WINTER EDITION 2014

XLEQUINE - BETTER TOGETHER

# Equine MATTERS

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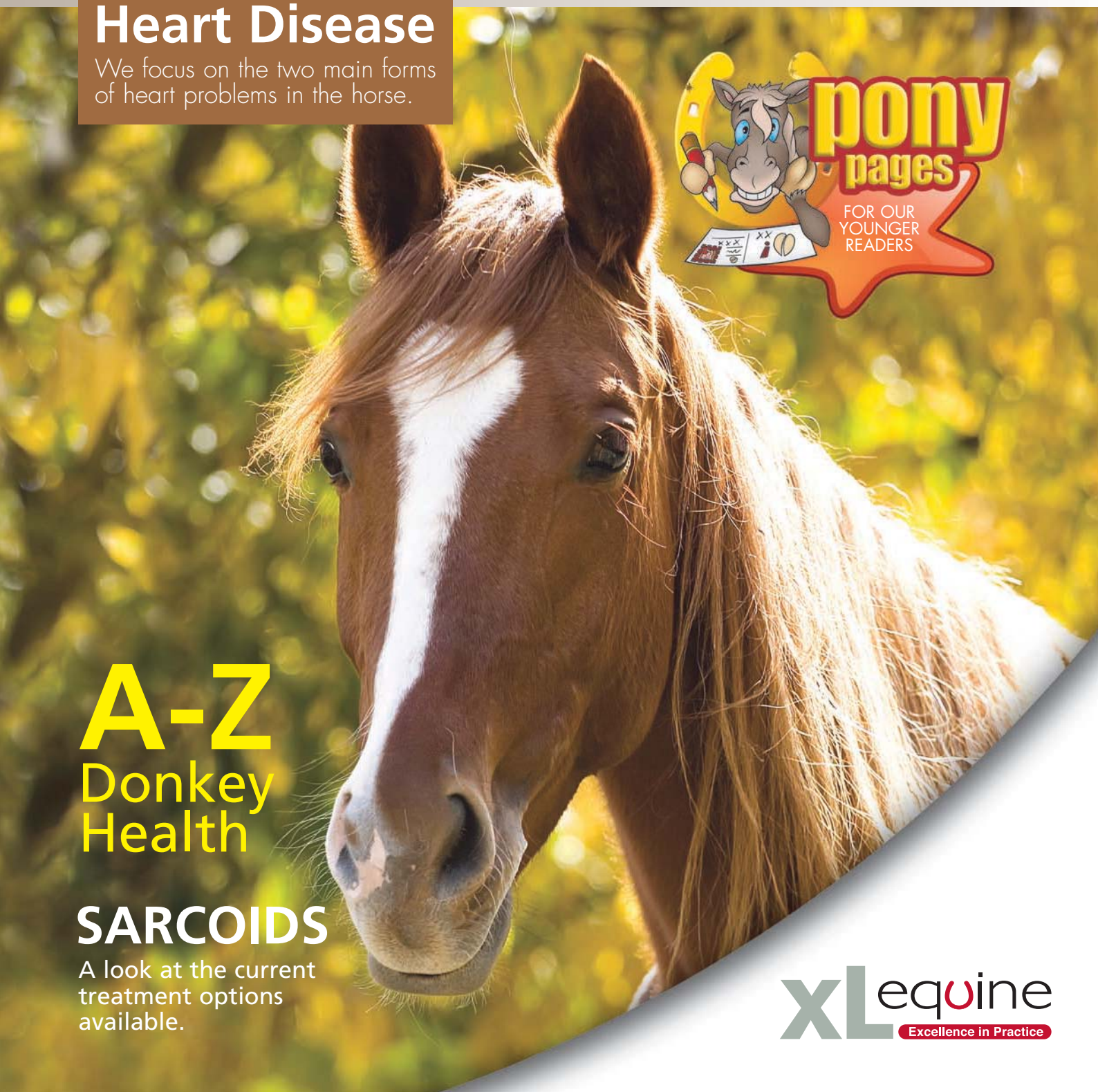
Inside this issue:

## Heart Disease

We focus on the two main forms of heart problems in the horse.




## A-Z Donkey Health

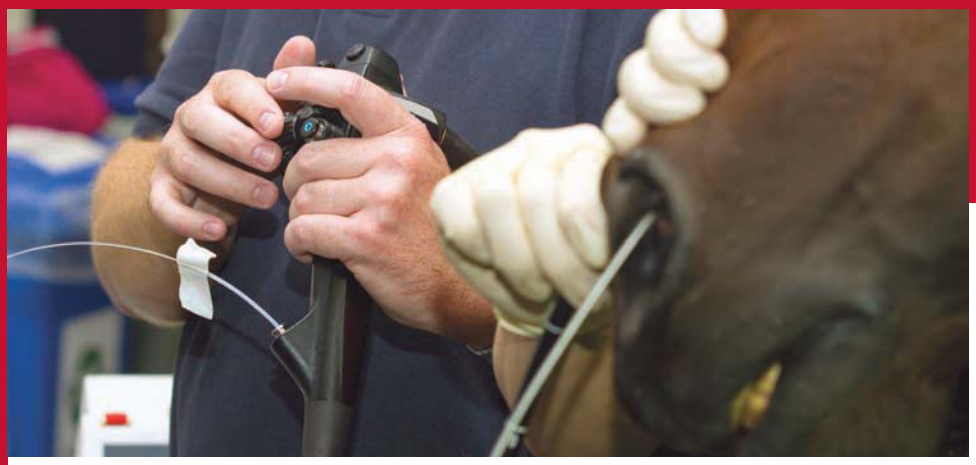
## SARCOIDS

A look at the current treatment options available.

xLequine Excellence in Practice

# Vet Focus

In each issue of **Equine Matters** we feature a brief insight into a selection of the veterinary surgeons who make up XLEquine. Featured in this issue are Wendy Furness, Gemma Wright and Graham Hunter...



## Wendy Furness MA VetMB CertEP MRCVS

ScarsdaleVets Equine

XLequine Excellence in Practice

**Wendy Furness is the senior equine veterinary surgeon at Scarsdale Vets in Derby where she is a director.**

Wendy has worked with horses since graduating from Cambridge University in 1997. Her first job was at the Animal Health Trust in Newmarket completing an equine internship with an emphasis on equine lameness and problems of the performance horse. After completing this she joined Scarsdale Vets in 1998, gained an RCVS Certificate in Equine Practice in 2003 and became a partner in 2006.

Wendy's main areas of clinical interest are lameness investigation and diagnosis and performance limiting problems of sports horses. As well as clinical work, Wendy was involved in establishing the practice as an equine nurse training centre, setting up the equine rotation for Nottingham veterinary students and she is a Director of XLVets and sits on the Equine Forum.

Outside of work she has three dogs Barney, Isa and Angus and two horses Cassie, who she retired a few years ago and her youngster who was backed this year and will be brought fully into work next year.

## Gemma Wright BVMS MRCVS

NORTHVET VETERINARY GROUP

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**Gemma Wright is from Alford, Aberdeenshire. She graduated from Glasgow University and started working at Northvet Veterinary Group on Orkney in 2010.**

At Northvet she has been able to develop a keen interest in first opinion equine work. Through various XLVets and XLEquine meetings and continuous professional development events, she has been able to gain further experience in investigation of lameness and care of the geriatric patient.

She also enjoys routine work including dentistry as well as getting to know clients and their horses whether big or small.

Outside of work she takes advantage of the Orkney coastline. On her days off she has been known to take out her body board if the waves aren't too big, the snorkel if it's not too cold and walk her Springer Spaniel x Labrador along the many beaches when the Orkney weather permits!

## Graham Hunter BVM&S GPCert(EqP) Cert EP CertAVP(ESO) MRCVS

ARDENE HOUSE VET PRACTICE LTD

XLequine Excellence in Practice

**Graham Hunter is the senior equine veterinary surgeon at Ardene House Veterinary Practice Ltd in Aberdeen, where he is a Director.**

Graham joined Ardene House Veterinary Practice in 1990 following graduation from The Royal (Dick) Veterinary College in Edinburgh. Originally working in all three departments of this large practice, he rapidly dropped small and farm species to work solely in the equine department. Keen on personal development he has undertaken extra equine qualifications, most recently attaining a certificate in equine surgery and orthopaedics. In 2009 Graham was appointed as an RCVS examiner for the Certificate in Equine Practice and continued in the position until these certificate examinations were terminated. Although interested in all aspects of equine medicine and surgery, his focus and passion over recent years have been very much on lameness and surgical cases.

In his spare time…of which there doesn't appear to be much, he tends to shoot up to the Moray coast where the lure of his fishing rods, lobster creels and small boat fills the day and the family's dinner plates, whatever caught being pleasantly washed down with a wee dram.

## WINTER EDITION

**XLEquine** 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.

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## THE EDITOR

# Welcome to the 'Winter 2014' edition of Equine Matters...

**...produced by XLEquine practices.**

In this issue we focus on sarcoids including real life medical and surgical case examples. We look at genetic diseases of horses, heart disease and provide an insight into donkey health. We have chosen to discuss equine vaccination as well as continue to provide an insight into XLEquine with three more featured veterinary surgeons.

**On behalf of XLEquine I would like to wish you all a great Autumn and Winter season.**

**Lee Pritchard** BVSc MRCVS
Calweton Veterinary Group

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ScarsdaleVets Equine

Dr Kirstie Pickles BVMS MSc PhD DipECEIM PGCert(Couns Skills) CertEM(Int Med) MRCVS

# Heart Disease in the Horse

**There are two main forms of heart problems in the horse;** murmurs (abnormal heart sounds) caused by abnormal blood flow in the heart and arrhythmias (disturbances in heart rhythm).

**Many murmurs and arrhythmias are of no clinical concern, however, it is important that they are fully evaluated to determine their cause and therefore their clinical significance.**

The most common clinical signs associated with heart disease are weight loss, exercise intolerance, swollen legs from fluid accumulation (oedema) and poor growth (in youngsters).

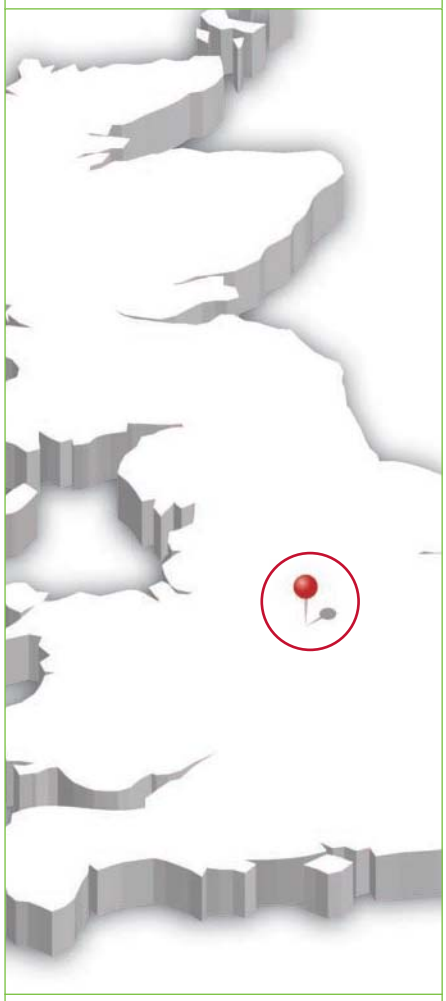
## Cardiac Murmurs:

### Evaluation of a Heart Murmur

It is important to distinguish between functional flow murmurs, which are common and of no clinical significance, and pathological murmurs caused by heart disease. Evaluation using a stethoscope as well as a full physical examination is essential, with particular reference to the heart. The murmur will be graded according to its loudness, when it occurs in the heart cycle, and where it can be heard loudest. Other signs of heart disease will be evaluated including listening for arrhythmias and abnormal lung sounds, feeling the arterial pulse, looking for distension or pulsation of the jugular vein in the neck, and fluid accumulation in the abdomen and chest cavities. Sometimes further diagnostics such as blood tests are necessary as well.

If a pathological murmur is suspected, an ultrasound scan of the heart (echocardiogram) will be advised (figure 1). This can identify heart valve abnormalities such as leaky valves (valvular regurgitation), birth defects such as holes in the heart and abnormal heart muscle function. Specialised ultrasound functions can document the size and speed of the abnormal blood flow in the heart. An electrocardiogram (ECG) of heart rhythm will usually also be performed at the same time.

**Figure 1:** An ultrasound scan of the heart (echocardiogram)

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| Veterinary Surgeon | Kirstie Pickles |
| XLEquine Practice | Scarsdale Veterinary Group |


## Causes of equine cardiac murmurs

### A. Physiological / functional flow murmurs

These are very common due to turbulence in large blood vessels associated with high flow rates of blood filling, or being pumped out of, the heart. They can also sometimes be heard transiently during episodes of fever, colic or anaemia. These murmurs are usually quieter than pathological murmurs and are heard only over a short period of the heart cycle.

### B. Murmurs associated with heart disease

#### 1. Birth defects

- Holes in the heart are the most common birth heart defect (figure 2). Horses with small defects may be able to exercise normally (and even race successfully) and have a normal life expectancy.
- Other heart birth defects are rare.

**Figure 2:** Ultrasound scan of the heart showing abnormal blood flow through a hole in the heart.

#### 2. Heart valve murmurs

- These are most commonly caused by degeneration of the valve and surrounding tissues. Infection of the heart valve (endocarditis) is rare in horses. Horses with significant valve murmurs may have exercise intolerance e.g. become unusually tired during faster work. Mild leakiness of some heart valves can be seen in fit, healthy horses but valve disease can be very serious and may lead to heart failure. Severely leaky valves cause secondary enlargement of heart chambers which makes horses unsafe to ride. It is therefore important to fully evaluate these murmurs with heart scans.

# Cardiac Arrhythmias:

## Evaluation of an Arrhythmia

It is important to characterise the abnormal heart rhythm by the heart rate (abnormally fast or slow), the presence of abnormal pauses or premature sounds in the heart cycle and whether such abnormalities are heard regularly or irregularly. Other signs of heart disease will also be evaluated as described for murmurs.

The heart rhythm should then be evaluated by performing an ECG (figures 3 and 4). This will be performed at rest and then possibly also at exercise if required. Modern ECG units can be fitted under the saddle and the heart trace recorded digitally. Sometimes it is necessary for a horse to wear an ECG for 24 hours to be able to record and identify intermittent arrhythmias.

Occasionally further diagnostics such as blood tests may be recommended. An ultrasound scan of the heart may also be advised to assess heart muscle function and investigate concurrent murmurs.

**Figure 3**

**Figure 4**

## Common Cardiac Arrhythmias

### Physiological Arrhythmias

- These arrhythmias are heard at rest and should disappear when the heart rate elevates during excitement or exercise.The most common physiological arrhythmia is **2nd degree atrioventricular block** (AV block) and is very common in fit,healthy horses. A regularly, irregular rhythm with occasional pauses (dropped beats) is heard e.g. four normal beats and then a dropped beat every fifth beat.

### Common Pathological Arrhythmias

- **Atrial fibrillation:** the most common arrhythmia associated with poor performance in horses. With this arrhythmia, the top chambers of the heart (atria) are working ineffectively. Output from the horse is normal at rest but submaximal and inadequate during exercise such that the horse suffers exercise intolerance. This arrhythmia can occur constantly or intermittently in short episodes, usually at exercise. It may be associated with whole electrolyte imbalances or underlying heart disease. Compared with AV block, the heartbeat is irregularly irregular and there is no set pattern to the rhythm. This arrhythmia may not even need to be treated in horses used for light work only but can often be treated successfully in performance horses if diagnosed shortly after onset.
- **Premature heartbeats:** occasional early beats are heard. Occasional early beats are unlikely to be significant but if frequent or at exercise they should be investigated. Electrolyte imbalance and underlying systemic or heart disease may cause premature beats. Premature beats can progress into more serious arrhythmias and therefore should be investigated.
- **Ventricular tachycardia:** the most common life-threatening arrhythmia in the horse characterised by disordered and irregular beating of the large pumping chambers of the heart (ventricles). This usually occurs as a consequence of other systemic disease (especially gastrointestinal disease), electrolyte disturbances, heart infection, immune-mediated heart disease or accidental consumption of ionophores, which are used as growth promoters in farm animals. Ventricular tachycardia may result in respiratory distress, fainting, and heart failure. Treatment can be effective in the early stages.

## Conclusion

Murmurs and arrhythmias are relatively common in horses, many of which do not cause the horse any problem. The most common clinical sign of heart disease an owner will pick up is exercise intolerance. If you are concerned about your horse's health and possible heart disease, contact your veterinary surgeon for further advice.

Aimi Duff BVM&S MRCVS Scott Mitchell Associates

# Equine Genetic Diseases

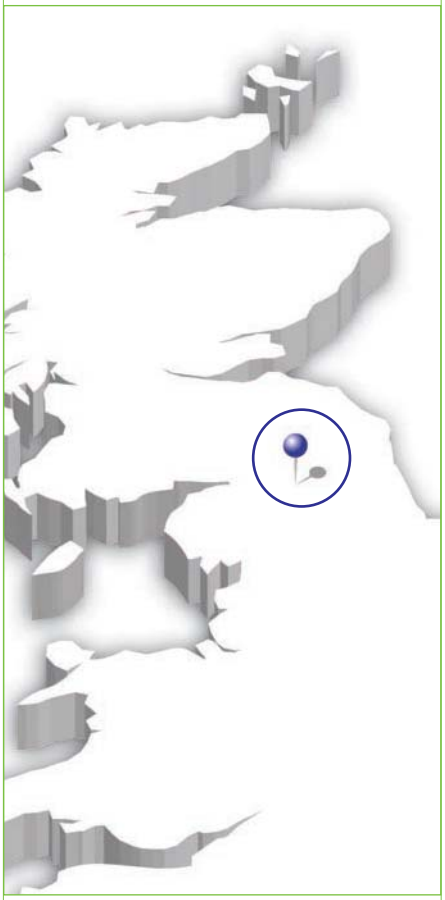
## Genetic diseases occur in all species and are due to changes in an individual's DNA sequence.

Genes are comprised of a DNA sequence, which dictate a code for making proteins involved in cell structure and function. Where there is a significant change in the code, like a spelling mistake, a defective protein is produced. This change is called a 'mutation', and the defective protein produced results in a change in protein function and signs of disease. Mutations may occur on a single gene or on several genes to cause disease; the latter are more common.

If the mutation is present within the germ line cells then the genetic disease is hereditary; germ cells are involved in passing genetic material from parents to offspring. This has led to the development of genetic tests using blood samples or hair plucks to identify carriers and avoid breeding more diseased individuals.

Considering the familial potential for genetic disease we can appreciate how certain traits are associated with particular breeds: Lavender Foal Syndrome in Arabian horses, Foal Immunodeficiency Syndrome in Fell ponies, Polysaccharide Storage Myopathies in Quarterhorses for example. In order to produce certain breeds of horse, we have maintained genetic disease traits which were part of the foundation herds.

Collecting a hair sample for DNA analysis

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| Veterinary Surgeon | Aimi Duff |
| XLEquine Practice | Scott Mitchell Associates |


# Examples of Genetic Disease

## Foal Immunodeficiency Syndrome

This recently recognised syndrome was previously known as 'Fell Pony Syndrome', because it was first recognised in this breed in the 1990s. It has since been recognised in Fells, Dales and Cobs worldwide and causes anaemia and suppressed immunity making them prone to infection.

Affected foals are born apparently normal then at two to six weeks of age, develop signs such as diarrhoea, pale gums, inappetance, nasal discharge, poor growth and become increasingly lethargic.

Treatment involves antibiotics to prevent infection developing when the immune system is weak, rehydration, pain relief, vitamin and mineral supplementation and blood transfusion. Unfortunately despite treatment there are no reports of foals with Foal Immunodeficiency Syndrome surviving.

There are no reports of foals surviving 'Foal Immunodeficiency Syndrome'

Foal immunodeficiency syndrome was first reported in Fell ponies

## Lavender Foal Syndrome

This disorder affects pure and part-bred Arabian horses, especially Egyptian lines. Foals are typically born weak, invariably unable to stand or position themselves when lying down. They may be found lying with an arched back, seizuring and paddling their legs. The disease is associated with 'coat dilution' meaning affected foals have a light coat varying from silver to dull lavender to pale chestnut. Unfortunately there is no cure for this disease and affected foals are euthanased.

## Overo Lethal White Syndrome

This genetic disorder occurs most frequently in American Painthorses. Foals are born after term apparently normal but with white coat and blue eyes, akin to the Cremello colouring, and with a non-functioning intestinal colon. Foals typically fail to pass the 'meconium' (the first faeces), and within 24 hours of birth display signs of colic due to intestinal obstruction. Obstruction develops because the colon of the affected foal develops without nerves to stimulate intestinal motility and this becomes blocked with static faecal material. Unfortunately there is no treatment for this condition and affected foals must be euthanased.

## Genetic Muscle Disease

### Glycogen Branching Enzyme Deficiency

Quarterhorses and Painthorses are typically affected. This is a fatal condition in which the foal is unable to store enough energy for organ function. Foals might be aborted before term or stillborn. If born alive, foals are weak, struggle to stand, may seizure and are unlikely to survive beyond eight weeks of age. Many are euthanased as there is unfortunately no treatment for this condition.

### Hyperkalaemic Periodic Paralysis

American Quarterhorse, American Painthorse and Appaloosa breeds are typically affected. In this condition there is a disturbance in how the muscle cells work, resulting in generalised muscle weakness or uncontrolled muscle trembling. Other signs might include a change in the horse's whinny because the muscles around the voicebox are affected. In very severe cases the horse might die because of paralysis of the diaphragm leaving the horse unable to breathe. This condition can be managed with high carbohydrate diets and various sugar and electrolyte therapies are available for veterinary treatment of severe attacks.

### Polysaccharide Storage Myopathy

Clydesdales, Shires, Belgian Drafts, Suffolk Punches and Percherons are typically affected. In this condition there is a failure to digest grain correctly which results in muscle damage. Affected horses may not show clinical signs, however sometimes a change in diet or work might trigger disease. Symptoms include muscle wastage, muscle weakness, 'tying up', lameness or abnormal gait, poor performance or a failure to rise after anaesthesia. Diagnosis is made by collecting a muscle sample and analysing the muscle architecture under microscopy for characteristic changes. This condition can be managed and reversed with dietary management to replace starch and sugars with fats.

# Implications for breeding

When considering breeding from your mare it is important to carefully consider that she is not suffering from or carrying a genetic disease which might be apparent if her ancestry is known. Genetic tests are available to establish the risk status for some of the more common genetic diseases, which should be especially considered when breeding from Arabians, Quarter Horses, Drafts and American Saddlebreds. These tests are non-invasive and simply require collection of a blood sample or hair pluck depending upon the test.

We recommend veterinary checks for newborn foals to identify the presence of genetic or congenital disease. Some diseases may not manifest until later in life but early detection of disease which might not be readily apparent to the owner might influence treatment and management.

Nicola Harries BVMS MRCVS, Wright & Morten Veterinary Surgeons

# A-Z of donkey health

**A.** **Average body weight of a donkey** is 170kg and height approximately 11 hands. There are also miniature donkey breeds as well as larger donkey breeds such as the mammoth ass and the rare Poitou donkey.

**B.** **Bonding** - donkeys are social animals and like company. They develop strong bonds to other donkeys and sometimes other animals, and for this reason should not be kept alone. If separated from their companion, even for a short time, this can be very stressful, leading to depression and anorexia, which can precipitate hyperlipaemia.

**C.** **Colic** is a term for abdominal pain, a clinical sign that has many causes, most of which are the same as in horses. However presenting signs may be different to those seen in horses; dullness and inappetence may be the only signs noted, due to the stoic nature of the donkey.

**D.** **Dullness and depression** may be the only symptoms exhibited for many diseases in the donkey. Reduced appetite may also be noted. This means that a disease may be at an advanced stage before it is noticed. A vet will always treat a call to a dull donkey as an emergency, as it may potentially be a very sick donkey.

**E.** ***Equus asinus***, the latin name for the donkey.

**F.** **Foot trimming** should be carried out every eight weeks. Donkeys' hooves are smaller, and more upright and boxy than those of horses; the horn also has a higher moisture content. As the donkey evolved in an arid desert environment it will be prone to foot conditions such as abscesses and seedy toe in our wetter UK climate.

**G.** **Gelding** or castration of the male donkey should be performed under general anaesthesia using what is known as a closed castration technique. This also enables a ligature to be placed around the blood vessel during surgery, reducing the risk of postoperative bleeding.

wright & morten
Veterinary Surgeons


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| Veterinary Surgeon | Nicola Harries |
| XLEquine Practice | Wright & Morten Veterinary Surgeons |


**H.** Hyperlipaemia is a life threatening disease. It can be a primary condition or can develop secondary to other conditions. If a donkey stops eating, fat reserves are mobilised and converted to glucose for energy, also resulting in high levels of lipid in the blood stream, which is then deposited in organs such as the liver and kidney, leading to organ failure. Early clinical signs are easy to miss, and treatment needs to be early and rapid to be successful.

**I.** Impactions of the large intestine are the most common cause of colic in donkeys.

**J.** Jam sandwiches are a useful way to give oral medication to donkeys. Gingernut biscuit sandwiches also work well!

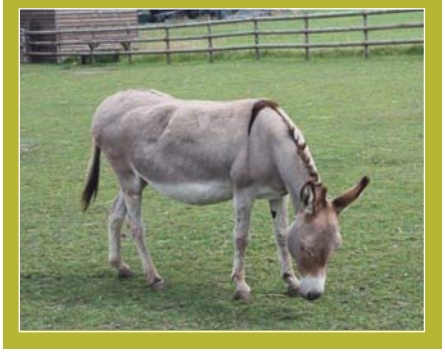
**K.** Ketamine is an injectable drug used to induce general anaesthesia. The adaptation of the donkey to its natural desert environment has led to changes in its metabolism, meaning that during an operation, the drug is given more frequently than in horses.

**L.** Laminitis is a common problem. This is a painful foot condition and donkeys that are overweight are predisposed to developing laminitis. Equine metabolic syndrome and 'Cushing's' disease can also lead to development of laminitis. Maintaining optimum body condition score and feeding high fibre, low sugar feeds can help prevent laminitis. Laminitis is a potentially fatal disease.

**M.** A mule is the offspring of a donkey stallion (jack) and a pony mare. Mules are infertile due to their odd number of chromosomes (63).

**N.** The nutritional/energy requirements of a donkey are 25% less than a similarly sized pony. They are very efficient at metabolising food, having adapted to live in a desert environment on sparse fibrous vegetation. Restricted grazing, supplemented with straw is sufficient for most donkeys. In the winter, hay can be substituted for 50% of the straw.

**O.** Obesity is very common in the UK donkey population because our pastures are very nutritious compared with the sparse vegetation that donkeys have evolved to live on. In addition donkeys largely have a sedentary lifestyle in the UK; rarely are they working animals. There is a body condition scoring system for donkeys which we can use to help monitor weight and prevent obesity.



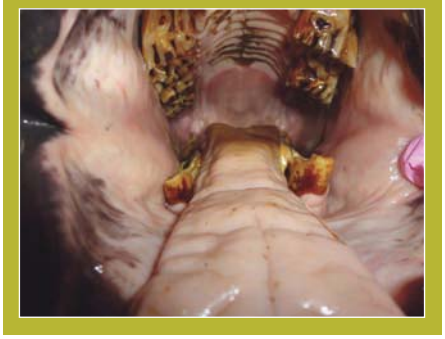
**P.** Pars Pituitary Intermedia Dysfunction (PPID) or 'Cushing's' disease commonly affects older donkeys. This disease increases the risk of developing laminitis. Other symptoms include delayed shedding of the coat, increased thirst, and recurrent infections. PPID can be diagnosed by means of a blood sample, and managed with a drug known as pergolide.

**Q.** Quiet behaviour may be normal behaviour particularly in an older donkey, but it can also be an early symptom of illness, so knowing your donkeys' normal behaviour and checking them regularly is very important.

**R.** Respiratory disease in donkeys can be caused by viral or bacterial infections, parasites and allergies. Symptoms include: nasal discharge, coughing, increased respiratory noise, rate or effort, general dullness, or anorexia.

**S.** Donkeys are stoic, rarely giving away how they might feel. This can make detection of disease difficult.

**T.** Teeth - donkeys have up to 44 teeth. These erupt throughout life, and develop sharp enamel points which require regular removal to prevent discomfort when eating. Even with severe dental disease donkeys will rarely show any symptoms or lose weight, so yearly examination is required to detect and treat tooth problems.



**U.** Unusual behaviour can be a sign of underlying disease.

**V.** Vaccinations should be given annually against equine influenza and tetanus.

**W.** Waterproof coats - shelter is necessary for donkeys, as they **do not** have waterproof coats; there is less grease in the coat compared to horses.

**X.** X-rays can be used to help assess the pedal bone within the hoof for conditions such as overgrown hooves, laminitis, pedal bone sepsis (infection), and keratoma (a tumour of the horn of the hoof).

Septic pedal bone after foot abscess

**Y.** Yards can be useful areas for donkeys to stand on to limit access to grazing and help prevent obesity.

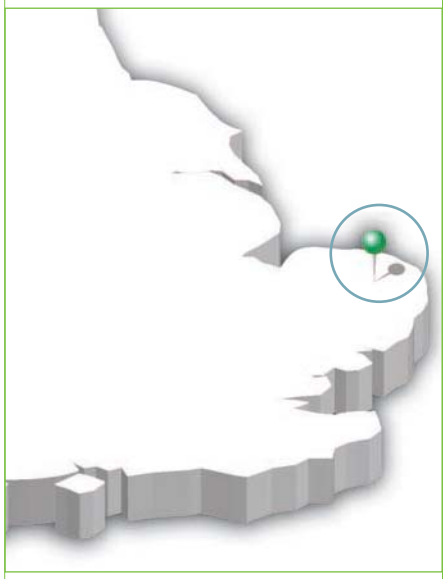
**Z.** Zeedonk is a cross between a zebra and a donkey!

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

# Sarcoids

## Current Treatment Options

**Sarcoids**, a type of skin tumour, have without doubt become increasingly common in recent years and they are now one of the most frequently recognised equine skin conditions. This may be as a result of an increased incidence as well as increased awareness amongst owners and veterinary surgeons, leading to a greater number of animals being diagnosed.



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| Veterinary Surgeon | Chris Lehrbach |
| XLEquine Practice | Chapelfield Veterinary Partnership Ltd |

Figure 1

Figure 2

Although the exact cause and mechanism of spread of sarcoids across a patient's body and between animals is poorly understood, flies are thought to play a role. Sarcoids primarily affect the skin and tissues immediately under the tumour, but they do not spread to internal organs. Wounds on an animal with sarcoids are at risk of developing into a sarcoid.

Animals can develop single or multiple sarcoids at one or more locations, simultaneously or over time. They can grow slowly or very rapidly and their appearance is highly variable. There are a number of categories of sarcoid, including flat, hairless patches of skin (figure 1), nodular lumps within the skin (figure 2), ulcerated and bleeding pendulous masses (figure 3) and even a mixture of several types. There is no age or gender predilection, although animals under two years of age are rarely affected. Certain breeds such as Arabs, along with certain families and individuals are thought to be genetically predisposed. Whilst they can develop anywhere on the skin, sarcoids are most frequently found on the head and face, between the front legs and in the groin.

Figure 3

## Diagnosis

It is important to make an accurate diagnosis, as sarcoids can be mistaken for conditions which have different treatments e.g. they can look similar to proud flesh, warts and even ringworm. A skin sample (biopsy) is the only way to confirm the diagnosis, although taking a biopsy can trigger the sarcoid to grow. Experienced veterinary surgeons will often treat a suspected sarcoid based on its appearance.

## Treatment

Treatment can be quite expensive as it may involve a number of visits and repeated applications or injections over several weeks, or possibly even a surgical procedure. Sedation may be necessary, along with local anaesthetics, antibiotics and painkillers. In some cases it might be considered appropriate to monitor a sarcoid, rather than treat it immediately.

Treatment of individual, relatively discreet sarcoids would normally aim to resolve them completely. Patients with numerous or extensive sarcoids might instead undergo occasional courses of treatment to eliminate the most problematic sarcoids. Realistic expectations avoid disappointment in cases where a complete cure may not be possible and avoid frustration in cases where more than one course of treatment is likely.

There are a myriad of lotions, potions and supplements that make impressive claims at treating sarcoids. Unfortunately there is frequently little good scientific data to support these claims. If such effective products existed, the veterinary profession would already be using them. The University of Liverpool Veterinary School has a department dedicated to the research, production and on-going development of a chemotherapy cream, a very effective topical treatment widely used to treat sarcoids.

Without doubt, the best opportunity to eliminate a sarcoid is the first occasion that it is treated. Each time a sarcoid is re-treated, the likelihood of being able to completely remove the tumour decreases, hence the importance of selecting an effective first treatment. There are a number of medical and surgical treatment options available.

## Medical Treatments

### 1) BCG therapy

The tuberculosis vaccine, which, when injected into sarcoid tissue, stimulates the body to destroy the tumour. This treatment can be extremely effective at removing sarcoids around the eye, when a series of three or more injections are given over several weeks (figures 4 and 5). BCG is not suitable for treating sarcoids elsewhere on the body.

Figure 4

Figure 5

### 2) LUDES cream

The University of Liverpool manufactures and supplies this cream to veterinary surgeons. Only a veterinary surgeon can handle and apply the product, which is widely considered to be one of the most effective treatments for a wide range of sarcoids.

### 3) Other chemotherapy creams

There are several other topical chemotherapy creams that are used, either alone or in conjunction with other therapies in the treatment of certain sarcoids.

### 4) Radiotherapy

There are currently only three equine hospitals in the country that offer this option, where radioactive wires are inserted into the sarcoid, emitting radiation which kills the tumour cells very effectively. Patients require hospitalisation and strict quarantine during the period of treatment. This expensive treatment is only used on a small proportion of sarcoids.

## Surgical Treatments

### 1) Surgical removal

Surgical removal of a sarcoid, either under sedation or general anaesthesia should only be undertaken after ruling out all other options. It is impossible to tell where the true boundaries of the sarcoid lie, due to the microscopic infiltration of normal tissue with sarcoid cells. A large margin of normal skin should be removed, followed by careful reconstruction of the remaining surgical wound.

### 2) Rubber banding

The application of a tight rubber band can in some cases eliminate individual sarcoids. Only clearly defined sarcoids with good margins of loose skin should be treated by this method (figure 6).

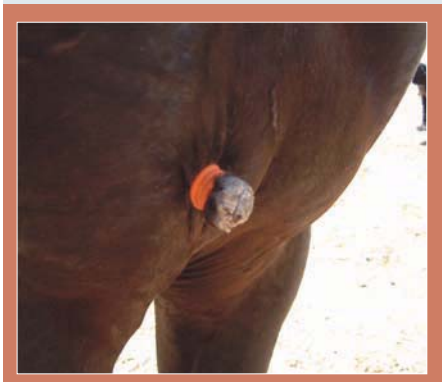


Figure 6

### 3) Cryotherapy

Destroying sarcoid tissue by freezing it using liquid nitrogen is an extremely effective treatment. Areas with excess loose skin, such as between the front limbs can be treated using cryotherapy, allowing some surrounding normal skin to be frozen. Cryotherapy is usually undertaken under sedation, although inaccessible areas can be treated under a short general anaesthetic (figure 7). Liquid nitrogen spray is applied to an area larger than the actual sarcoid, killing the tissue which then falls off several weeks later (figure 8).

### 4) Laser surgery

This destroys sarcoid tissue using heat rather than cold. As with cryotherapy, the process results in a wound which is monitored during healing.

Figure 7

Figure 8

## Aftercare

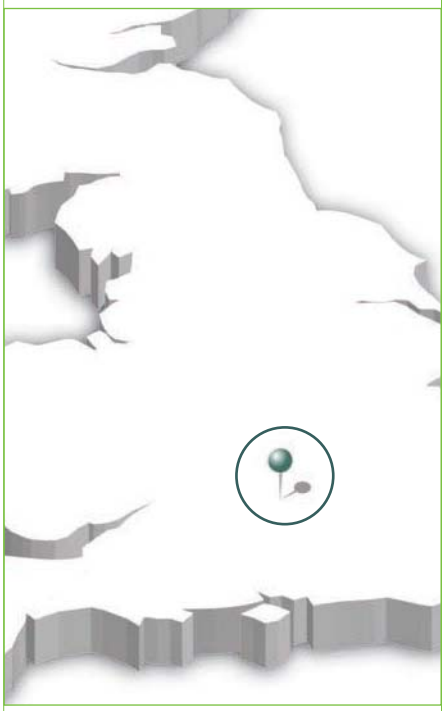
It is important for an owner to understand that each treatment option will have varying degrees of aftercare requirements. Surgically and chemically induced wounds will need management to control pain and infection, sometimes using antibiotics and painkillers. Monitoring will also be necessary for several months to identify any signs of regrowth.

## Conclusions

Whilst there has been a tendency to monitor non-problematic sarcoids, it is now recognised that prompt treatment of sarcoids, before further growth and spread, is usually a more appropriate means of managing a patient. There are numerous effective therapeutic options, which, when used as the first treatment, can successfully cure many patients. Repeated treatment using over the counter products can reduce the effectiveness of subsequent treatments and increase the risk of recurrence. To avoid compromising the outcome, always seek veterinary advice before attempting treatment of a sarcoid.

Sally Hodgson VetMB BA BSc MRCVS Hook Norton Veterinary Group

# Case Study: Medical Treatment of Sarcoids



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|---|---|
| Veterinary Surgeon | Sally Hodgson |
| XLEquine Practice | Hook Norton Veterinary Group |

## Sarcoids can occur in six different forms:

1. occult (flat and scaly);
2. verrucose (warty, with a broad base or thin neck);
3. nodular (firm rounded lumps);
4. fibroblastic (fleshy and ulcerated);
5. malignant (large and invasive);
6. mixed.

## **Winston,** a four year old TBx presented with multiple sarcoids on his head, neck, chest and inside his hindlegs.

Winston's sarcoids were verrucose, nodular and mixed verrucose-nodular. They had appeared quite quickly, so required aggressive treatment before they got out of control. It is important that the first treatment applied is effective because each failed treatment reduces the chances of being able to cure the sarcoids completely - some types of sarcoid will become more aggressive once traumatised or ulcerated.

We used AW4-LUDES cream as this has a good success rate. AW4-LUDES is a mixture of chemotherapy medications and toxic heavy metals, so must be used only under strict safety precautions. For this reason it can only be supplied to and applied by a vet. The cream kills the cells in any living tissue it touches. The body reacts to this by producing an inflammatory response to remove the dead and dying tissue. This causes a lot of swelling and can be painful. Anticipating this, we gave phenylbutazone ('bute') for pain relief at the same time as the first cream application. 'Bute' cannot be used in horses that may enter the human food chain so section IX of Winston's passport was signed to exclude him permanently from the human food chain.

Following advice from the University of Liverpool Equine Hospital, the AW4-LUDES cream was applied five times at intervals of 24, 48, 72 and 120 hours after initial application. Winston came to the clinic for his cream to be applied, as this was a more cost effective means than five visits.

Winston was re-examined six weeks after the last application of cream to check that the sarcoids had reacted as we would expect. The sarcoids had all swollen up and formed a tight scab - this is the normal reaction to AW4-LUDES cream that we want to see at this stage (figure 4).

The scabs sloughed over the next few weeks and healed well. All the sarcoids inside Winston's hind legs and between his front legs reacted in the same way as those shown but have healed so well that the sites are now unidentifiable. Figure 5 shows Winston's sarcoids two years after treatment, with only flat scar tissue remaining. This long after treatment we would be very disappointed if the sarcoids recurred.

Sarcoids can be very treatable if caught early enough. AW4-LUDES is one of the most effective and commonly-used medical treatments. Other treatments can also be effective (under the direction of a veterinary surgeon) but often require treatment for much longer periods.

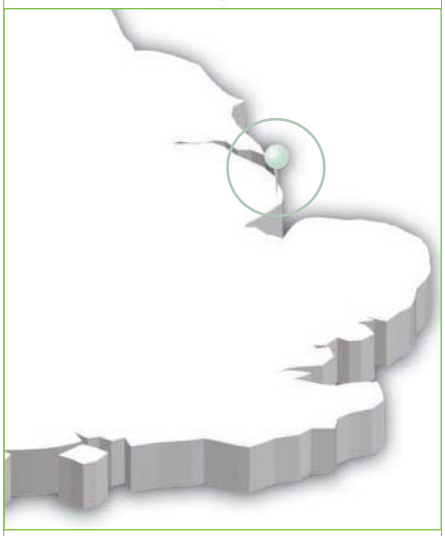
Figure 1: Nodular sarcoid below the right ear, before treatment

Figure 2: Verrucose sarcoids on the chest, before treatment

Figure 3: Mixed verrucose-nodular sarcoid over the jugular vein, before treatment

Figure 4: Winston's sarcoids, over the jugular vein, six weeks after treatment

Figure 5: Winston's sarcoids, over the jugular vein in June 2014, two years after treatment



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| Veterinary Surgeon | Richard Morris |
| XLEquine Practice | Fenwold Veterinary Practice |

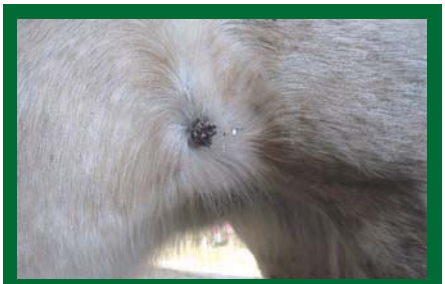


Figure 1: Verrucose sarcoid

Figure 2: Ligation with a rubber band

Richard Morris BSc BVetMed CertVD MRCVS Fenwold Veterinary Practice

# Surgical Feature: Equine Sarcoids

Equine sarcoids are the most common equine tumour accounting for over half of all equine tumours. They are thought to be triggered by infection with the Bovine Papilloma virus BPV1 and 2. Their behaviour is unpredictable and inactive sarcoids may become aggressive if disrupted by injury, surgery or inappropriate treatment. There are many approaches to management and the size and number of sarcoids will determine the technique for removal.

Surgical sarcoid removal involves physically removing the sarcoid and can include ligation, conventional excision and laser surgery. We shall discuss the surgical treatment of sarcoids and illustrate these techniques with case studies.

Ligation with a rubber band or tying a ligature with suture material around isolated individual sarcoids can be carried out in a select number of cases but the site and type of sarcoid has to be appropriate; they need to be easily accessible with plenty of loose skin. The verrucose sarcoid in figures 1 and 2 responded well to this treatment. The horse may be restrained with a twitch or sedation may be required. The sarcoid could be treated with cryotherapy at the same time to improve effectiveness.

More extensive sarcoids may need removing with conventional surgery which can be carried out under standing sedation and local anaesthesia or in some cases may require general anaesthesia. This will depend on the size and location of the sarcoid. It is necessary to remove a 2-3cm margin of healthy tissue around the edge of the sarcoid (which may contain seeds of the original tumour) in order to prevent recurrence. Success rates of 30-50% are quoted with conventional excision, most relapses occurring within about six months, sometimes in a more aggressive form so 'regrowths' should be treated as soon as they appear.

Figure 3 shows a nodular sarcoid in the groin of a chestnut mare removed under standing sedation and local anaesthetic. In this case, no relapse was seen after five years. Skin is elastic and contracts once the sarcoid is excised so wound edges appear smaller than the removed sarcoid.

Figure 3: Nodular sarcoid in the groin of a chestnut mare

Figures 4 and 5 show extensive sarcoids requiring general anaesthesia. The sarcoids had previously been treated with the Liverpool sarcoid cream AW3-Ludes but they re-grew soon after treatment. The decision was made to remove every sarcoid visible on the horse at that time under a general anaesthetic. The horse made a full recovery and no relapses were seen nine years later.

Surgical removal with a laser uses carbon dioxide to cut and vaporise the tissue around the sarcoid (figure 6). This causes less pain and swelling and minimal bleeding compared with conventional surgery with success rates of 60-80% reported.

Complete resection of sarcoids can be difficult so other treatment options may be used alongside surgery including applying topical ointments after surgery such as Imiquimod or Aciclovir. Sarcoids are a major therapeutic challenge; early recognition and treatment reduces the complications and improves the outcome when treating these tumours.

Figure 4: Removal by conventional excision

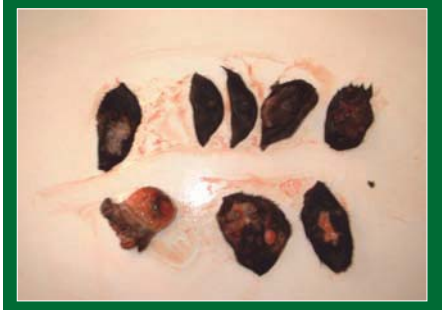


Figure 5: Extensive sarcoids after removal

Figure 6: Surgical removal of sarcoids with a laser using carbon dioxide

Sarah Holmes RVN REVN Alnorthumbria Veterinary Group

# Laboratory Procedures

Most practices have facilities to carry out procedures which help in the early diagnosis of some diseases or conditions. Some practices have large laboratory facilities which have multiple machines for carrying out a large range of tests whilst others may have basic equipment such as a microscope, centrifuge and blood analyser.

There are some tests which can be carried out whilst the vet is with the patient - such as 'snap tests' on blood and dipstick tests on urine; if they cannot be performed horse-side the vet can bring samples back to the practice for further tests to be carried out. The vets may send samples away to specialist laboratories for further analysis; this is why some results take longer to be reported back to you than others.

## Samples which can be tested include:

- blood
- urine
- hair
- faeces
- peritoneal (abdominal) fluid
- synovial (joint) fluid.

## Blood

### Common tests carried out on blood samples.

**1 Haematology**

The examination of cells within the blood - red blood cells (RBC), white blood cells (WBC), platelets and packed cell volume (PCV).

**2 Biochemistry**

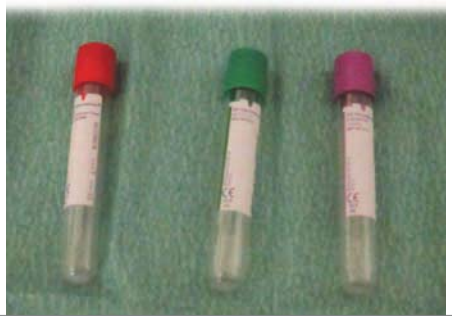
Examination of the chemical components of the body i.e. liver and kidney function, muscle enzymes and electrolytes.

**3 Serology**

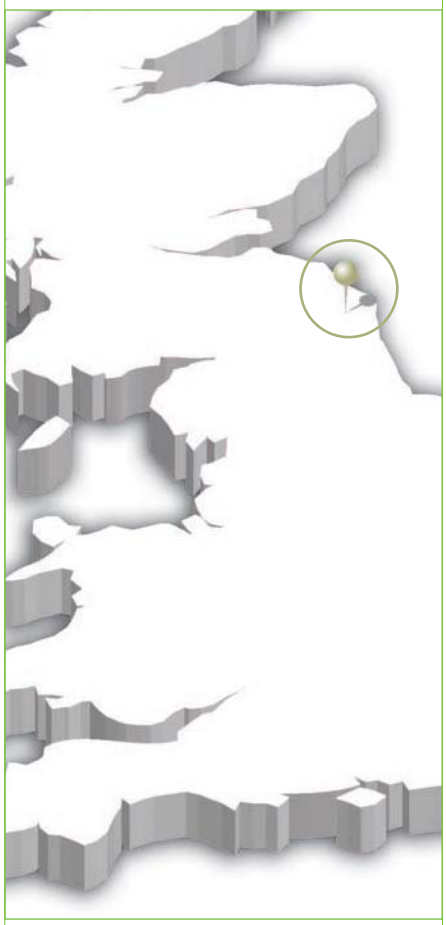
Examination of serum for antibodies in response to certain diseases e.g. strangles - serology samples are more often sent to external laboratories.

### A common question which clients ask, is why do vets take so many blood tubes?

The reason for this is that the various blood tubes are required for different tests. The anticoagulant in different blood tubes can affect the blood cells which can give inaccurate results.



alnorthumbria veterinary group EQUINE



| | |
|---|---|
| Veterinary Nurse | Sarah Holmes |
| XLEquine Practice | Alnorthumbria Veterinary Group |

## Different tubes for collecting blood samples

| Top colour | Red | Purple | Green | Grey | Blue |
|---|---|---|---|---|---|
| Anticoagulant | None | EDTA | Heparin | Fluoride oxalate | Citrate |
| Test | Biochemistry | Haematology | Biochemistry (quicker to use as do not need to wait for sample to clot) | Glucose | Coagulation studies Fibrinogen |

## Haematology

This is usually carried out by a haematology analyser which has set reference ranges for each component so there can be variation in results depending on the type of analyser used. The haematology analyser looks at the red and white blood cell counts. The white blood cell count is separated out into the individual white cells; this is known as the differential count.

### Some tests can be carried out individually

- Packed cell volume (PCV) - is the percentage of blood made up of red blood cells. Increased PCV can be due to dehydration. Decreased PCV is commonly seen in anaemia or blood loss.
- White blood cell differential - can be done manually by preparing a blood smear. A small drop of blood is placed onto a microscope slide and spread across the slide. The slide is allowed to dry and then stained. Once the stained slide is dry, it is then examined under the microscope at a high power magnification.

## Biochemistry

Is carried out in automated machines which are either:

- 'wet' analyser - where liquid reagents are added to samples and the chemical reaction measured;
- 'dry' analysers - where individual tests are carried out on slides and lights are passed through and the intensity of the light is measured.

Common tests performed in equine practice on biochemistry analysers are muscle enzymes (CK, AST) commonly elevated in azoturia ('tying up'), liver and kidney function and assessment of proteins.

## Urine

**Urinalysis is the examination of urine. This involves:**

- specific gravity (SG) - measure of the density of urine;
- biochemistry tests - dipstick analysis;
- sediment - microscopy examination.

Ideally the sample should be a free-flow sample collected mid-stream.

The sample is initially examined visually in the pot - normal horse urine is yellow and may be either cloudy or clear in appearance.

### Urine colour

| | |
|---|---|
| Yellow | Normal |
| Red | Blood in urine |
| Brown–red/black | Muscle damage |

### Dipstick analysis

The test strip is dipped into the urine; this identifies any evidence of protein, blood, haemoglobin and the pH of the urine.

### Sediment

The urine sample is mixed well and a small amount of sample is then spun down to concentrate any cells which may be present. This is placed on a microscope slide and examined. The slide is checked for the presence of RBC, WBC, bacteria, and crystals. Calcium carbonate crystals are commonly seen in normal horse urine.

## Faecal analysis

The most common test on faeces is a worm egg count - this is carried out by faecal flotation using salt solution and examined on the microscope using a McMaster slide (counting chamber). The number of eggs detected correlates with individual worm burden.

## Other tests available

### Hair and skin sampling

Hair samples are routinely examined as skin conditions are common.

- Hairs plucks - for 'ringworm' culture and identification of ectoparasites such as lice.
- Sellotape preparations - used to identify pinworm infestations in the peri-anal region.
- Skin scrapings - for identification of mites such as Chorioptes (leg mites).

### Synovial fluid and peritoneal fluid analysis

Commonly obtained for diagnosis of septic joints and peritonitis - the tests routinely carried out on the samples are:

- WBC - either with commercial analyser or microscopy;
- Biochemistry - looking at proteins to indicate an inflammatory response.

Visual examination of the samples is also performed; normal samples should be pale yellow and clear.

### Bacteriology

Some practices have the facilities to carry out bacteriological culture. Samples or swabs are placed onto selective media in petri dishes and incubated to see if bacteria grow. The bacteria are then examined by making a smear on a slide, staining and examining on high power under the microscope.

Lee Pritchard BVSc MRCVS, Calweton Equine

# Peak Performance: Driving

## We asked the experts for tips on achieving peak performance in driving

| | |
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| Veterinary Surgeon | Lee Pritchard |
| XLEquine Practice | Calweton Equine |

Driving encompasses a number of different disciplines; these range from leisure driving to driving trials and harness racing. As such, the nature of the injuries affecting driving horses can vary depending on the type of horse and the work performed.

### What are the common veterinary problems of the driving horse and how can they be prevented?

Driving trials are probably the most all round test of a horse's athletic ability. Driving horses are generally skeletally mature when they start training and so they do not tend to suffer from the same bone issues as young racehorses. However, the endurance training necessary produces repetitive loading of joints and soft tissues making conditions such as osteoarthritis and tendonitis common.

As well as the musculoskeletal system, great demand is placed on the cardiovascular and respiratory systems. As with any discipline, injuries and veterinary problems are more likely to arise if the horse has not been conditioned appropriately for the level of work. Monitoring heart and respiratory rate when training provides a measure of recovery and as a result enables evaluation of the horse's current fitness level.

**Common lameness problems seen in driving horses:**

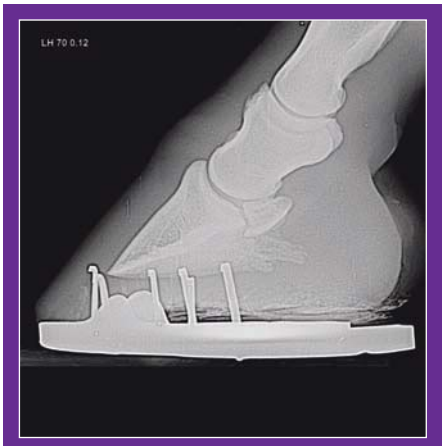
- back and neck soreness
- foot imbalance and soreness
- osteoarthritis (coffin, fetlock, pastern and hock joints)
- suspensory ligament desmitis
- tendonitis
- sacroiliac pain
- external trauma
- recurrent exertional rhabdomyolysis.

## Prevention of lameness

Often lameness problems start well before they are apparent. Underlying poor conformation can be a major contributor to lameness, especially hock, knee and foot conformation. When purchasing a horse do not underestimate the value of a pre-purchase examination; their aim is to assess suitability for purpose as well as detect underlying problems.

An essential part of lameness prevention is the formation of an effective team. This involves input from veterinary surgeon, farrier, physiotherapist, nutritionist and trainer all aiming to achieve the same goal. If any one of these are not striving for the same goal or the team is unbalanced, peak performance will not be achieved.

Some management and training strategies can minimise the risk of injury and so improve performance. A good even training surface is important as well as correctly fitting tack, regularly assessed by a professional. Prompt investigation of unsoundness, swellings or poor performance minimises the risk of long term problems.




Prompt investigation can minimise the risk of long term unsoundness

Maxine Ingham, International Competitor

# Driving - how does training and talent influence 'peak performance'?

Performance carriage driving, and in particular, horse driving trials are no different to any of the other competitive equestrian disciplines. In order to be able to compete successfully at the top level, nationally or internationally you will need a level of talent from the whip (driver) which will then enable you to learn and train your horse to optimise peak performance.

The horse will also need to be talented, i.e. trainable and athletic. Often, having a driving horse with the right attitude and one that is trainable can make for a more successful partnership, than one that is hugely talented but without the trainability.

In summary, the whip does require a degree of talent to be able to train and compete at a high level but with the right attitude (and therefore training) the average horse can often go far.

Steve Craddock DipWCF

# What role does farriery play in achieving driving 'peak performance'?

Driving covers a number of different disciplines and the demands placed on the horse depend on the work performed. Despite this variation in work, basic principles must always be followed. These include an appreciation of underlying conformation issues (not only foot conformation but limb conformation), balance of the feet and break-over.

Put simply, the most important aspect is to correctly balance the foot. To achieve this we must have an understanding of what balance is. Balance is the state whereby the hoof wall, sole, frog and bars are prepared so that an equilibrium exists around the DIP joint (coffin joint), with a shoe placed on the foot, providing maximum base of support while still minimising stresses and leverages to the lower limb, both statically and dynamically.

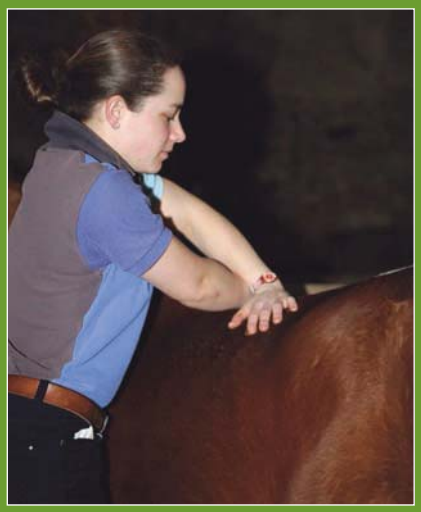
If the feet are well balanced and equal weight distribution across the foot is achieved, this reduces stress on the limb; as a result this should give the horse more stability and so confidence producing a better performance.

Amy Cox MSc(Vet Phys) BSc(Hons) MCSP HPC Reg ACPAT
Physiotherapist

# Physiotherapy and driving

Physiotherapy has an important role in maintaining peak performance. This is mainly through injury prevention and management. Physiotherapy treats a number of primary and secondary problems using combinations of manual therapy, electrotherapy and exercise. Individual treatment plans are formulated that are discipline specific to optimise performance. For example, a horse that has muscle spasm and tightness in the back might take a shorter stride length, over the course of an event this can slowly add up and could be the difference between winning and second place!

It is important to have a multidisciplinary approach in order for the horse to perform at the best of its ability. Monitoring of the horse throughout the fittening process is important so any weaknesses can be addressed before they become a larger problem.



Laura Ruby BVSc MRCVS, Calweton Equine

# Equine Vaccination

**Vaccines are an important preventative measure against diseases affecting the health and performance of horses. The two diseases most commonly vaccinated against are tetanus and equine influenza; however there are also vaccines available against herpes virus, strangles and equine viral arteritis (EVA).**

## Tetanus

Tetanus is caused by the organism Clostridium tetani; this lives in the soil and enters through wounds or surgical sites. Horses are particularly susceptible to tetanus and the disease can be fatal. The bacteria do not need oxygen to live and so rapidly multiply within the damaged tissue.

**It is a neurotoxin released by the bacteria that causes the following classic clinical signs:**

- muscle stiffness/spasm;
- difficulty moving;
- protrusion of the third eyelid across the eye;
- elevated tail;
- sweating.

Tetanus carries a high fatality rate however it is easily preventable with vaccination.

## Equine Influenza Virus

Equine influenza virus is a highly contagious viral disease affecting the respiratory system. It has a very short incubation period (1-3 days) and spreads rapidly amongst naïve populations. Affected horses will typically present as dull and depressed with a fever, nasal discharge and most cases will develop a cough. The virus is usually self-limiting, although the damaged respiratory system is susceptible to secondary bacterial infection requiring veterinary attention. Equine influenza is more severe in donkeys and carries a higher fatality rate. Prevention is achieved with vaccination.

Strict competition guidelines are present and specific vaccination schedules must be followed. The vaccine requirements are available on the British Horseracing Authority/FEI websites.

## Equine Herpesvirus (EHV)

The two most common herpesviruses causing disease in horses are EHV-1 and EHV-4. EHV-1 can cause respiratory disease, abortion in mares and neurological disease.

EHV-4 is associated with respiratory disease in younger animals.

- Horses with respiratory disease often present with fever, nasal discharge and a cough.
- Infection of the mare during pregnancy can result in abortion, usually in the last three months of pregnancy.
- With the neurological form, ataxia (inability to control the movements of muscles) can vary from mild stumbling to collapse.

Vaccination against herpesvirus is only protective against abortion. It can be given to horses to minimise respiratory signs, however it will not completely stop them from contracting EHV-1 or EHV-4.

## Strangles

Strangles is caused by the bacterium Streptococcus equi subsp. equi. Vaccination can be used as part of a strangles management programme; it can form an important element in preventing strangles outbreaks on yards, but it is not a substitute for good stable management and disease awareness. The vaccine available aims to reduce clinical signs and the incidence of lymph node abscesses.

## Equine Viral Arteritis (EVA)

EVA is a notifiable disease. Clinical signs include fever, nasal discharge, conjunctivitis, swelling of the legs, eyelids, mammary gland or scrotum and abortion. Some infected horses will not display any clinical signs. Breeding stallions must be blood tested at the beginning of each breeding season to prove they are not infected with the virus, and breeding mares must be tested after 1st January and within 28 days of entering a stud/AI centre. Routine vaccination against EVA is not performed but in some circumstances it may be appropriate.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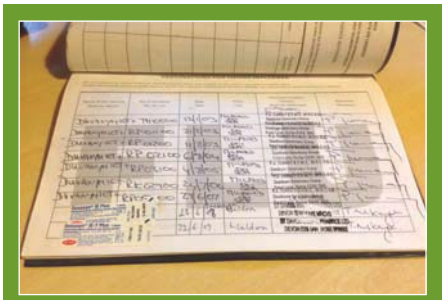
| Veterinary Surgeon | Laura Ruby |
| XLEquine Practice | Calweton Equine |

Equine Influenza vaccination record

# VET VIEWPOINT...

WE ASK THE OPINIONS OF OUR VETS ON WHETHER VACCINATION IS NECESSARY

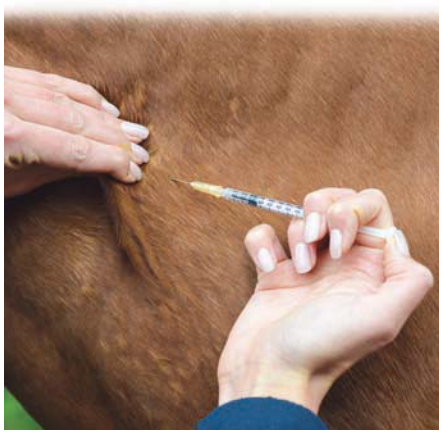
# Is vaccination really necessary?

**Alistair Couper BVMS MRCVS**
Capontree Veterinary Centre

The simple one word answer to this is yes. This could be countered with the opinion that as a vet what else would I say. I would respond that I always consider what is best for the animal and since vaccines are developed to protect animals from diseases that are often fatal, then vaccination has to be in the best interests of the animal.

For horses when we consider vaccination we are usually discussing equine influenza ('flu) and tetanus. Vaccinating against tetanus is an absolute must no matter what the age of the horse, because tetanus is extremely difficult to treat and watching an animal dying from tetanus or euthanasing an animal to alleviate its suffering during attempts to treat it, is a horrible experience for the vet, owner and horse alike.

I would always recommend vaccinating against 'flu. However there are some circumstances (e.g. if an older horse is no longer competing and is overdue its 'flu jab by one day), where I would struggle to recommend starting the primary course again and would not consider giving the horse three 'flu vaccinations over seven months as being in its best interest, especially if it is needle shy!



**Jane White BVetMed MRCVS CCRT**
St Boniface Veterinary Clinic

Against tetanus - definitely yes! It is usually fatal in non-vaccinated horses and causes huge distress, so why risk it when it is essentially preventable? There may be a temptation to let vaccinations in the elderly retired horse or pony lapse or they may inadvertently be forgotten. Those with Cushing's disease may be immunocompromised so vaccination remains important. Equally those retired at grass may be groomed infrequently or grow thick winter coats so that small puncture wounds may go unnoticed.

I personally think it is advisable to vaccinate for equine influenza. Although new strains emerge faster than the vaccines can keep up with, if most of the equine population is vaccinated any outbreak should be less severe. If an owner elects not to vaccinate then I hope this is an informed decision based on the individual risk factors and discussed with their vet. The problem then comes when the unvaccinated horse changes yard or ownership, as these risks then alter.

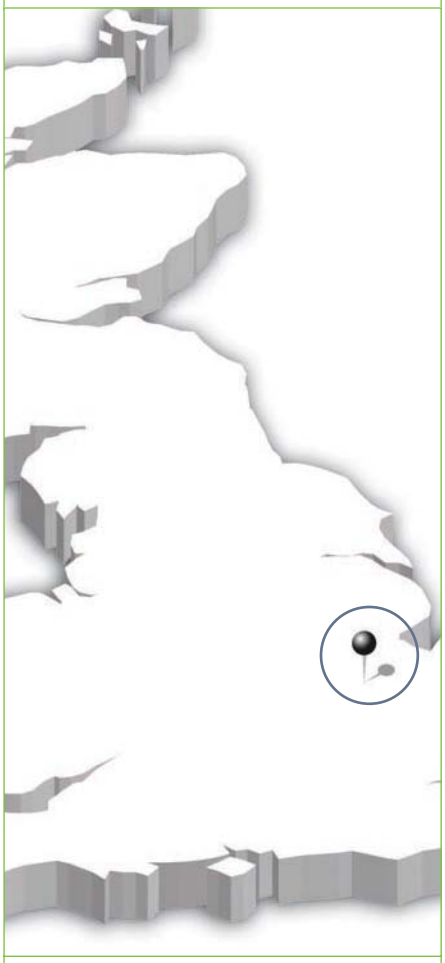
**Edward Chinn CertEP BVetMed MRCVS**
Alnorthumbria Veterinary Group

Vaccinations are used to help protect horses against severe pathogens for which there are no specific treatments. All horses are particularly susceptible to tetanus (a soil-living bacterium). Treatment of cases is usually unsuccessful and yet vaccination is effective and cheap, therefore tetanus vaccine should be considered essential.

Equine influenza ('flu) is a common, severe and highly contagious respiratory virus with the young and old particularly susceptible. Vaccination is mandatory for racing, those competing under FEI rules as well as many other competitions and livery yards. Some insurance companies insist that horses are up to date with 'flu and tetanus vaccinations to keep their insurance valid. Currently there are several outbreaks in the UK.

You should speak to your vet about your horse's individual risk when considering the use of equine herpesvirus and strangles vaccines. There are other equine vaccines available for breeding mares and stallions (providing protection against rotavirus and equine viral arteritis) also horses travelling outside the UK (West Nile virus).

Fellowes Farm Equine Clinic Ltd
VETERINARY SURGEONS



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|---|---|
| Veterinary Surgeon | Stuart Thorne |
| XLEquine Practice | Fellowes Farm Equine Clinic |

Stuart Thorne BSc PhD BVSc MRCVS
Fellowes Farm Equine Clinic Ltd

# Technological advances in the equine veterinary industry: Laser Surgery

Investment by veterinary practices in cutting edge technology, combined with the continued advance of the digital age, has positively affected all areas of equine practice.

Vets now have at their disposal numerous high tech monitoring, diagnostic and treatment options that have provided obvious benefits to the UK population of horses and ponies.

For example, at our practice, the CCTV cameras that monitor our patients 24/7 can be accessed by the vets on their laptops at home, or on their smart phones whilst they are out and about (figure 1).

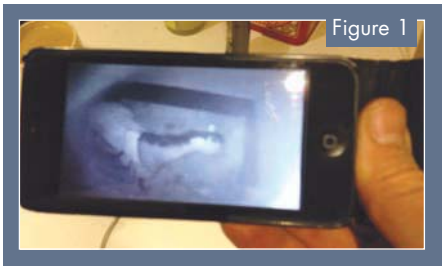


Figure 1


Figure 2: Laser surgery

Technological advances have allowed the development of a new generation of digital diagnostic instruments, such as x-ray units, ultrasound machines and endoscopes. These are both highly portable and also able to provide images of stunning quality. This has allowed many procedures that in the past could only be carried out at a clinic or hospital to be performed at home on the yard.

High tech' treatment modalities are also now in frequent use and include, for example, shockwave therapy and surgical lasers. The use of surgical lasers is a good example of how the advances in knowledge and equipment have been harnessed to provide a significant improvement in the way in which we treat an age old problem, in this case sarcoids and melanomas (Figures 3 and 4).

Sarcoids are the most common skin tumour affecting equines and are often difficult to treat due to their unpredictable nature, varying response to traditional therapies and tendency to recur. Equally melanomas under the tail and between the legs are a frustratingly common occurrence in ageing grey horses.

A surgical laser is a specialised piece of equipment that can cut through skin and other soft tissues, just like a normal surgical blade, but since the emitted energy also results in heat, small blood vessels are sealed immediately. The laser therefore cuts and vaporises tissue, with minimal bleeding. This is particularly useful when operating on skin tumours, where there is an increased risk of spreading the tumour via the blood or lymphatic system. As the laser vaporises the cells it cuts, any potential cancerous cells are also killed, thereby reducing the chance of tumour cells contaminating the surrounding healthy tissues. Once the sarcoid is removed the underlying area can be crosshatched with the laser to vaporise any remaining cancerous cells.

The laser has distinct advantages over other treatment methods such as the application of creams as these often have to be reapplied on numerous occasions. Laser therapy however removes the offending tissue in one session. It also has the benefits of rapid healing times, good cosmetic results, minimal complications and most importantly good success rates with a low recurrence rate. Despite all of its advantages some sarcoids, depending on the type and position, are still best treated by more traditional methods or a combination of the laser with other options. A general anaesthetic is sometimes required for the laser removal of sarcoids but many other cases can be treated under standing sedation with the area desensitised by local anaesthetic only. Early intervention when the offending lesions are small provides the best rates of success combined with low recurrence rates.

## In Summary

Advances in technology have provided significant benefits in the way in which we monitor, diagnose and treat our equine patients.

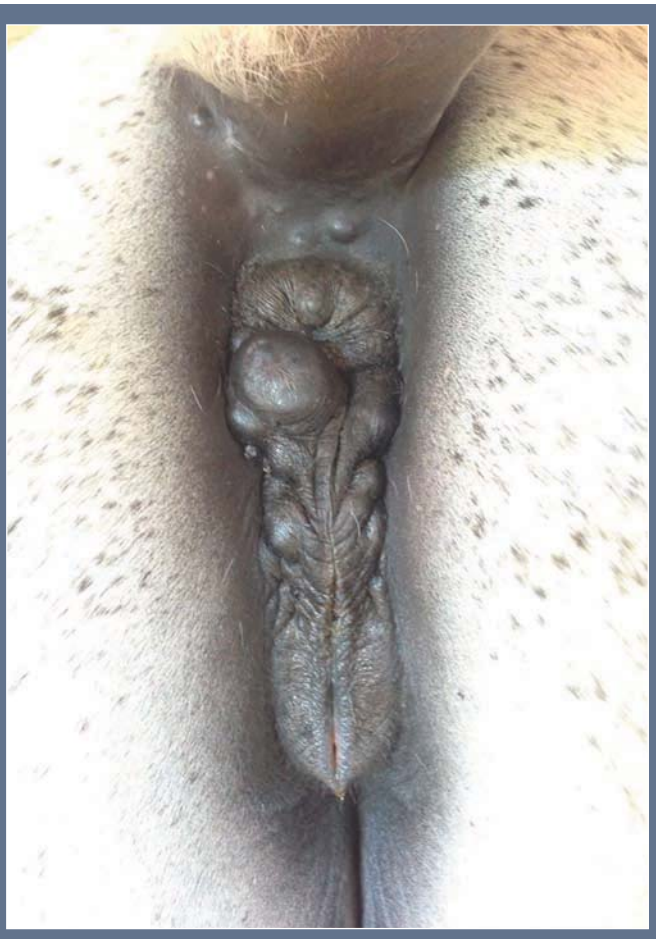


Figure 3: Melanoma before Laser surgery

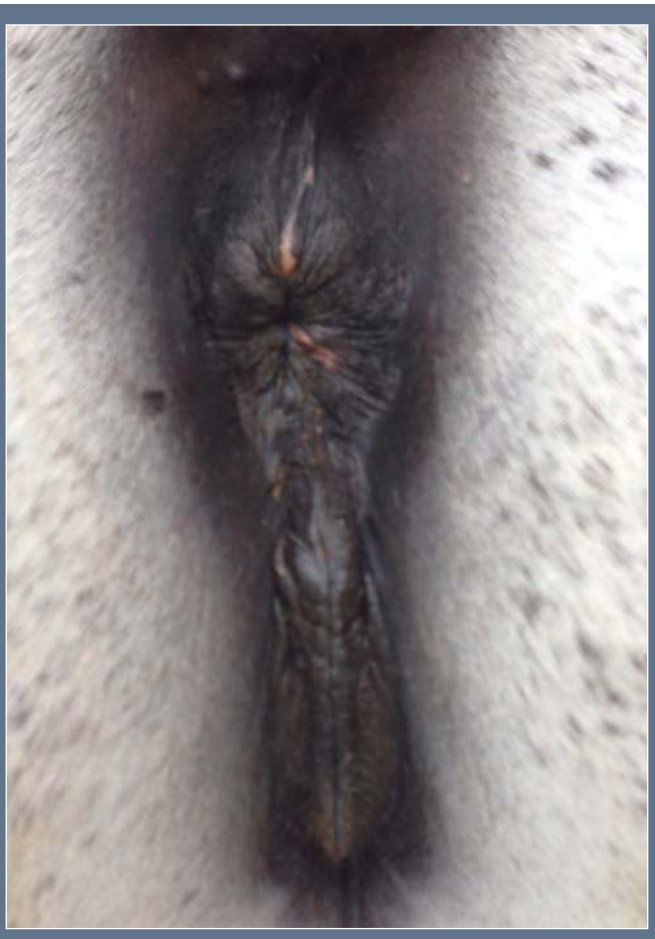


Figure 4: Melanoma after Laser surgery

# pony pages

## Welcome...

TO THE WINTER 2014
XLEQUINE PONY PAGE

## Top Tips

# Respiratory Health

- The most common causes of airway disease are when your horse inhales infectious agents, such as bacteria and viruses, dust and gases such as ammonia.
- Using dust free bedding reduces the number of fungal spores, bacteria and ammonia. Although deep littering might save you time and money it is bad for respiratory health.
- Keeping your pony turned out will reduce the burden of irritating substances like dust down to a minimum.
- Hay is often linked to poor respiratory health as it is a source of mould and dust. Soaking hay for approximately 2 hours will reduce dust. Soaking for longer leaches out many nutrients. Whilst this may be beneficial for an obese or laminitic horse, it is not good for the regular horse. Feeding it from the floor is a good way to reduce the number of spores. This is not an acceptable alternative to sourcing good quality dust-free hay.
- When mucking out, tie your pony up elsewhere on the yard away from the spores.
- A well ventilated stable prevents the build-up of bacteria, fungal spores and ammonia. It also prevents condensation and stops his bedding becoming mouldy, therefore stables with windows or skylights, or those in big open barns are best for respiratory health.
- Ensure your pony is vaccinated against respiratory viruses such as equine influenza.

**If you have any questions about your pony's health speak to your vet.**

equineSkills
GROWING EQUINE KNOWLEDGE

XLequine
Excellence in Practice

## Would you like to grow your equine knowledge?

At XLEquine we are committed to providing you with up-to-date training to enable you to be further equipped to look after the horses and ponies in your care.

Interactive and practical, EquineSkills workshops are delivered to small groups of horse owners with plenty of opportunity for hands-on practice of the skills learnt using both live animals and props. The workshops are delivered by our equine veterinary team, all of whom have attended an accredited course on the latest training tools and techniques, to ensure they deliver a consistently high level of education, catering for all levels.

# First Aid for your Horse

**First aid is the initial help that is given following injury or illness. Understanding what you can do when faced with an emergency medical situation can help to prevent or reduce suffering, help stabilise the patient, keep you and your horse safe and promote recovery.**

Distressed horses can be unpredictable. This course aims to equip you with the confidence and skills to take charge of emergency situations you may be faced with, and ensure the safety of everyone involved.

### Learning Outcomes

- Learn the principles of first aid.
- Prioritise and know how to deal with emergencies, discriminating between those that are life-threatening, urgent, semi-urgent and non-urgent.
- Undertake a clinical examination of your horse including taking a temperature, checking pulse and breathing rates and assessing dehydration.
- Assess, examine and bandage a wound.

# Foot Care

**Taking care of and understanding the hoof is paramount to good horsemanship and providing proper care for your horse or pony.**

Hoof health is of course fundamental to horse movement and so to optimise your horse's performance we need to take hoof care seriously.

### Learning Outcomes

- Understand the normal anatomy of the hoof and surrounding structures and how this relates to your horse.
- Be able to spot basic diseases of the foot.
- Understand what you can do to keep your horse's feet healthy.
- Understand different types of shoes available and when they should be used.
- Know how to perform basic procedures such as applying a poultice.

To register for an EquineSkills workshop near you visit...

**www.equineskills.co.uk**

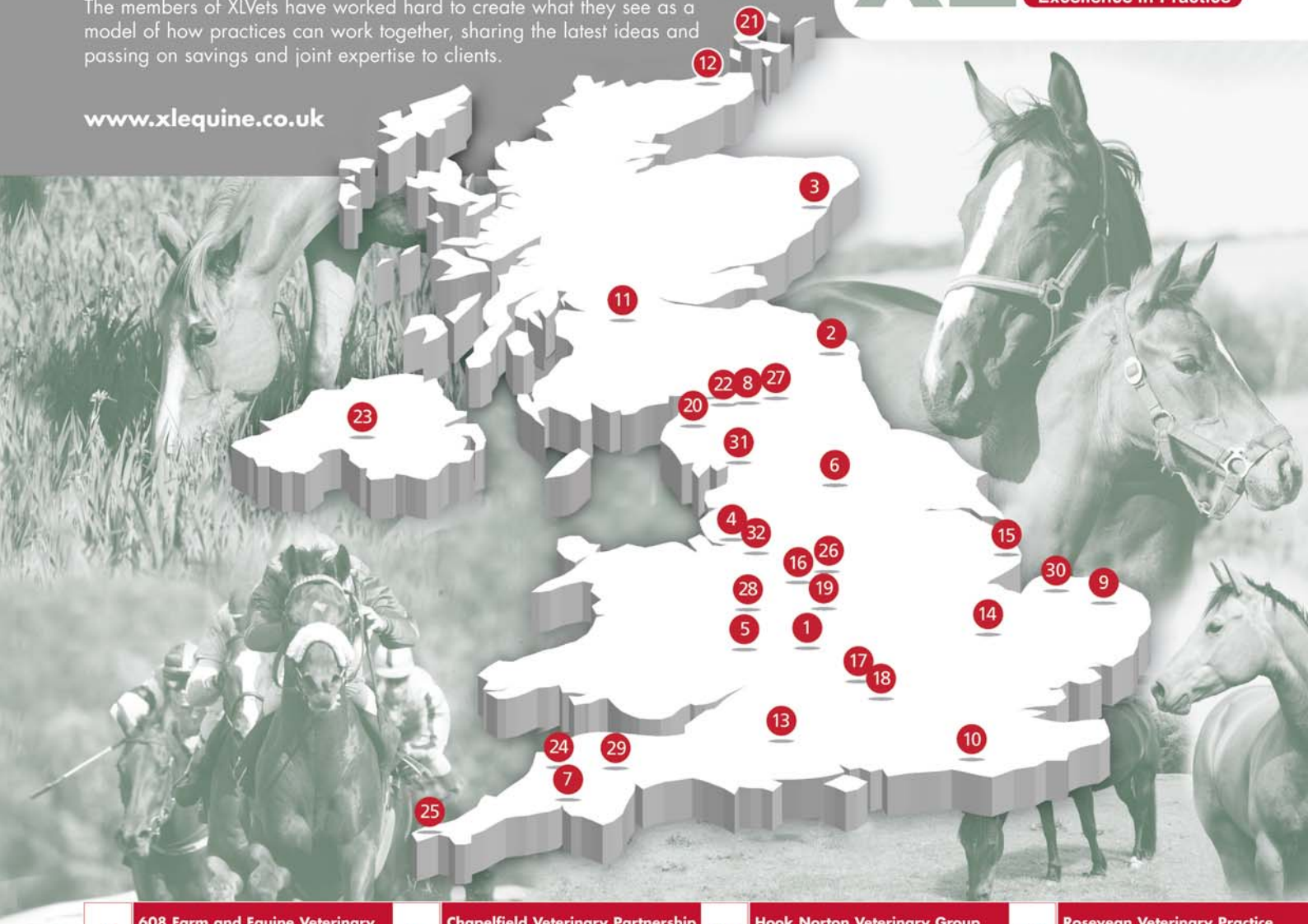
Telephone **01765 608489** E-mail **training@equineskills.co.uk**

## EXCELLENCE IN PRACTICE

# XLEquine - Better Together

The members of XLVets have worked hard to create what they see as a model of how practices can work together, sharing the latest ideas and passing on savings and joint expertise to clients.

**www.xlequine.co.uk**

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**XLEquine** - We Excel

November 2014