hospital for thorough diagnostic investigation and treatment.

Our hospital provides a friendly service with experienced staff caring for your horse 24 hours a day. We are able to offer complex lameness investigations, including high quality digital radiography and ultrasonography. We also routinely perform gastroscopy and respiratory endoscopy. Our surgical services include routine and emergency orthopaedic and soft tissue surgeries, and are one of the few UK clinics able to provide laparoscopic surgery under standing sedation. During the breeding season, we run a very successful AI programme.

At Ashbrook, we are lucky enough to hold regular visiting clinics with dermatology specialist Sue Paterson MA,VetMB,DVD,DipECVD, MRCVS, remedial farrier, Ian Hughes and manipulative therapist, Mark Windsor.



(Above) Sunny was just 4 days old when he fractured his metacarpal bone. Here he is trying to escape from Leona and Lindsay on his way home after the fracture was repaired with a lag screw.

(Centre) Andy rasping teeth in the stocks at our Harray surgery.

NORTHVET VETERINARY GROUP

Kirkwall, Orkney

Northvet Veterinary Group is an eight vet practice situated in the Orkney Islands off the north of Scotland and is the mostly northerly practice in the XLVet group. Orkney is made up of 70 islands, 18 of which are inhabited. The old Norse name for the largest of these islands is Hrossey which means The Island of the Horse.

So there is a long history of horses in Orkney! Working horses have now given way to leisure horses and Orkney has an active equine community.

Northvet provides an ambulatory service to our clients for routine work but we also have facilities at our premises in Harray to take horses into our stocks for dental, lameness workups, x-ray and fertility procedures. All our vets get involved in the equine side of the practice and so do our support staff - in fact most of them own horses themselves - not a prerequisite, but it helps!

St Boniface Veterinary Clinic

Crediton, Exeter

St Boniface Veterinary clinic is a first opinion mixed practice. We are proud to have served the people and animals of mid-Devon for over 65 years. Our dedicated small and large animal teams are committed to a high standard of veterinary care at a fair price.

Our large animal vets cover an area from Okehampton on the edge of Dartmoor to the west, through to Honiton in the east.

We have just purchased a new building on the outskirts of Crediton giving us a main practice site of over eleven thousand square feet. A significant part of the premises will be converted into a large animal centre that will include an equine knock down box. The new facility will give us the opportunity to carry out a broad range of procedures in house.

The new practice will also include an audio visual room where we intend to host regular client meetings and practical workshops. We look forward to seeing patients, new and old, at the new premises in spring 2012.

AUTUMN/WINTER EDITION

XLVets is a novel and exciting initiative conceived from within the veterinary profession. We are all independently owned, progressive veterinary practices located throughout the United Kingdom committed to working together for the benefit of our clients.

XLVets Equine Member Practices

608 Vet Group
Alnorthumbria Veterinary Group
Ardene House Veterinary Hospital
Belmont Veterinary Centre
Bishopton Veterinary Group
Capontree Veterinary Centre
Castle Veterinary Surgeons
Chapelfield Veterinary Partnership
Cliffe Veterinary Group
Clyde Veterinary Group
Drove Veterinary Hospital
Endell Veterinary Group
Fenwold Veterinary Centre
Glenthorne Veterinary Group
Hook Norton Veterinary Surgeons
Larkmead Veterinary Group
Millcroft Veterinary Group
Minster Veterinary Practice
Northvet Veterinary Group
Paragon Veterinary Group
Parklands Veterinary Group
PAWS Veterinary Health Centre
Penbode Veterinary Group
Rosevean Veterinary Practice
Rutland Veterinary Centre
Scarsdale Veterinary Hospital
Scott Mitchell Associates
Shepton Veterinary Group
St Boniface Veterinary Clinic
Thrums Veterinary Group
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THE EDITOR

Welcome to the 'Autumn/Winter' issue of Equine Matters...

With the shortening days it is time to think about winter feed, the good spring weather means there should be some good hay and haylage available. Many horses lose weight in the winter this edition's article provides some good advice on the investigation of weight loss. We also have the second part of the wounds feature and a great insight into a day at the races for a working vet as well as a topical discussion on horse welfare in racing. In this issue we begin the first in a series of articles on equine physiotherapy and provide careers advice for anyone considering equine veterinary nursing.

Enjoy the winter season and stay safe!

Liz Mitchell MA VetMB CertEP MRCVS
Scott Mitchell Associates

CONTENTS

Failure to manage wounds correctly can result in delayed or poor healing and increased costs for the owner. In cases where other structures e.g. joints or tendon sheaths are involved, failure to recognise and treat may result in euthanasia if infection (sepsis) becomes established.


Primary Closure

Wound Healing

Dave Rowlands BVSc CertEM (StudMed) MRCVS, Penbode Veterinary Group

Penbode Equine Vets since 1840

Veterinary Surgeon Dave Rowlands
XLVets Practice Penbode Veterinary Group

Equine skin

Skin is the largest organ in the body. In the horse it varies from 1 - 6mm in thickness. It is thickest in areas where the chance of injury is greatest i.e. at the mane and tail attachment, croup and back. It is thinnest where most sensitivity is required i.e. the lower and middle surfaces of the body and limbs. Normal skin tension is due to elastic fibres in the dermis, they are the reason why edges retract when skin is cut.

Wound Healing - the phases

Wound healing relies on a complex series of biochemical reactions. The aim of wound healing is to restore normal physical form, structure and function.

1. Vascular phase

Initially there is a temporary shutting down of injured blood vessels (vasoconstriction). After a few minutes the blood vessels dilate. A fibrin (protein) seal creates a meshwork base. Platelets then aggregate and release hormones and enzymes that cause bleeding to stop and a clot to form.

2. Inflammatory phase

White blood cells are released into the damaged tissue and engulf bacteria and debris. They release growth factors to further assist wound healing.

3. Re-epithelialisation

Epithelial cells (superficial skin cells) at the wound margin migrate across the fibrin meshwork in the first 24 hours.

A characteristic pink rim of epithelium is visible after 4-6 days. These cells are very delicate and migrate slowly, they operate best in moist conditions free from infection. Wounds with a narrow gap between the wound edges can heal fairly quickly by epithelialisation alone.

4. Granulation and fibroplasia

Granulation tissue consists of invading blood vessels, fibroblasts and products from fibroblasts e.g. collagen and elastin. It is produced 3-4 days after wounding and serves to rapidly fill in the skin defect, later the epithelial cells will cover the granulation tissue to complete healing.

5. Wound contraction

This occurs maximally 5-15 days after injury. The extent varies according the wound location. Wounds on the body with lots of spare skin can undergo large amounts of contraction as shown in Figures 1-3 below.


Figure 1

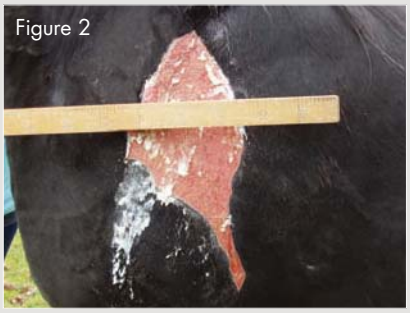


Figure 2


Figure 3

6. Regeneration of the blood flow to a wound.

This is essential to allow the supply of oxygen and nutrients to a healing wound. It starts approximately two days after injury.

7. Re-modelling

This may continue for months after re-epithelialisation. It improves tissue tensile strength and reduces the bulk of a scar. At two weeks after injury, a scar may only have 5 percent of its optimal strength. It may only reach 80 per cent of normal strength.

Factors that affect wound repair

There is no way of definitely accelerating wound repair, but several factors slow down wound healing. These factors need to be reduced or removed in order to provide an optimum environment for wound healing.

1.General health status

Malnutrition/debilitation and some diseases will reduce the rate and quantity of wound healing. Protein loss (hypoproteinaemia) reduces wound strength. Deficiencies in Vitamin C, Magnesium and Zinc will delay healing.

2.Blood supply/anaemia

Reduced blood supply to a wound inhibits the healing process.

3. Location of the wound

Wounds on the head and trunk generally heal well. Wounds on the lower limbs of horses tend to heal poorly. This is because the blood supply is poor, there is less musculature, more movement and more contamination.

4. Infection

Bacteria inhibit all phases of wound healing. Time is a critical factor in the treatment of wounds and prevention of the establishment of infection. There is a 'golden period' of 3-5 hours before bacteria reach a critical level to prevent healing. It is therefore important that wounds are effectively cleaned using clean water or saline as soon as possible.

5. Proud flesh

Excessive movement and contamination of wounds on the lower limb can result in excess granulation tissue or 'proud flesh' being formed which halts the healing process. This needs to be trimmed back and immobilised, a flat bed of granulation tissue is essential for epithelialisation to occur.

Other factors that delay wound healing include; the presence of dead tissue, foreign bodies e.g. wood, a haematoma (blood blister) and dead space (a gap between the skin and underlying tissue), movement and oedema (swelling).

DAVE ROWLANDS

There is no way of definitely accelerating wound repair, but several factors slow down wound healing...

Types of wound treatment

Primary closure

The wound is closed usually immediately, and completely, using a strict aseptic technique, with skin sutures (stitches) or staples. This is only suitable for clean or minimally contaminated wounds. Plastic drains can sometimes be used to reduce the 'dead space' between skin and underlying tissue.

Second intention healing

Many traumatic wounds in the horse have to be allowed to heal by secondary intention. This may be due to significant skin loss, marked contamination, continuous movement, skin tension or wounds not presented on the day of injury. Secondary intention healing usually involves the application of dressings to assist wound healing.

Dressings and bandaging

The wound changes as it heals, and different dressings are required at different stages to get the best possible results. A good dressing will keep the wound slightly moist but the surrounding skin dry.

Primary wound dressings such as dermisol cream, intrasite gel and allevyn dressings are placed directly in contact with the wound.

Secondary dressings support or hold the primary dressing in place. They provide support for the injured limb or region. Their functions include immobilisation, reducing swelling, reducing pain, protecting the wound from trauma.

A variety of bandages can be used which include foot, lower limb, full limb and stent bandage e.g. for abdominal incisions/ wounds or over areas that are difficult to bandage normally. Bandage changes may be required every 2-3 days initially; reducing to every 3-5 days once the wound is starting to mature.

A Robert-Jones bandage is a heavily padded, layered bandage which can be used for temporary support for a severely injured limb. It may also be used to treat wounds that occur in combination with other injuries to bone or where movement of the joints needs to be limited. Casts can also be useful to assist in the healing of wounds of the lower limb; by preventing movement of the area they can allow an optimum rate of healing.

Treatment of wounds

Box rest is usually required to minimise the amount of movement and speed wound healing in the early stages. Antibiotics and pain relief may also be required. Where skin sutures (stitches) have been used, they are usually removed after 10-14 days.

Skin grafts

These are used commonly in equine wounds to speed the rate of healing where the wound covers a large area, especially on the limbs. 'Pinch' and 'punch' grafts are the simplest to perform and involve taking small circles of skin from another area usually the neck or abdomen. A flat healthy bed of granulation tissue is needed to accept the grafts which are placed in small holes made in the tissue (Figure 1). Epithelialisation can begin from each accepted graft and can rapidly speed up the total healing time (Figures 2 & 3).


Figure 1


Figure 2


Figure 3

Skin Graft Case Study:

Use of a skin graft in a limb wound

Louise Cornish BVMS Cert EP MRCVS, Clyde Veterinary Group

Wounds on the lower limbs of horses are very common but notoriously slow to heal and frequently develop 'proud flesh'. This case report follows the progress of Oliver, an 8 year old Arab gelding, who injured his leg when caught in a wire fence. A skin graft was used to aid healing.

Veterinary Surgeon Louise Cornish
XLVets Practice Clyde Veterinary Group

Oliver had unfortunately fallen for the old saying 'the grass is always greener on the other side of the fence' and had decided to explore when he caught his left hind limb in a plain wire fence. He was found limping in the neighbouring field by his distraught owner, who discovered that he had a large wound to the front of the leg from above the hock to the upper part of his cannon bone. The wound was deep in places, narrowly missing the hock joint itself but scraping the surface of the cannon bone. Most of the skin in the area appeared to be missing, and what was left was too damaged to be stitched together.

The vet was called and administered painkillers, antibiotics and a sedative. The wound was cleaned, taking as much dead tissue away as possible. Oliver was stabled with a well-padded bandage to protect the wound and to reduce limb movement. He became much more comfortable over the next few days but was kept on box rest, despite his protestations, to keep movement to a minimum which would otherwise slow down wound healing.

In this type of wound, healing occurs by 'second intention', which means that there is a gap between the two edges of the wound which must initially be filled by granulation tissue. The edges of the healthy skin then begin to develop new skin cells and gradually grow, cell by cell, over the surface of the bed of granulation tissue. If the granulation tissue grows higher than the surface of the normal skin, it is termed proud, and needs to be removed surgically or by applying creams or powders; otherwise it will interfere with the new skin growth. A firm padded bandage will effectively help to prevent proud flesh development.

Although Oliver's wound initially appeared to be healing well, progress seemed to cease after about 6 weeks. Proud flesh developed and the wound edges were no longer producing new growth of skin cells. It was decided to perform a skin graft to speed up healing. Under sedation and local anaesthesia, about 20 small sections of skin were removed from Oliver's neck using a punch biopsy instrument. These were embedded into the granulation tissue in the hock region and kept in place by bandaging.

The graft provided a large number of healthy skin cells to multiply and help to cover the wound with new skin. Within a fortnight, the skin graft had adhered well to the granulation tissue bed and healing was again progressing nicely. A further month later, the wound was small enough to leave open although box rest was continued. A prescription gel was applied twice daily to prevent proud flesh growth.

Four months after the initial injury, Oliver's wound had fully healed, leaving only a scar and he was able to rejoin his friends in the field for some early spring grass!

1. Wound one week after injury.
2. Punch skin grafts were embedded into granulation tissue.

3. Graft Donor Site with small circles of skin removed.

4. Wound six weeks after skin graft - no further bandaging required.

Oliver was left with a scar but was sound and ready to return to work.

Case Study - Wound Casting

Chris Lehrbach BVMS MVM Cert ES (Orth) MRCVS, Chapelfield Veterinary Partnership

Traumatic injuries commonly involve the lower limbs, wound healing in this area is notoriously slow, often resulting in excessive proud flesh and scar tissue formation and poor quality healing (Figure 1). Bandaging may be necessary for prolonged periods of time, resulting in considerable expense and time off work.

Veterinary Surgeon	Chris Lehrbach
XLVets Practice	Chapelfield Veterinary Partnership

Figure 1 Heel bulb laceration with bulging proud flesh and damage to the coronet.

Certain types of wound can be managed very effectively with the application of a limb cast. Whilst the initial costs may be greater, the period of wound healing can be considerably shorter, with an earlier return to work, less need for repeated bandage changes and a better cosmetic result.

The main benefit of limb casting is the rigid stabilisation of the wound within the cast. This reduces the amount of proud flesh production and allows the normal healing process to progress, without being continuously disrupted by movement at the wound edges. This benefit is particularly important with wounds over joints such as the fetlock.

For a cast to be applied, the wound site must be healthy and relatively free from infection. Removal of any dead or infected tissue and excessive proud flesh must first be completed (Figure 2). Partial or complete suturing of the wound is often carried out at this time (Figure 3). Depending on the location of the wound and temperament of the patient, preparation of the wound and application of the cast can be undertaken either using standing sedation with local anaesthesia, or under general anaesthesia.

Lower limb casts can include only the hoof, or extend up to the fetlock, or knee/hock (Figure 4), depending on the location of the wound. Several layers of padding are applied to the leg, including foam strips around the main pressure points before the cast is applied. Modern cast materials set very quickly, are light weight, but very strong and durable. Equine patients tolerate casts very well and soon adapt to having a slightly longer and inflexible leg.

Casts can remain in place for up to about three weeks, before being removed under sedation using a cast cutter. At this point the wound can be re-assessed and a light bandage applied for a short period to protect the area. If the wound has healed well then the patient may be able to return to normal work considerably sooner than expected (Figure 5).

Figure 2 Healthy wound flap after removal of proud flesh, ready for suturing.

Figure 3 Wound flap after suturing, re-aligning coronary band to avoid hoof wall defects.

Figure 4 Casts prevent movement of the joints, tendons and ligaments of the lower leg.

Figure 5 Three weeks after repair and casting, the coronet wound has healed very well, with minimal scarring.

PART 1
OF A THREE PART SERIES

Equine Physiotherapy

Rachel Greetham BSc (Hons) MCSP, SRP, Category A member ACPAT

Hi, my name is Rachel Greetham

I am a chartered animal physiotherapist based in Cheshire and team physiotherapist to the British FEI Pony Event Team. I'd like to give you an overview of what we do and how we may be able to help you and your horse.

Physiotherapy is an important part of veterinary medicine. It is involved in the treatment of injuries and diseases which affect all horses and ponies from your happy hacker to your Olympic hopeful.

Know who's treating your horse....

Physiotherapy is concerned with maximising movement and function using applied knowledge of physiology, anatomy and biomechanics. It is an established healthcare profession having been in existence for over 100 years. Animal physiotherapy has been recognised for 25 years and now has formal professional qualification routes. We are qualified to treat human patients first before further postgraduate study with animals. In animal physiotherapy, the title physiotherapist is not protected by law, this means that anybody, even someone without any physiotherapy qualifications can call themselves an animal physiotherapist. The title Chartered Animal Physiotherapist is protected, all Chartered Animal Physiotherapists are fully qualified human physiotherapists (MCSPs) and have then undergone postgraduate education to qualify as Chartered Animal Physiotherapists and Category A members of ACPAT (The Association of Chartered Physiotherapists in Animal Therapy, the governing body of our profession). Chartered Animal Physiotherapists have rules of professional conduct and have to attend courses regularly to continue their professional development and maintain standards.

ACPAT physiotherapists have been invited to provide physiotherapy services at the London Olympics 2012.

What you should look for in your physio....

When you have a physiotherapist treat your horse, you should check that they:

- are fully qualified Chartered Animal Physiotherapists (Category A members of ACPAT),
- only work with Veterinary Referral (legislation means that before a physiotherapist treats your horse they should get your vet's permission),
- have Professional and Public Liability Insurance,
- liaise with other professionals such as Vets, Saddlers, Farriers, Behaviourists,
- adhere to the Chartered Society of Physiotherapy's Regulations and Standards of Practice.

When could physiotherapy help?....

- Soft tissue injuries to tendon, ligament and muscle
- Back pain related/unrelated to lameness
- Poor/inconsistent performance issues
- 'He's not quite right'
- Wounds and scar tissue
- Splints, swellings and capped hocks
- Behavioural issues
- Lameness
- Rehabilitation post-surgery
- Age related stiffness
- Schooling/jumping problems
- Sporting injuries
- Prevention of injuries
- Post competition to promote tissue recovery
- Decreased range of movement
- Haematomas

How do we treat?

One of our most important tools are our hands. There are a wide variety of manual techniques used such as reciprocal inhibition, trigger point release, myofascial release, joint mobilisations, massage and stretches. These will reduce pain and muscle spasm, improve range of movement and flexibility. We also use electrotherapies such as ultrasound, laser, PEME, H Wave, TENS and neuromuscular stimulation. Laser is very effective in promoting wound healing. Ultrasound uses sound waves to stimulate collagen synthesis which is required in the healing of tendon, ligament and muscle injuries. Neuromuscular stimulation builds up muscle bulk and strength in damaged and weak muscles. These electrotherapies are used to promote the body's natural healing process, reduce pain and complement the manual therapies used. Chartered Physiotherapists are also very involved in the rehabilitation of horses following injury or post-surgery. Rehabilitation is very important to increase muscle strength, core stability, flexibility and aim to try to prevent recurrence of the injuries.

This haematoma received a course of physiotherapy which included ultrasound.

Carrot Stretches

A detailed assessment is undertaken before any treatment is given. The chartered physiotherapist will take an in-depth history of the problem. The horse will be observed moving in hand, on the lunge and where appropriate ridden. Asymmetries of movement, lameness and weaknesses are noted. The range of movement is measured and palpatory examination will be performed to identify areas of pain, muscle spasm, heat, swelling or scar tissue. From the assessment a problem list and treatment plan will be created. The treatment plan will involve the owners as well. Stretching programmes, massage, cold therapy will be tailored to the horse's needs.

Prevention of injuries is vital. The rehabilitation and maintenance programmes are key to this. The rehab programme can vary from progressive walking to lunging, to pole work, hill work, specific ridden exercises and core stability exercises such as carrot stretches. Chartered animal and veterinary physiotherapists will also work closely with vets, farriers, saddlers, trainers to achieve the best possible result.

If you want to find a Chartered Animal Physiotherapist in your area please go to **www.acpat.org** or **www.acpat.co.uk**

If you have any queries or want to contact Rachel directly go to:

www.equineandcaninesolutions.co.uk

This wound received laser therapy to promote healing.

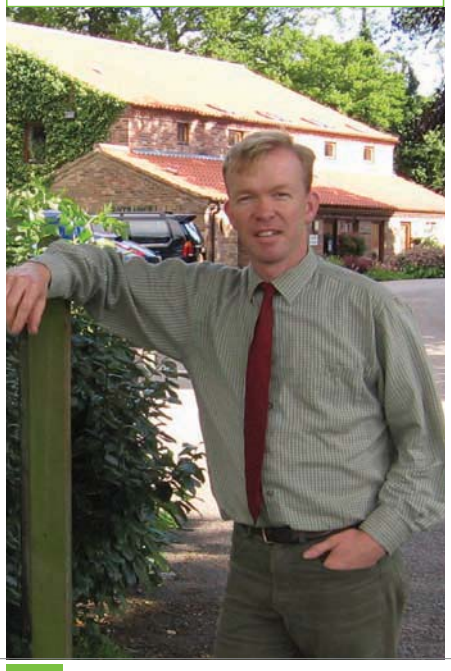
Richard Sutcliffe BVM&S MRCVS, Bishopton Veterinary Group

Weight Loss

Weight loss in horses presents vets with an interesting diagnostic challenge. By adopting a logical approach to investigation, asking probing questions, performing a targeted, careful examination and selecting from a range of clinical tests, we can identify reasons for weight loss. In many cases treatments or strategies to reverse the loss, or at least minimise further loss can be put in place.

Veterinary Surgeon Richard Sutcliffe

XLVets Practice Bishopton Veterinary Group



Is weight loss always a bad thing?

Weight loss frequently causes great anxiety amongst horse owners. Perhaps this is because we have been conditioned to believe that allowing our horses to lose weight is a sign of failure of adequate care. In the wild, horses and ponies gain and lose weight cyclically depending on the availability of adequate forage. In the UK of course this means that our horses and ponies would naturally lose weight during the winter months - when forage is scarce and of lower feed value and the colder climate requires use of energy to maintain normal body temperature. We now realise that our native ponies would be better served by allowing them to lose weight in a controlled and gradual manner over winter so that, come spring, they are in a better state to face the spring grass - with lower risk of developing laminitis and other conditions related to obesity.

Any investigation for weight loss in a horse begins with a thorough investigation of the feeding regime in place. Some people are offended at having the quality of their hay or silage brought into question - but it is important to have some first-hand knowledge of the potential feed value and likely palatability of the roughage being fed, especially when this comprises the majority of the daily ration. Horses will lose weight if they are wasting much of the food put in front of them because it smells fusty and is unappetising! Equally it is nice to rule out poor forage as a potential contributing factor when presented with a lovely sweet-smelling bale of dry haylage which has been well preserved, stored and used quickly to avoid spoilage.

An experienced horse vet will be quickly able to assess whether a horse or pony would be expected to manage to preserve weight on the ration being fed. Sometimes things are not as straightforward as they would appear though, and some assessment has to be made as to whether the patient is capable of eating the food provided. Feeding mismatches occur in older horses with dental problems. The most common problems are veteran ponies with very worn incisor teeth which may be presented with quite short grass. Longer grass in summer is often no problem but with teeth that don't meet, shorter grass is very difficult to bite off, and weight loss ensues. These same ponies are then offered supplementary hay or haylage but their back teeth have been lost too so they can't manage that either! What they do need is supplementation with some easily consumed feed such as soaked sugar beet pulp and grass nuts as a fibre source together with a source of energy which can be provided by the careful addition of corn oil. Your vet will be able to provide advice on this. Many commercially produced diets for veteran horses and ponies are also available and these have the advantage of containing a suitable mix of vitamins and minerals.

After addressing feeding issues it is sensible to check the horse's teeth for signs of abnormal wear, periodontal disease, loose teeth and oral ulceration. All of these cause oral pain and lead to 'quidding' (dropping food from the mouth in small balls, after chewing, which are often seen on the floor around hay nets.)

If after addressing the thin horse's dental health the cause for its poor condition has still not been explained, then a full examination followed by selected diagnostic testing as appropriate would be necessary (see Figure 1).

WHY DOES WEIGHT LOSS OCCUR?

Insufficient nutrient intake

- **Inadequate food**
  - Poor quality (low nutrient value)
  - Insufficient quantity provided
  - Poor palatability
  - Unsuitable presentation (e.g. short cropped grass for pony with worn incisor teeth or seed hay for old pony with no molar teeth)
- **Poor appetite**
  - Stress or anxiety
  - Gastric ulceration
  - Systemic disease (e.g. Strangles)
  - Pain (e.g. lameness)
- **Inability to eat**
  - Dental/oral pain
  - Difficulty swallowing (e.g. Grass Sickness)
  - Poor mobility (unable to reach food easily)

Excessive nutrient loss

- **Inability to adequately chew (which aids digestion and therefore nutrient uptake)**
  - Oral pain (e.g. Loose teeth, dental overgrowths, periodontal disease)
  - Lack of molar teeth (especially in old age)
- **Kidney disease (nutrients lost into urine)**
- **Diarrhoea (nutrients lost into faeces)**
  - Feed intolerance (especially to haylage)
  - Internal parasites especially small roundworms (Cyathostomes)
  - Bacterial overgrowths (e.g. following antibiotic treatments)

Figure 1. Tests which may be used to investigate weight loss

- **Blood testing:**
  - **Haematology and biochemistry**
    - Liver enzymes
    - Kidney enzymes
    - Urea/Creatinine as indicator of kidney function
    - Bile acids as indicator of liver function
    - Blood cell count may indicate
      - Infection
      - Lymphosarcoma
    - Specific ACTH assay (for 'Cushing's disease')
- **Urine testing:**
  - **Glucose/ketones (in 'Cushing's disease')**
  - **Protein**
  - **Bacteria**
- **Liver biopsy** (a test used when liver disease is suspected)
- **Glucose tolerance test** (to check that glucose uptake from the gut is normal)
- **Rectal examination**
- **Abdominal fluid sampling** (can be useful to identify some cases of abdominal tumours)
- **Abdominal ultrasound** (to examine gut wall, and liver and kidneys. May identify some abdominal masses)
- **Endoscopic examination of stomach lining ('Gastroscopy')** to check for gastric ulceration
- **Faecal worm egg count ('WEC')** to check for adult gutworms

SUMMARY

INVESTIGATION OF WEIGHT LOSS

- History taking
- Examination of feed/pasture
- Dental examination
- Initial physical examination
- Specific examinations as indicated (e.g. rectal examination, Gastroscopy)
- Selection of diagnostic tests required
- Secondary tests

Case Study
Weight Loss

This horse was in good condition when loaned out 8 weeks previously over the cold spell last winter. The open sore on its withers was produced by the turnout rug which no longer fitted.

When reclaimed by its owner the horse was ravenously hungry but after veterinary examination, with adequate provision of spring grass it regained its normal weight within a few weeks.

CAREERS
ADVICE AND GUIDANCE

Marie Rippingale Bsc (Hons) REVN G-SQP from Scarsdale Veterinary Group describes the role of an Equine Veterinary Nurse in Practice.

Careers: Equine Veterinary Nurse

Veterinary Nurse	Marie Rippingale
XLVets Practice	Scarsdale Veterinary Group

Equine veterinary nursing is a dynamic and challenging vocation and in my opinion it is the best job in the world! To be an Equine Veterinary Nurse (EVN) you have to have a strong love of horses but you also need to be disciplined, organised and capable of adapting to any situation. The first veterinary nursing training scheme was set up in 1961, but a specific equine veterinary nursing qualification has only recently been introduced. The first EVN examination was held in 2000 and the first certificates awarded in 2001. Qualified EVNs carry out a number of functions in equine practice and are specifically trained in the following areas:

- Taking x-rays
- Giving medications
- Administering fluid therapy
- Bandaging
- Caring for and supporting patients
- Assisting with the monitoring of anaesthetics
- Scrubbing in to assist with surgical operations
- Theatre practice
- Critical and emergency care
- Laboratory work
- Foal care
- Law, ethics and legislation

All procedures carried out by an EVN are under the direction of a veterinary surgeon in line with legislation.

There is a large organising role to consider too. EVNs are often responsible for running the operating theatre and sometimes the pharmacy. The most important role the EVN has is monitoring and assessing the inpatients. The main goal is to ensure that patients recover as soon as possible.

Veterinary nurses as a whole take a holistic view of patients which means the functioning of all body systems is taken into account as well as those that are compromised. The patient's mental wellbeing will also be considered, as a happy patient will recover faster than a stressed patient. It is essential for an EVN to have a working knowledge of equine behaviour as this can be adapted to enhance care given.

The EVN will provide plenty of necessary TLC for patients, using techniques like grooming patients to mimic their natural behaviour which encourages them to relax and feel at ease.

EVNs monitor patients by regularly recording clinical parameters e.g. heart rate, temperature and respiratory rate. Just recording parameters is not enough qualified EVNs can identify abnormalities and instigate action to amend inconsistencies and improve patient welfare. This is where good communication skills are required, as EVNs must update the case veterinary surgeon regularly regarding the progress of their patients. As EVNs are mainly based at the practice they are always in close proximity to patients which makes monitoring more efficient. Producing patient care plans helps to guide holistic nursing of patients and encourages the use of evidence based medicine to improve standards of inpatient care.

How do I become an Equine Veterinary Nurse?

RCVS Level 3 Diploma in Veterinary Nursing

The NVQ system of vocation training has now been phased out and replaced with the Royal College of Veterinary Surgeons (RCVS) Level 3 Diploma in Veterinary Nursing. This qualification is completed whilst students are employed at the practice and takes either 2 or 3 years. Students go to college on either

day or block release and spend the rest of the time in practice. The course is assessed by the RCVS through written and practical exams and by the college through written exams and assignments. Students are also assessed via the Nursing Progress Log (NPL) which is an online replacement for the portfolio and is a practical assessment carried out in practice. For a practice to be able to train veterinary nurses they have to be approved by the RCVS and given the title of 'Primary Centre'. The practice must also train a qualified veterinary surgeon or veterinary nurse to be a 'Clinical Coach'. This person will guide the student through the course and the NPL. All students on the new Level 3 Diploma in Veterinary Nursing complete a certain number of units studying both small animal and equine species before they are given the opportunity to specialise in the final year. This means that students can still qualify as an equine veterinary nurse but they must study a certain amount of small animal nursing on the way.

The old denomination EVN has now been replaced and students who have completed the new RCVS Level 3 Diploma in Veterinary Nursing through the equine pathway will use the letters VN (eq) once qualified.

Degree in Veterinary Nursing

Students can opt to do a degree in veterinary nursing which takes three or four years. The degree is assessed in the same way as the Level 3 diploma by the RCVS and the college. Students must complete a 60 week placement at an RCVS approved Primary Centre to satisfy the NPL requirements. The degree can be completed in either an equine or small animal context.

Training equine veterinary nurses requires a large commitment from both the student and the practice. However the outcome is a knowledgeable, professional member of staff who has shown commitment to the job prior to qualification. The hard work doesn't stop there! All qualified EVNs are eligible to apply to be on the RCVS Register to become a registered equine veterinary nurse (REVNs or RVN (eq) for the new qualification). By registering, EVNs are demonstrating to employers and the general public that they are keeping their skills up-to-date and accounting for their professional conduct. REVNs are required to complete an average of 45 hours of continuing professional development (CPD) over a three-year period and also follow the Guide to Professional Conduct for Veterinary Nurses. If things go wrong, an REVN would undergo a disciplinary process, similar to that for veterinary surgeons.

There is no normal working day for an REVN, emergencies can arrive at any time day or night and arranged procedures can change on an hourly basis. The way to survive is to adapt using professional judgment and skills to assist and support others in the veterinary team. Being an REVN is challenging, inspiring and heartbreaking all at the same time, however I still believe it is the most rewarding career you could ever choose.

Lesley Barwise-Munro BSc BVM&S Cert EP MRCVS
Alnorthumbria Veterinary Group

Behind the scenes at the Races...

...The Vet's Role

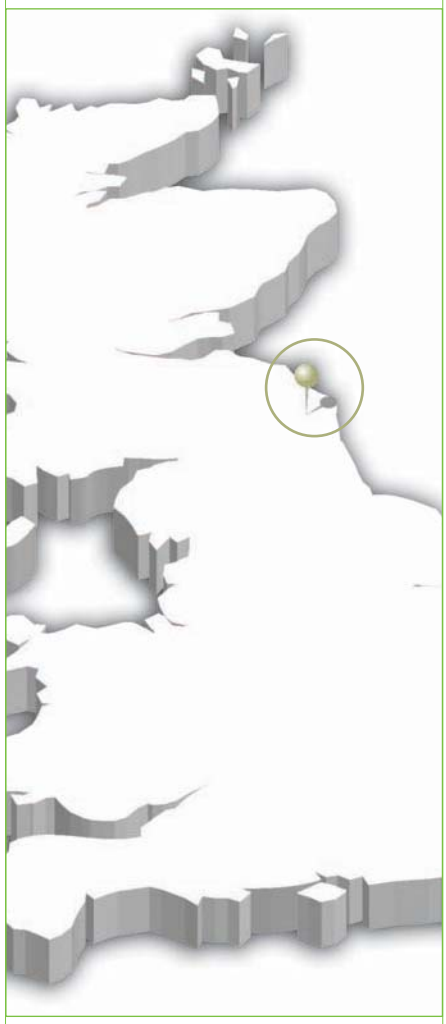
There are two categories of veterinary surgeons that attend all the racecourses in the UK:

Firstly one referred to as the Regulatory Vet who is employed by the British Horse Racing Association (BHA) and is responsible for ensuring that all horses are ridden within the rules of racing and these vets carry out random testing of horses for any substances that may affect their performance (dope testing).They also check the identity of each horse by reading the microchip implanted in its neck.

The second category is Racecourse Vet who, as suggested by the name is employed by the racecourse itself. The racecourse vet has to be an experienced equine vet and to have attended the appropriate casualty management training. The racecourse vet attends and treats any horse present at the racecourse who sustains an injury either on or off the race track or occasionally during transit to the racecourse. The vets are part of a larger team of people all working together to make the day a success. Both categories of veterinary surgeons are there to look after the wellbeing of the horses at the racecourse and to ensure the best standards of care and welfare are in place for these animals.

So what does the Vet's day at the races entail?

The appointed senior racecourse vet is responsible for ensuring that two vets are present at each race meeting on the flat and three vets for each National Hunt meeting over hurdles and fences. In addition one BHA vet attends every meeting.



Veterinary Surgeon	Lesley Barwise-Munro
XLVets Practice	Alnorthumbria Veterinary Group

The vets arrive in good time before the start of the first race in case there are any pre-race problems. For example there can be injuries en-route to the course, one of the stabled horses may develop colic, or sometimes there may be pre-race concerns about soundness. In these cases the horses trot up usually with two vets present in order to decide if they are fit to run.

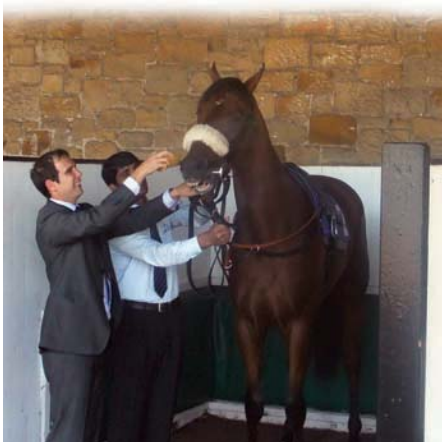
Early arrival of the vet also allows time to check all equipment and collect a radio which is the method of communication between vets, horse ambulance, starter, clerk of the course and groundsmen.

The race day is now set to start...

Horses arrive off lorries and are taken into the stable yard to prepare for racing.

In the saddling area, horses are saddled up and any food washed out of their mouths to avoid inhalation during the race. They then proceed to the parade ring.

The jockeys mount and horses leave the parade ring to go down to the start. Each phase from arrival of the horses can involve accidents which need a vet at hand, or able to be summoned on the radio.



At the start...

For both the flat racing and the jump racing a vet has to attend the start of all races. This is to be able to check any horses that the jockeys are concerned about during the canter from the parade ring to the start of the race. Occasionally a horse may get kicked by another and require checking to see that it is still alright to run. The vet informs the starter who makes the final decision. No horse will race if it's not fit to.

All the races at Newcastle are accessible by car. The flat races, that are shorter and statistically hold less risk of injury to the horses are followed by one vet together with horse ambulance, screens and full medical team for the jockeys. In National Hunt (Jump) racing we have two veterinary vehicles accompanying the horses during each race.

On course - Faller

A large percentage of horses that fall are winded, not injured. The horse is screened and examined systematically for any injuries; head, neck, back and each limb one by one and a neurological assessment. Oxygen is given into the nostril and time allowed to get their breath back and they are assisted to their feet behind the screens. If injured they are walked slowly back to the unsaddling area as walking helps to reduce the build up of lactic acid in the muscles and reduce stiffness.

If the horse is lame the horse ambulance will drive onto the course to collect the injured horse. The vet continually reassesses injured horses to determine where the injury is and apply support bandaging sometimes with splints in order to protect the damaged area whilst recovering to the stables for further reassessment. If the fallen horse is obstructing the racecourse; the jump in front of the horse undergoes the dolling off procedure which directs the jockeys approaching on the second circuit to miss out that jump and steer round the faller.

Horses that pull up (drop out of the race) whilst racing...

When the vet is following the horses whilst racing we are watching each horse carefully for any sudden changes. Towards the end of the longer distance races it is expected that some horses for a variety of reasons may tire and the jockey takes the decision to let the horse slow down and make its way round to the finish area in its own time. Often of more concern to the following vet are those horses that pull up suddenly in the earlier stages of the race. They may pull up lame and the jockey dismounts straightaway. The vet then attends the horse and if appropriate for assessment privacy, the screens are put up around the horse. If the horse is not lame but the jockey was not happy for other reasons then the jockey may ride quietly back to the finish after the horse has been examined by the vet.

The Horse Ambulance

The horse ambulance and driver play a key role in any race day by the recovery of injured horses both to the stables at the racecourse and if necessary onto an equine diagnostic and surgical clinic. The design of the horse ambulance has a low loading ramp into and out of it, this minimises the effort that an injured horse has to make getting into the vehicle. The side supports reduce the swaying of the animal's body on potentially injured limbs and the front unload, low ramp avoids the horse having to turn a corner at the same time as bracing itself coming down the ramp.

At the finish of the race

The vets are very aware that problems can arise with tired horses as they are crossing the finish line, as they are being unsaddled, washed off and in the parade ring hence we split our duties so that all the horses are supervised as much as possible. Occasionally a horse may develop a nose bleed or become more noticeably lame after the race has finished and require attention. Washing the horses off with cold water and gentle walking helps the large muscle groups in hindquarters, back and neck to cool down and disperse the lactic acid. The cool down period for any athlete is important for looking after the muscles, tendons and ligaments in preparation for the next phase of their training programme and ultimately their next race.

Acknowledgements
- John Grossick Photographer
- James Armstrong Clerk of the Course for Newcastle Racecourse
- Peter & Kim Dunn - Horse Ambulance Providers
- Alnorthumbria Vets Equine Staff

VET VIEWPOINT...

WE ASK THE OPINIONS OF OUR VETS ON THE TOPIC OF **THE RACING INDUSTRY**

...Is racing a welfare issue?

Simon Stirk BVSc CertEP MRCVS, Minster Veterinary Practice

Racing, both flat and National Hunt plays a large and colourful role in the sporting heritage of our country and the industry is a major employer and provider of significant work to equine practices throughout the country. I have always found that if owners, trainers and their staff genuinely care about their horses then a high standard of welfare invariably ensues.

Like most sports, racing carries risks. No-one wants to see valued racehorses killed or injured and as equine veterinary surgeons it is our professional duty to make every effort to ensure the highest standards of welfare for the horses under our care. Sadly fatalities do occur in racing to the extent of about two horses per thousand runners but we must not forget that horses are herd animals and galloping alongside one another is natural to them and it is common to see horses continue to race and jump after horse and rider have parted company.

With advances in management and repair techniques, many of these injuries are now successfully treated with horses commonly returning to racing but if fractures are of longbones many horses do not adapt well to a sustained period of convalescence following injury so in some instances, in the interests of welfare, humane destruction is the kindest course.

Nobody wants to see abuse of the whip and guidelines make it clear that the whip should only be used for safety, correction and encouragement.

Britain has led the way with restrictions on use of the whip and design of a kinder whip. Horses are examined by a veterinary officer after a race and any signs of abuse are reported to the stewards and the jockey will then face an enquiry that may result in suspension and a fine although I am not convinced by the deterrent value of fining wealthy top jockeys and effectively giving them a few days holiday when they have been found guilty of whip abuse which often occurs in high value races

When a horse's racing days are ended the racing industry correctly does not see its duty to racehorse welfare as ending; their subsequent whereabouts are monitored. Racing has also set up and funds the charity Retraining of Racehorses which has been very successful in raising the profile of ex-racehorses in the wider equestrian world. As well as being retired for breeding or racing at a lower level in point-to-points, a large and increasing number are re-trained for use in other disciplines and enjoy life in a different sphere e.g. hunting, eventing, polo, dressage, showjumping, endurance riding and many become loved and trusted hacks, often enjoying their retirement for many years.

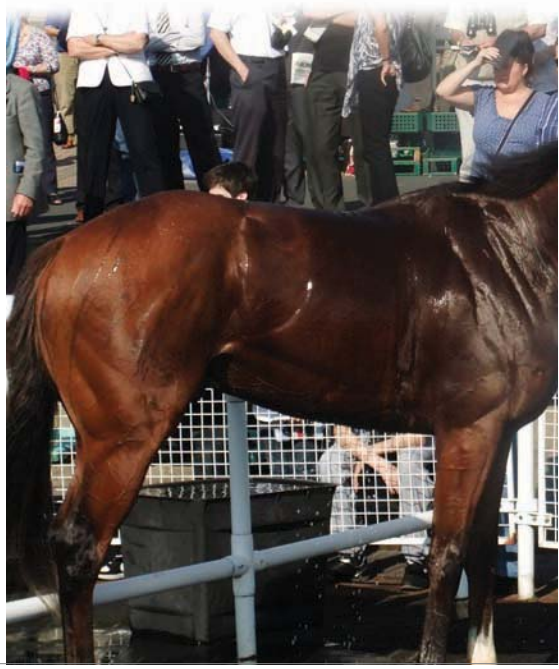
"**In my opinion** welfare is an issue that is taken seriously by those involved in racing; be they owners, trainers, grooms or veterinary surgeons. The close relationship with genuine welfare organisations results in constant improvement to the lot of these noble and bold animals and I sincerely hope that this approach continues to marginalise the stated wish of some organisations to ban racing"

Jane King BVetMed MRCVS
Westmorland Veterinary Group

I believe there are several aspects of the thoroughbred industry that could be considered a welfare issue. I am glad to say that from what I have seen from my involvement with racing and racecourse work, I believe much is done to safeguard the horse, from the provision of excellent veterinary care on the track to the debate on the use of the whip.

Whilst the horse is in training much effort goes into his care and the prevention of training injuries, the aim, after all, is to have a fit healthy horse who will win races. Good trainers achieve this, sadly many horses are not so lucky in the care they receive and fall by the wayside.

Another welfare issue, harder to control is the indiscriminate breeding of thoroughbreds at the bottom end of the market, although the recent economic climate has helped reduce this. At the other end of the horse's life when his racing career is over, welfare can also be an issue but I think there has been a recent improvement with specific re-homing charities and showing classes designed for retired racehorses.



Lesley Barwise-Munro BSc BVM&S Cert EP MRCVS
Alnorthumbria Veterinary Group

The BHA has raised the standards of welfare of racehorses on the track over the last 10 -15 years by working closely with the Association of Racecourse Vets which assists in the training of racecourse vets. Any horse with nose bleeds or injuries are recorded by the British Horse Racing Association and horses are only allowed to race again when they have had an adequate period of time off racing.

Data collected from racecourses is used to review patterns of problems both in groups of horses and at particular racetracks. If a group of horses have a higher injury rate, they then assess what can be done to reduce this either by changing training methods, surfaces or jump design. If investigations show a particular racetrack appears to be having more problems than others then the BHA will assist the team at that track to investigate the reasons behind the pattern and make changes.

This might mean for example improved drainage or the use of turf watering systems. The important point is using a team approach ensures reviews are carried out and improvements are made to benefit the future welfare of the racehorse.

Joseph Ivey BVSc MRCVS Rosevean Veterinary Practice

As a vet working in west Cornwall my contact with the racing industry is minimal but in general I believe that thoroughbred horses are born to race, it is what they do, and to my eye what they enjoy doing.

Whilst horseracing has its own issues, if you start to break down any competitive equine sport you can find welfare issues to debate. Therefore, as long as we continue to closely scrutinise and monitor horse welfare and safety so that we can strive to achieve the best practice both race side and away from the racecourse it is a great sporting event for all involved. I do believe in these hard economic times we need to be realistic about the number of racehorses that are bred and maybe this is an area that needs closer attention.

pony pages

Welcome...

TO THE AUTUMN/WINTER 2011 XLVETS PONY PAGES

Top Tips

Top Tips for Preventing Injury in Ponies...

by Katherine Timms BVetMed MRCVS, PAWS Veterinary Health Centre

- Ensure no sharp objects are in your pony's field or stable.
- Make sure your fencing is safe and pony proof!
- Always tidy up forks, tack and all other equipment after use. Do not leave lying around for them to get tangled up in.
- Always tie your pony up to a piece of string attached to the stable or trailer, so it will easily snap if your pony tries to pull away.
- Always check a new riding area before setting off on your pony to make sure there are no hidden problems, like rabbit holes, barbed wire or disused machinery.
- Make sure your jumps and games equipment are in good condition so not likely to break and hurt your pony if he catches one of them.
- Get your trailer or lorry regularly checked to make sure the floor is strong.
- Remember ponies with red ribbons kick and green ribbons are young so keep out of their way at shows or meetings.
- Ensure you know your highway code before hacking out on the road.
- Always wear high visibility clothing when riding out on the road in winter. **Be safe and be seen!**

Fact!

Did you know - Foals can usually stand up within an hour of being born...

winner

CONGRATULATIONS TO...
COMPETITION 7 WINNER
Rosevean Winner:
Emma Haase

1st Competition page

ENTER TODAY
GOOD LUCK...

Welcome
XLVets Competition

How many differences can you spot between the two pictures below. Circle the differences as you find them, then write how many you can find on the competition entry form below and send it back to us for **YOUR CHANCE TO WIN.**

Spot THE Difference

WIN a V-Bandz Horse & Rider Starter Fluorescent Set (One Size), comprising of a rider hatband and tabard, and for the horse there are legbands, a tail guard and a noseband.

WIN!

Answer to Summer 2011 competition: 6 Differences

A winner will be chosen from all the correct entries received before the closing date, Friday 23rd December 2011. The winner will be revealed in the next issue of Equine Matters. The editor's decision is final, no correspondence will be entered into.

THE NUMBER OF DIFFERENCES: _____

Send your completed entry to: Equine Matters Competition No.8
XLVets, Carlisle House, Townhead Road, Dalston, Carlisle, CA5 7JF

Name

Address

Postcode

Daytime Telephone Number

Email

XLVets Practice Name

☐ I do not wish to receive further information from XLVets

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XLVETS EQUINE - BETTER TOGETHER

November 2011