



EXCELLENCE IN PRACTICE

EQUINE

review

SPRING 2008
XLVETS MAY EDITION



PREPURCHASE EXAMINATION
Vetting by a Veterinary Surgeon

LAMINITIS
PREVENTION IS BETTER THAN CURE

HORSE HEALTH PLANNING

Take a look...
FIRST EDITION

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XLVets - We Strive to Excel

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

Our intentions...

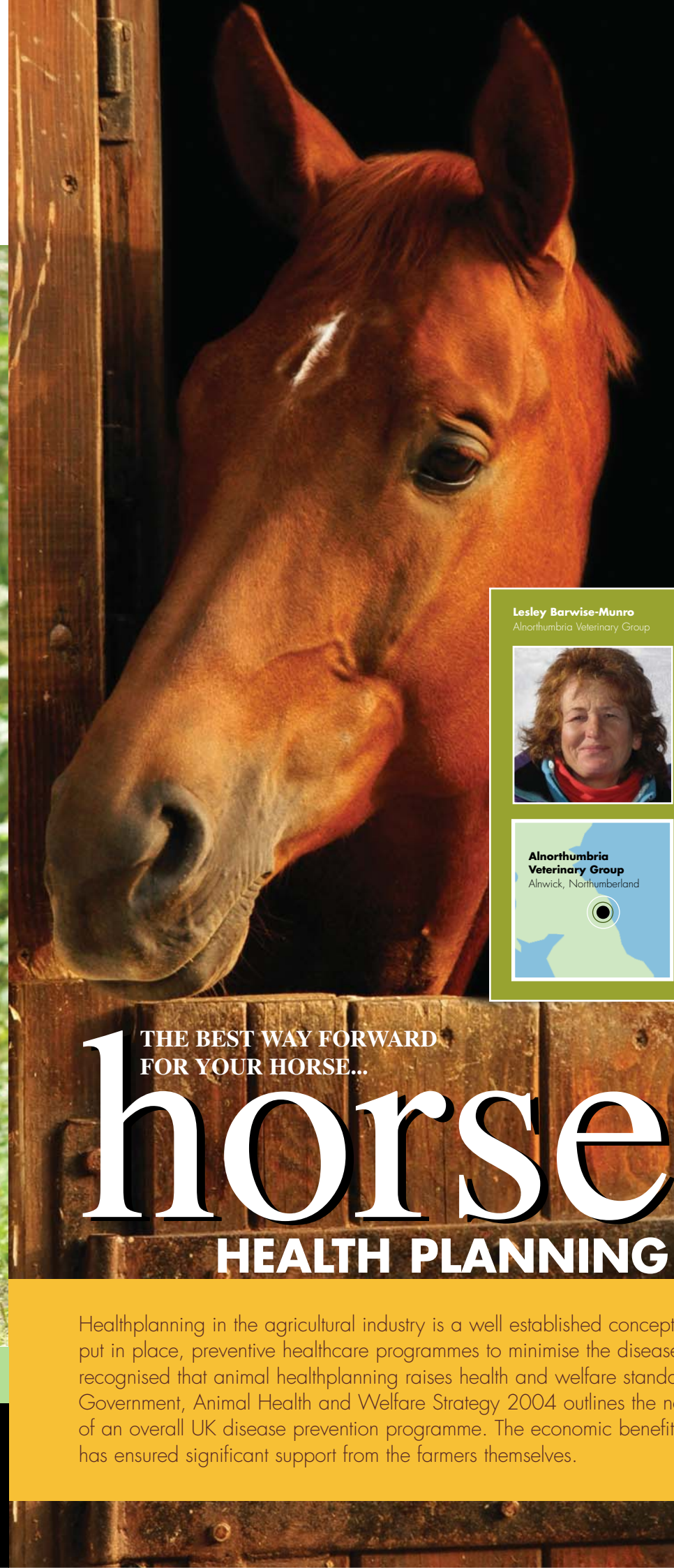
Our vision is that by sharing experience, knowledge and skills we can deliver the highest standards of service and care to all our clients. As members of XLVets, we have worked hard to create a model of how veterinary practices can work together as an extended national team, sharing the latest ideas and passing on the benefits that arise to all our clients.




www.xlvets.co.uk

Please talk to your XLVet to discuss any of the issues raised in this newsletter.

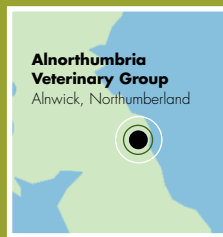
XLVets Excellence in Practice



Lesley Barwise-Munro
Alnthumbria Veterinary Group



Alnthumbria Veterinary Group
Alnwick, Northumberland



THE BEST WAY FORWARD FOR YOUR HORSE...

horse

HEALTH PLANNING

Article by Lesley Barwise-Munro
Alnthumbria Veterinary Group

The Horse Industry, led by the British Equine Veterinary Association (BEVA) and supported by the Government, launched its own Equine Health and Welfare Strategy in May of 2007. Horse Health Planning, a relatively new concept, forms an integral part of this strategy and will be included in the requirements for future livery yard licensing.

On a day to day level Horse Health plans (HHPs) can be tailored to meet the requirements of an individual animal according to its health status, the way it is used, fed and cared for. Alternatively a whole yard health programme can be devised for livery, competition or training yards. The veterinary practice that you are working with may choose to involve specialist nutritional advisers, farriers and physiotherapists according to individual requirements.

A growing number of top equine practitioners across the UK are recognising the importance of being involved with all aspects of the horses' health that are in their care. 'Our service as equine practitioners is based on forming a good relationship with our clients and a complete understanding of their horses requirements. Providing the whole healthcare package for the horses in our practice we find gets the best results. In 2008 with all the technology available to vets we are fortunate enough to be able to offer these services to all types of horses and ponies whether they are used for competition or leisure purposes' Tim Greet MRCVS, Rosedale and Ricketts, Newmarket.

Not only do the individual horses, ponies and donkeys benefit from HHPs but as the awareness of disease risk on a greater scale grows the proactive approach to disease prevention is likely to benefit the whole UK horse population illustrated by the comment from Chris House of House and Jackson Vets, Essex (BEVA President Elect) 'We only have to look at how the Australian racing industry has been brought to its knees by the recent outbreak of equine influenza which could have been prevented by having a vaccination protocol as we have here in the UK.'

The next edition of the XLVets Equine Newsletter will explore what Horse Health Planning means and how you can start to work with your veterinary practice to give your horse the best.

Healthplanning in the agricultural industry is a well established concept of working with the vet to develop and put in place, preventive healthcare programmes to minimise the disease risk for the animals involved. It is widely recognised that animal healthplanning raises health and welfare standards across the UK. For this reason the Government, Animal Health and Welfare Strategy 2004 outlines the necessity for farm healthplanning as part of an overall UK disease prevention programme. The economic benefits of this type of preventative approach has ensured significant support from the farmers themselves.

What is Artificial Insemination? Artificial insemination is where semen is collected from the stallion and introduced into the mare by the inseminator (a vet or DEFRA approved technician). This can be done immediately at stud to allow the stallion to cover more mares and reduce the risk of injury. More commonly, the semen is preserved by chilling or freezing to allow a mare at a location remote from the stallion to be inseminated. Chilled semen is usually sent on an overnight carrier to be used the following day. Frozen semen can be preserved in liquid nitrogen for years and so can be transported abroad and still be used after the stallion has died or is no longer fertile.

What are the advantages of Artificial Insemination over natural covering?

Artificial insemination greatly increases the choice of stallions for mare owners, in particular when using frozen semen; a stallion from anywhere in the world can be used provided it has the necessary health certificates for importation of the semen. If the stallion chosen is far away AI can prevent the need for a long journey for a mare and her new-born foal.

Artificial insemination can reduce the spread of diseases such as CEM (contagious equine metritis) which can be spread during natural service. However it must be remembered that frozen and chilled semen can still carry bacteria and viruses so it is important that the stallion has been tested and the semen is accompanied by the appropriate health certificates before it is used.

Natural service carries a risk of injury to mare, stallion and handlers. There is no contact between stallion and mare with AI and the mare is safely contained in stocks thus reducing the risk of injury to all concerned.

Conception rates with both frozen and chilled semen AI are now comparable with those for natural service and may even be better in some problem mares. The use of deep uterine insemination techniques in which semen is deposited at the end of the uterine horn close to the fallopian tube has improved the conception rate with frozen semen.

I have heard that the timing of Artificial Insemination is crucial to success so how is correct timing achieved?

Semen that has been preserved by chilling or freezing has a shorter lifespan than fresh semen, and because of the transport and collection costs associated with AI it is important to try to achieve a single insemination closely timed to ovulation.

The stage of the cycle is judged by ultrasound scanning the ovaries and measuring the size and shape of the follicle as well as looking at the oedema (fluid) within the wall of the uterus. This helps to accurately predict the time of ovulation, but all horses are individuals and without scanning every 6 hours through the night changes can be missed.

An ovulation induction agent e.g. Ovuplant, when given at the right time can mean the timing of ovulation can be predicted to within a few hours. The regular examinations mean mares usually need to be resident at the insemination centre for AI.

With chilled semen timing of insemination is reliant on postal delivery so insemination on Sunday and Monday are not usually possible. The use of a prostaglandin injection can help to bring the mare into season early to try to avoid her being in season over a weekend.

Is AI much more expensive than natural service?

With artificial insemination increased veterinary intervention is required to aid accurate timing of insemination, therefore the costs will always be higher compared to natural service. Ask for a price list from your XLVets practice, some offer complete packages which can make budgeting easier. Remember that you also need to consider the fee for the semen and for the transportation of the semen.

I want to use AI on my mare. What preparations must I make?

If you haven't bred from your mare before it is advisable to get your vet to give her a full reproductive examination to see if she is suitable to breed from. Having her properly checked out at this stage can save a lot of disappointment and costs further down the line. Speak to your XLVets practice about AI and they will be able to advise you of the

suitability of your mare. Your vet should take clitoral swabs for CEM culture; samples take a week to come back so it is important to plan ahead.

She should be in good, not fat, body condition (overweight mares have a reduced fertility). She should be receiving either some complete concentrate diet or be on a broad spectrum vitamin and mineral supplement to ensure she has everything she requires to cycle normally.

If you are looking to breed an early foal, exposure to grazing and increased light exposure can help to hasten the onset of cycling after the winter.

Make sure her feet are in good condition and have been recently trimmed; lameness can contribute to reduced fertility.

To choose the stallion, ask advice from other breeders and look on the internet on the breed society websites. Some breed societies, including the thoroughbred breeding industry, do not allow AI to be carried out. Check that the stallion has proven fertility using AI.

When purchasing semen for artificial insemination it is important that you clarify what you are paying for. It could be a live foal, a pregnancy or a set number of doses or straws of semen. If you are buying a set number of straws or doses of semen ask what happens if your mare doesn't get pregnant and clarify if you have remaining semen after the mare is pregnant who that belongs to and whether there is the possibility of getting a second covering certificate should another pregnancy be achieved.

For further information on the facilities and prices for Artificial Insemination contact your XLVets practice.

Liz Jackson
Paragon Veterinary Group




Paragon Veterinary Group
Dalston, Carlisle

ARTIFICIAL *insemination*

By Liz Jackson MA Vet MB Cert EP MRCVS
(Paragon Veterinary Group)

BREEDING

from a
problem mare

Richard Sutcliffe
Bishopston Veterinary Group



With the stud season now getting into full flow some mare owners will be realising that not all mares seem to get in foal quite as easily as nature intended. Here we look at some of the many varied reasons why this may be the case and what your XLVet may be able to do to help your mare to conceive and carry a successful pregnancy to term. This article should not be seen as an exhaustive account of all the problems which may be encountered in mares at stud, instead it seeks to give the reader an insight into some of the more common or interesting problems encountered.

Mares not seen in season

Most mares' ovaries become dormant for a variable period of 3-8 months during the winter, and early in the stud season (ie mid February - March) may not have commenced normal cyclical activity. This is because natural selection, especially in native breeds, has ensured that many mares will not start to cycle until much later in the year so that grass is available for better nutrition of the mare in lactation and to support the growing foal. The changeover from non-cycling to cycling ovaries is called the transition phase and during this time mares typically have prolonged but weak signs of being in season and these seasons are often not associated with the release of eggs.

By providing a period of light in the middle of the night over winter it is possible to confound the mare's perception of daylight/day-length and start mares cycling much earlier in the year than they would naturally. This is performed in the bloodstock industry where it is desirable for the foal to be born as soon as possible after 1st January to ensure that it is well grown in relation to its counterparts at the sales/races.

Lights which advance the onset of transition to a cycling ovary are often combined with hormone treatment to shorten this transition phase between non-cycling and fertile cycling states.

There are, of course, disease states where mares fail to cycle normally. Mares which are in poor condition, or on a low plane of nutrition or which are debilitated by disease affecting other organ systems may stop cycling and these problems need to be addressed first before the mare's ovarian function can be expected to be normal. One common ovarian disease which prevents normal cycling is an ovarian tumour called a Granulosa Thecal cell tumour. These can

be suspected at routine examination of a non-cycling mare with a rectal ultrasound scan and blood sampling for hormone analysis can sometimes aid a diagnosis. Additional signs such as colic, persistent season or stallion-like behaviour may variably be seen in such cases. Once the diagnosis is confirmed then surgical removal of the diseased ovary will allow the remaining ovary to operate normally and for the mare to conceive.

Rarely some mares never develop functional ovaries due to genetic/chromosomal abnormalities.

Mated mares which fail to conceive

Conception rates in mares are usually quoted as being in the range 45-60% per mated cycle. Hence after 3 mated cycles of a population of mares with normal fertility somewhere between 82-95% of them will be in foal. i.e. 5-18% of them will not be in foal and they may still be of normal fertility. Part of the job of a stud vet is to determine which mares are normally fertile and which mares will need our assistance around the time of mating. Very few mares are completely and permanently infertile but subfertility in mares is a major problem.

The vulval lips should provide a tight, intact seal which is vertical and free from faecal debris. In older, thinner mares, especially thoroughbreds the anus may drop forwards with the upper portion of the vulval lips horizontal. These mares may suck air in and out of the vagina as they move, bringing with it contamination and leaving the mares reproductive tract prone to infection. Surgical correction by means of a Caslick's operation is a simple and effective cure.

A cervix which has been damaged during foaling will need to be given time to heal since the seal provided by the cervix is essential to maintain a harmonious uterine environment for the pregnancy.

Older maiden mares may have a very firm, fibrous cervix which impedes passage of semen into the uterus and also clearance of fluid from the uterus.

Older mares tend to suffer from a degenerative condition of the uterine lining (endometrium) which is known as endometrosis. Diagnosis depends on the laboratory examination of an endometrial biopsy. Successful treatment is difficult and may involve physical scraping of the endometrium or the use of chemical agents e.g. kerosene or povidone-iodine. Some clinicians advocate repeated washes with hot (50°C) sterile saline washes. Whatever treatment is used the prognosis for future fertility is poor. Urine pooling occurs in mares where the anterior vagina tilts downwards allowing urine to flow forwards and collect there against the cervix.

Examination of the anterior vagina with a speculum readily reveals the problem. The problem can be temporary after foaling but if it persists then surgical correction will become necessary.

Venereal disease screening of mares and stallions should be performed before mating is allowed, and will rule out this important and highly infectious cause of infertility. Stallions are tested before the season starts and clitoral swabs are taken from mares, with laboratory culture results taking 10-12 days, before mating is allowed. Most reputable studs will have a strict policy in place and this is encouraged by the veterinary profession.

Endometritis

The uterus of the normal, fertile mare can be considered to be bacteriologically sterile but this is despite contamination of the reproductive tract during mating and foaling. The mare's own immune system and defence mechanisms normally clear infections and inflammatory debris quite rapidly.

Endometritis (inflammation of the uterine lining) is the most important cause of subfertility in mares. It causes a hostile environment in the uterus for the developing embryo with resultant embryonic death. Endometritis occurs due to the presence of a combination of microbial infection and other non-infectious agents (e.g. spermatozoa or urine) which invoke an inflammatory response from the mare's immune system.

Swabs for bacterial culture taken from the endometrium are required for the identification of infectious agents and these are usually taken in conjunction with smears of the endometrium looking for inflammatory cells which aids the interpretation of culture results.

It is well recognised that mares which are mated at foal heat (approx 7-10 days after foaling) may still have an enlarged uterus from the previous pregnancy and probably also still have some degree of bacterial infection from foaling. These mares require particular care at mating and often it is preferable to delay mating until a subsequent season to optimise the mare's chances of conceiving.

Following mating, the mare's immune system starts to clear the debris of the ejaculate and introduced bacteria from the uterus. In most mares this inflammatory response to mating lasts 24-72 hours so that by the time the embryo returns from the oviduct (where conception occurs) 5 days after fertilisation of the egg, the uterus represents a clean, safe environment for embryo survival.

Susceptible Mares

If, however, the inflammatory response to mating is delayed or prolonged the embryo will arrive from the oviduct into a hostile uterine

environment and die, and the mare will come back into season. These are referred to as being 'susceptible mares' (i.e. they are susceptible to prolonged post breeding endometritis) and need special treatment at breeding.

We recognise these mares by ultrasound examination of their uterus. The presence of free fluid in the uterus before mating is strongly indicative of a mare susceptible to persistent endometritis. Old maiden mares typically first presented for breeding in their teens present a high risk and are also considered highly susceptible. Other mares will be recognised from a detailed knowledge of their breeding history.

The Management of Susceptible Mares

The successful management of these mares is aimed at assisting the uterine defence mechanisms in clearing the debris, bacteria and inflammatory by-products which inevitably occur at service.

Within 4 hours of mating the spermatozoa responsible for fertilisation will have entered the relatively safe environment of the oviducts. This enables us to employ post-mating therapy which may include uterine irrigation/lavage with sterile saline, intra-uterine antibiotics, and oxytocin injections (to stimulate uterine contraction and aid expulsion of fluid via the cervix) either alone or in combination.

Since the endometritis in these mares is induced by mating, it stands to reason that such mares should be mated only once per oestrus period. If we monitor the mare throughout her season then mares can be mated on a single occasion 1-2 days before the predicted time of ovulation. This gives us extra time to clear the endometritis before the embryo emerges from the oviduct and has the advantage of maximising the time post mating that the cervix is open for expulsion of fluid during oestrus.

Serving a mare so far in advance of ovulation and expecting conception is possible because we increasingly recognise that fresh semen will survive for up to 72 hours in the mare's reproductive tract.

Ideally the treatment of susceptible mares with uterine lavage etc. should be carried out on the day of ovulation and so mares need to be re-examined 4-12 hours after mating to assess the presence of intrauterine fluid and therefore the need for treatment.

Wherever possible, susceptible mares benefit from artificial insemination with fresh or chilled semen over natural service because the process, when carried out efficiently, is cleaner and introduces less inflammatory fluid. Furthermore semen for AI is commonly 'extended' with the addition of antibiotics.



Gastric ULCERS

HOW SUSCEPTIBLE IS YOUR HORSE?

Whilst gastric ulcers are known to affect many racehorses, it is perhaps less well known that around 60% of performance horses and approximately 37% of leisure riding horses are also affected by this underrated condition¹.

Developments in diagnosis

The non-specific nature of the clinical signs of equine gastric ulcers means that they are possibly one of the most under-recognised equine conditions. However, progress in the development of diagnostic equipment has helped veterinary surgeons identify and confirm the presence of ulcers in horses.

A long endoscope, usually three metres in length, fitted with a video camera passes down into the horse's stomach. This is the only way to confirm the presence of gastric ulcers in a horse.

Clinical Signs

The signs are usually vague and will vary from one horse to another, but can include some or all of the following; reduced appetite, poor physical condition, changes in attitude such as sourness or irritability, colic, poor performance and reluctance to work.

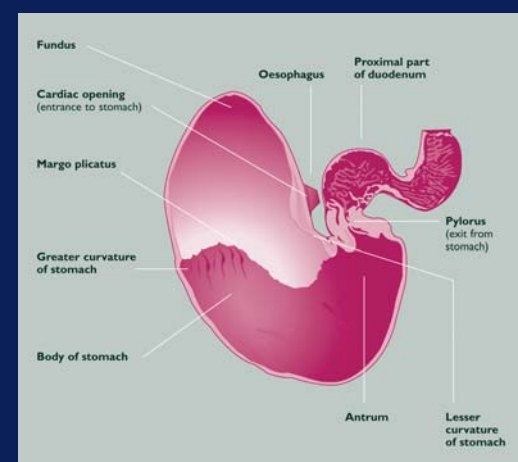
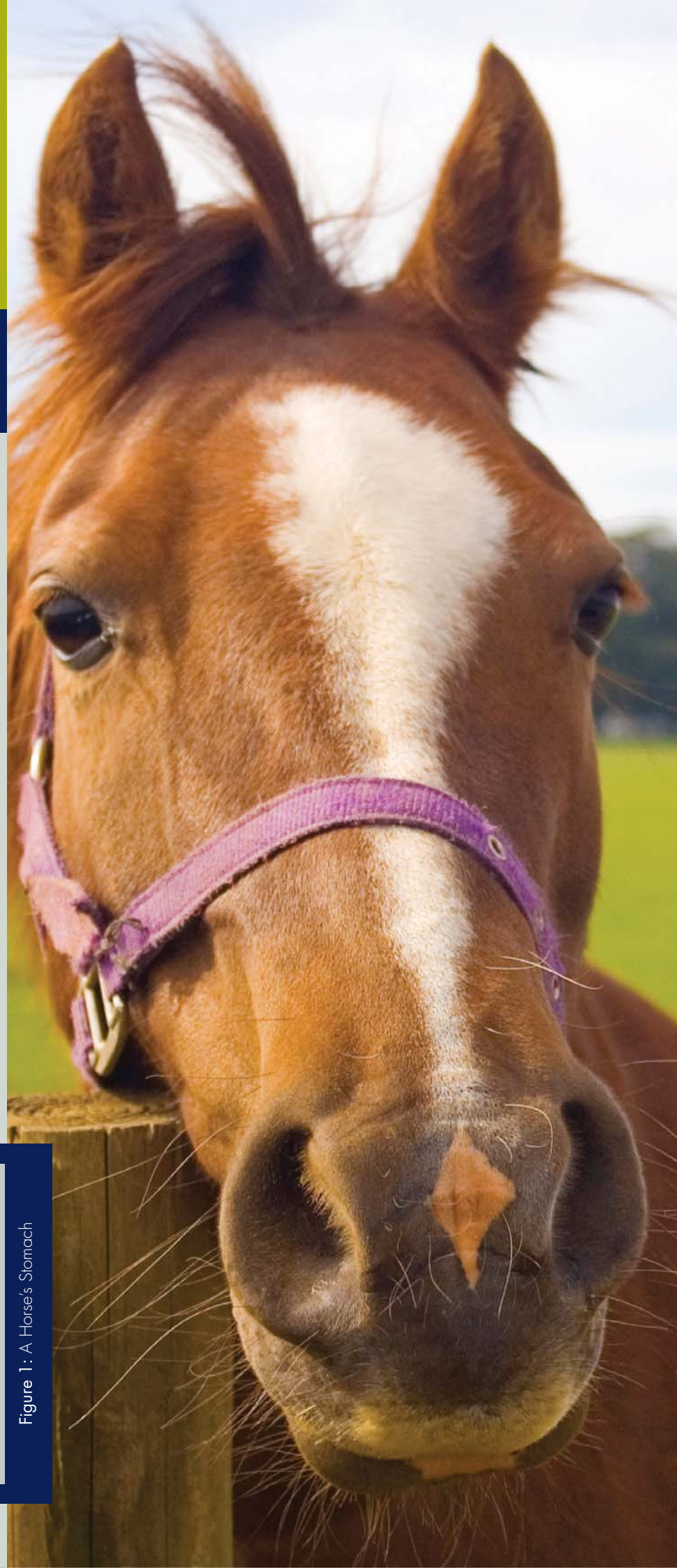


Figure 1: A Horse's Stomach



Gastric Ulcers The signs of gastric ulcers can be vague and vary from one horse to another and whilst it's generally known that around 90% of racehorses in training have ulcers, it's perhaps less well known that about 60% of performance horses and 40% of leisure horses are also affected.

How And Why Ulcers Form

Horses were designed as 'trickle feeders' with free access to light grazing. In contrast, depending on the level of work and yard regime, our modern horse in work is usually stabled, often with restricted access to food.

Whilst, like humans, horses produce saliva when they eat, an important feature of equine ulcers is that horses secrete gastric acid continuously in the stomach, whether or not they are eating.

An adult horse will produce approximately 1.5 litres of gastric acid per hour, and, with restricted access to food, continued secretion means the pH level can rapidly become very acidic and ulcers can begin to develop.

In contrast, horses constantly eating hay or grass have a higher average stomach pH providing a much healthier environment. It can take up to 24 hours for the adult horse's stomach to empty completely after a forage meal, whereas a cereal based diet will pass through much more quickly.

Additional Factors

Research has also shown that regular exercise and training has an effect on stomach acid levels. Exercise increases the pressure in the stomach and decreases the gastric pH. Exercising on an empty stomach can exacerbate this.

In addition to the feeding regime and exercise, other factors that can influence the formation of ulcers are transportation,

relocation, hospitalisation or separation from their usual group². The use of anti-inflammatories has also been shown to be a possible contributing factor to the formation of equine ulcers³.

Diagnosis and Treatment

If a horse is suspected of having gastric ulcers, a gastroscopy using a video endoscope will confirm the presence, severity and location of the ulceration. Although the most common location for ulcers is the upper region of the stomach, they have been known to develop in other areas, including the duodenum.

Ulcers are graded from 0 to 4, reflecting the severity of ulceration. Grade 0 is a normal healthy stomach, and grade 4 demonstrating extensive lesions with areas of deep ulceration.

A 28 day course of the POM-V medicine omeprazole has shown to be the most effective treatment for gastric ulcers. After completion of the treatment, the horse is then usually re-scoped and in most cases the ulceration will have healed.

Recurrence and Prevention

Many owners and riders note a significant improvement in their horses, sometimes within days of treatment commencing. However, once the ulcers have healed, unless changes are made to the horse's management, training and/or environment, it's very possible that they will recur. For a horse in hard work, ulcers can start to reappear as quickly as three to

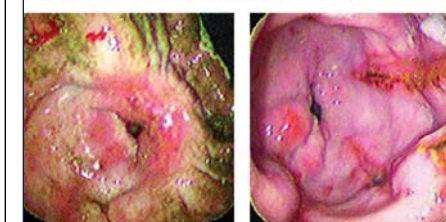
four days after the end of treatment, however even subtle changes to their daily regime can make a difference.

We should try to emulate the horses' natural environment as closely as is possible. Free access to hay and daily turnout - even for short periods - can help significantly, as can splitting hard feeds into smaller quantities fed more frequently i.e. the same total amount given in four instead of two feeds.

Studies have also shown that travel, and separation from peers are also high risk factors for gastric ulcers. In addition to management modifications, or where risk factors cannot be avoided, your veterinary surgeon may recommend that horses receive a preventative dose of omeprazole to keep them clear of ulceration.

If you suspect your horse may have ulcers, please talk to your veterinary surgeon.

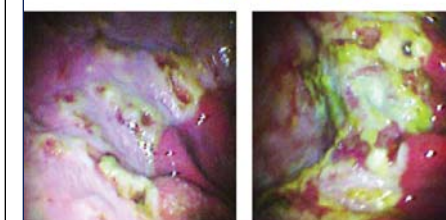
ENDOSCOPIC EVALUATION: ADULTS²



Pyloric ulcer²

Erosion, hyperplasia antrum rugal fold²

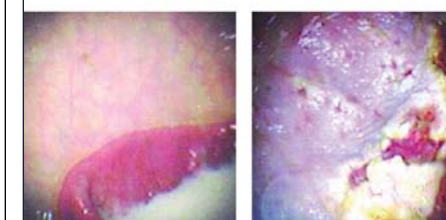
PROGRESSION OF GASTRIC LESIONS WITH RACE TRAINING



March 25²

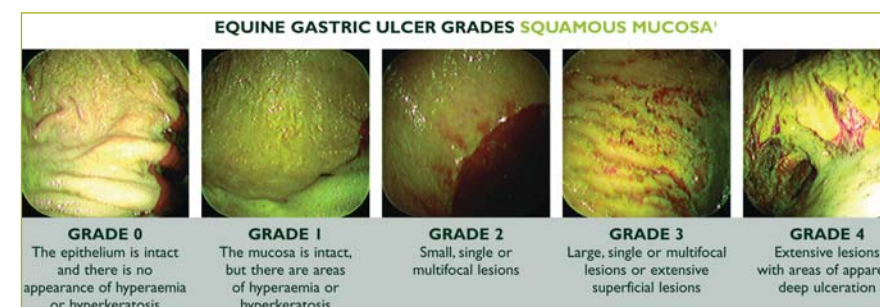
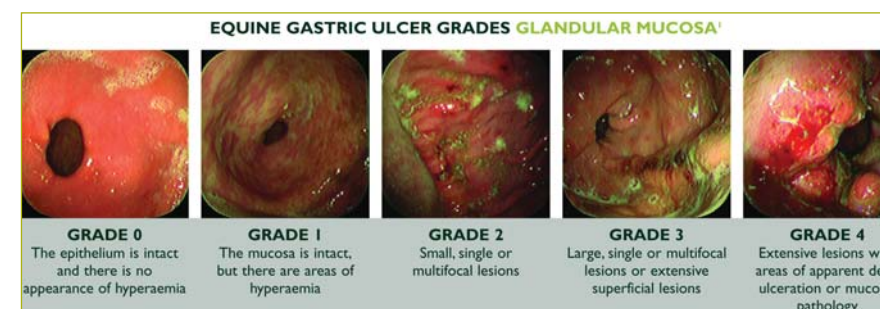
June 3²

PROGRESSION OF GASTRIC LESIONS WITH STALL CONFINEMENT



Day 0 in stall²

Day 7 in stall¹



Photographs courtesy of 'Merial Animal Health'

Continued...

Gastric ULCERS



GASTRIC ULCER AWARENESS MONTH

Dr Emma Batson of Merial Equine Health

Following the success of the UK's first Gastric Ulcer Awareness Month (GUAM) held in May 2007, the second GUAM which is set for May 2008.

GUAM is sponsored by Merial and supported by the British Equine Veterinary Association (BEVA) and the objective is to increase awareness and understanding of what is possibly one of the most under-diagnosed problems in the equine field.

2007 SUCCESS

Following GUAM 2007, a number of horses were identified, diagnosed and successfully treated for gastric ulcers as a direct result of the publicity campaign, thus improving the welfare and quality of life for the animals (and owners) concerned. Due to the vague nature of the signs, many horses were previously suspected of either other ailments, general poor performance, or behavioural problems.

GUAM 2008 SEMINAR

During GUAM 2008 a number of events are planned including a 'Horse Health Masterclass' taking place in Oxfordshire on Wednesday 21st May. For all horse owners, riders and trainers, in addition to the inside story on gastric ulcers, the seminar includes presentations from leading veterinary experts which focus on first aid, when to call the vet, and what to do while you are waiting for them to arrive. There is also a presentation on road transport and fire safety from Hampshire Fire Service in conjunction with BEVA.

The event is being held at North Farm Stud near Wantage, Oxfordshire from 6pm onwards, and includes a hog roast and wine supper. The evening is being hosted by HEROS (Homing Ex-Racehorses Organisation Scheme) and sponsored by Horse & Rider magazine and Merial Animal Health.

Delegate prices, including hog roast and wine are: Adults (over 16) £25, children (12-16) £15 (not suitable for under 12s).

For further information and to book tickets for the 'Horse Health Masterclass', contact the HEROS team on 01488 638243, e-mail grace.muir@virgin.net or book on line at www.heroscharity.org. All proceeds from the seminar go to HEROS.



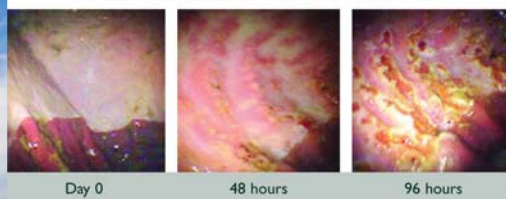
10 TOP TIPS...

...TO HELP PREVENT GASTRIC ULCERS

- 1 Emulate the horses natural environment as closely as is possible
- 2 Where possible, provide ad lib hay or forage
- 3 Split hay into two or three hay-nets to encourage 'forage' behaviour
- 4 Consider oil as an alternative energy source to high energy grains
- 5 Alfafa hay can be beneficial
- 6 Daily turnout (even for short periods)
- 7 Split hard feed into three or four feeds a day
- 8 Where possible travel with a companion or a mirror
- 9 Minimise segregation from peers
- 10 Minimise starvation periods before exercise



PROGRESSION OF GASTRIC LESIONS
WITH INTERMITTENT FEED DEPRIVATION¹⁴



PRE PURCHASE

EXAMINATION OF HORSES The equine leisure industry is currently seeing huge growth. There are a large number of people coming back to riding after a break, as well as others that are taking up the sport for the first time and the pony club children just starting out. Consequently there are more people buying their first horse. This can be a daunting task with the phrase 'buyer beware' coming at the potential purchaser from all directions!



David Feneley and Toby Kemble, Wensum Valley Vets, Norfolk

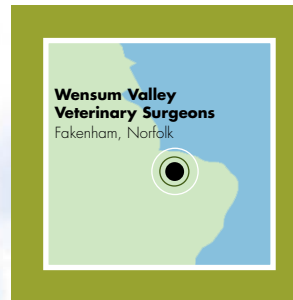
PRE PURCHASE

'Vetting'

by a Veterinary Surgeon

Once the ideal horse has been found a prepurchase examination ('vetting') can be requested. Asking the opinion of a trainer or instructor can also be useful for the first time buyer. Vettings cost money and there is no point spending this if there is a problem that is obvious to a more experienced lay person.

A vetting is carried out by a veterinary surgeon and is the best way of detecting potential problems before parting with any money. It is the equivalent of a house survey - you might still buy the house despite a list of faults, but at least you have been made aware of them and these may be reflected in the price. Prepurchase examinations ('vettings') are either 2 stage or 5 stage. The vet will list any clinical abnormalities found during the procedure and then conclude whether or not the horse is suitable for the proposed use. In other words, a slight problem may be acceptable if the horse is to be a quiet weekend hack but could be considered more serious in a three day eventer.



Arranging a... ... 'VETTING'

This may be straightforward if the horse is local to the purchaser and is already registered at a practice. If not or the animal is beyond their normal travelling distance then a vet local to the horse has to be contacted. The veterinary world is a small one and a local vet can be asked if they personally know any suitable vets that they can recommend. The vendor can also be asked for a list of local horse practices.

It is important that a first time purchaser obtains as much information about the purchase procedure and understands vettings before buying a horse. It should also be borne in mind that vettings ARE NOT guarantees or warranties, they ARE NOT influenced by vices and they DO NOT confirm height. These issues must be taken up with the vendor directly. However, vettings DO provide a thorough clinical report and lead to a veterinary opinion as to the suitability of the animal for purpose.



Prior to Purchase Examination

5 Stages

STAGE 1

Initially, the horse is subjected to a thorough examination in the stable. This includes the eyes, heart, lungs, teeth, limbs, joints, feet and skin. The horse's conformation is assessed on a level surface. During this stage the vet will touch and examine every bit of the horse.

STAGE 2

The horse is simply walked and trotted in a straight line on a hard, level surface. Its gait and soundness are assessed.

STAGE 3

This is the exercise stage. Ideally a competent rider should ride the horse but it can be lunged if no rider is available or if the animal is unbroken. The horse is observed over approximately 8-12 minutes and should be fatigued but not exhausted.

STAGE 4

This is a rest phase and the horse is allowed to stand in his box and cool off for around 20 minutes. The heart rate and breathing rate should both recover to near stage (1) levels. An identification diagram is completed during this stage.

STAGE 5

The horse's heart and lungs are listened to again. The horse is then walked and trotted in a straight line. The horse is tight circled, pushed backwards and his back may be examined again.

A two stage vetting can be requested by a purchaser as a cut down and cheaper alternative to a 5 stage vetting. It comprises of just stages 1 and 2 as previously detailed. Hence, stages 3,4 and 5 (the exercise, rest and final soundness exam) are omitted. The purchaser will still get a certificate detailing the findings and a full identification chart but will be requested to sign a letter in advance that lets the vet know that they have understood and accepted the limitations of a 2 stage examination. In general, it is advisable to obtain a five stage examination.

Sometimes it may be necessary to use other diagnostic tools, either at the request of a prospective insurance company or because the vet finds something that needs further investigation. X-Rays, endoscopy, ultrasound and other tests can all be incorporated into the examination and the report is obviously appended. They are not, however, part of the standard examination.

We are grateful to Heritage Marketing Ltd for allowing publication of this article which has been taken from a book in publication.



Far Left: David Feneley (Veterinary Surgeon)
Wensum Valley Vets, Norfolk

Left: Toby Kemble (Veterinary Surgeon)
Wensum Valley Vets, Norfolk

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Most people are aware that overweight native breeds on rich grass are prime candidates for laminitis; however there are many other common inciting causes which include...

- Obesity in any type of horse or pony
- Over eating carbohydrate rich food e.g. cereals, rapidly growing grass (which is why we often see laminitis when the weather changes and grass shoots up in spring and autumn)
- Excessive concussion
- Cushing's syndrome
- Cold weather
- Stress e.g. change of location, travel and separation from a friend
- Infections e.g. in mares that retain their placenta
- Some medications e.g. corticosteroids may on occasion induce laminitis

Symptoms of laminitis are variable from horse to horse but include

- Slow and stilted/pottery gait with a reluctance to turn
- Weight shifting
- Bounding digital pulses and warm feet (although not every laminitic has warm feet)
- Classic laminitis stance - rocking back on to the hind feet to take the weight off the front (although occasionally hind feet only are affected)
- Signs of pain including sweating up and lying down (sometimes laminitis is confused with colic)

Symptoms can rapidly progress from mild to severe, even if appropriate treatment is given.

If you suspect laminitis in your horse or pony contact your vet. In the meantime restrict him or her to the stable and provide a deep bed covering the whole floor area (ideally at least 18 inches of shavings). If they are in the field a long way from the stable consider taking your trailer to them, rather than force walking. Your vet will assess the symptoms and severity of the disease in your animal. Treatments are varied but will often initially consist of anti-inflammatories (to reduce the inflammation and help with pain), drugs that may help with blood flow to the feet and frog support.

In many cases radiography (x-rays) may be recommended during course of treatment.

These are useful to allow us to see

- If there are any structural changes (e.g. rotation or sinking)
- If there is any evidence of gas or fluid buildup
- To see how the foot has been trimmed

They are also invaluable to your farrier to allow appropriate trimming and supportive shoe fitting when the time is right. A good working relationship between your farrier and vet is essential for the best chances of recovery of your horse. In all but the most straightforward of cases repeated visits by your veterinary surgeon will be necessary to monitor the

progress of symptoms, and to alter treatment depending on your horse's response. Do not start walking the horse until specifically instructed to do so by your veterinary surgeon. Premature exercise is a common cause of setbacks. Treatment of laminitis often takes a long period of time and can be expensive.

When managed well from the start many horses will come back into work successfully. However it is essential to remember that some cases take a long time to recover and others unfortunately do not recover despite everyone's best efforts.

There are many things that you can do to help prevent this distressing disease:

1. Do not allow the horse to become overweight. **THIS IS EXTREMELY COMMON IN LEISURE AND SHOW HORSES.** Ask your vet at the annual vaccination visit what they think. If your friends are saying the horse is looking 'good' or 'well' at the minute often these animals are fat! You should be able to feel the ribs easily by running your hand along the chest wall. There should not be fat deposits over the crest, tail head, shoulder or loins. Use a weigh tape regularly or a weigh bridge for an accurate weight.

2. If they are overweight do not starve them as this may induce a severe metabolic condition known as hyperlipaemia, which causes fat to be released into the bloodstream. Weight loss needs to be gradual. Grazing muzzles can be useful.

3. Regular farriery. Feet should be regularly trimmed. Even horses no longer in work should be seen around every 6 weeks by the farrier. Long toes are to be avoided.

4. Avoid lush grass; look out especially for the flushes of grass in spring or autumn. It is also recommended that you avoid frosty pasture in the winter. (Cold and sunny conditions mean that the grass can produce sugars in the sun via photosynthesis, but cannot use them to grow as it is too cold. It 'stockpiles' the sugars as fructans which are thought to be involved in inducing laminitis).

5. Feed a high fibre diet. Hay can be analysed cheaply by some of the large feed companies. If your hay is found to be of a too high feed value for your horse it can be soaked for 12 hours to 'leech' some of the goodness out. Alternatively good quality oat straw can be mixed in (this is not suitable for horses prone to colic or dental problems).

6. Feed a balanced diet. Many horses and ponies that are prone to or are at risk of laminitis do not need to be fed hard feed, however as forage will not provide adequate vitamins, minerals and antioxidants a recommended balancer should be used.

7. Avoid sudden changes in diet, especially sudden increases when work is increased the digestive system needs time to adjust to changes.

8. Ensure your horse does not have a preexisting condition e.g. Cushing's syndrome that will make it more prone. Your XLVet practice can carry out an annual health check where early symptoms of the disease may be noted.

Laminitis

Laminitis is a debilitating condition of the feet in horses and ponies. The term itself means 'inflammation of the laminae'. The laminae form a bond between the pedal bone and the hoof itself. Inflammation of this structure is very painful, and the structure can weaken and tear resulting in rotation and potential sinking of the pedal bone. Many horses will recover from laminitis if managed correctly, however up to 20% of animals may die or be euthanised, or be left permanently lame as a direct result of laminitis. As such laminitis should be regarded as an emergency and if you suspect a case of laminitis please seek veterinary attention immediately.

in horses obesity

Before we can do anything about a problem, we have to be able to recognise a problem.

Obesity is becoming an increasingly common discussion point and whereas historically, only malnutrition was considered as an abuse of the horse, we may not be far away from RSPCA officers pursuing prosecutions of Owners of Obese horses.

Body mass index is a controversial topic in human medicine, in horses we commonly use a body condition scoring system. Depending on the system used a score is ascribed to a horse, either between 1 and 5 or 1 and 10. The features used to specify the obese scores are, ribs difficult to or impossible to feel, crease present along midline back, large crest and fat around tail head, fat in inner thigh, possibly causing rubbing together when walked, bulging fat over shoulder blades or rump, withers no longer prominent as covered with fat. In these scoring systems, 0/1 is thin and 5 or 10 is fat, (4-5 or 7-10 being obese).

How do we measure Equine Obesity?

We can use a body condition scoring system to find out what our horse's score is. There is a good deal of subjectivity in this and some horse owners will conduct the scoring with their 'horse thinning spectacles' on and achieve the score they want the horse to have.

More objective measurements can be achieved using weigh scales and/or a weigh tape, in conjunction with the horse's height and type. This approach is more akin to the body mass index but can help give an objective starting point and help monitor any progress (or deterioration!)

Why is obesity a bad thing?

There are many reasons why obesity is a bad thing and surprise surprise, they are very similar to the reasons why being obese is bad for humans.

Obese animals are metabolically compromised by their obesity. Obese horses can suffer a peripheral Insulin resistance (which is not unlike Type II diabetes in humans) which is in effect a form of avoidable Cushing's syndrome.

Obese horses are at a much greater risk of Laminitis, they are more likely to suffer from performance limiting arthritic joint disease, they are at greater risk of colic from strangulating lipoma, their reproductive function is more likely to be compromised and obese mares are far more likely to have problems foaling (if they were able to conceive in the first place.) Having foals and youngsters overweight can be extremely detrimental

also. Conditions such as OCD and most of the developmental orthopaedic diseases are much more likely in animals that have high calorie intake and reduced exercise potential (i.e. the ideal conditions for being overweight) any conformational defect is only going to be made worse if the limb concerned is having to support additional body weight, therefore, a combination of nutritional and physical effects mean that being overweight has a significantly detrimental effect on joint development.

These effects may also not manifest themselves in early life but can be a time-bomb for premature onset of other problems later in life.

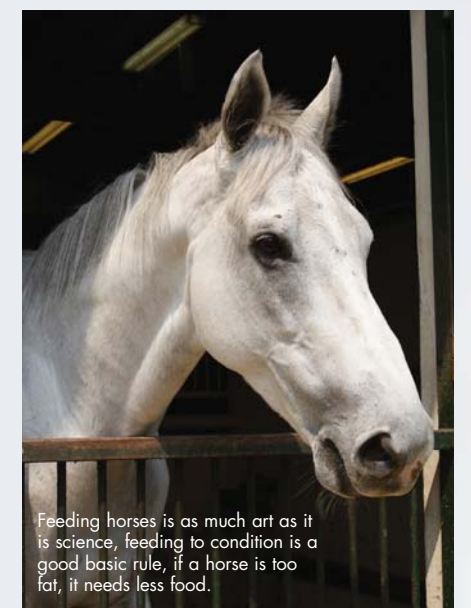
How should you control a horse's weight?

Feeding horses is as much art as it is science, feeding to condition is a good basic rule, if a horse is too fat, it needs less food (this is not Rocket Science!). Roughage is most important therefore reducing hard feed and replacing with roughage (hay preferable to haylage if overweight) is the first step. All dietary changes should be made gradually. Fat woolly horses do not need both rugs and extra feeding in the winter. For good doers, rough ploughing out a paddock and rolling it, allowing only bits of grass to grow through can help reduce total intake and increase exercise as the horse has to cover more distance searching for its grass. Much has been made in the equine press of horses in the show ring being in 'Show Condition'. One has to question whether horses that are grossly overweight in performance related classes, such as potential sports horse, hunter, etc. should be marked down as severely as if they were lame. Until judges and exhibitors recognise the deleterious effects of obesity we will continue to compromise the future athletic

potential of our performance horses. Therefore, educational efforts need to be concentrated both towards individual horse owners and the equine industry as a whole.

Feed the individual horse, not the horse in the textbook. It is always going to be a balancing act, constantly assess the horse's weight and body condition and make changes to the diet related to that and the levels of work, always remembering to make those changes gradually. Also remember the horse is designed to have a degree of fluctuation of its weight throughout the year and a little extra weight in the autumn and a little poorer in the spring is natural.

Obesity can be every bit as damaging to a horse as malnourishment, if not more so and can be more difficult to rectify, so watch out for the prosecutions, for they will be coming and remember, avoiding obesity will do you and your horse no end of favours.



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PREVENTION IS BETTER THAN CURE

equine

DENTISTRY

Dental disorders are extremely common in all ages of the horse and pony. They can present with various different clinical signs which the Veterinary Surgeon or equine dental technician (EDT) will enquire about at the time of examination. It is important for owners to look for these signs as they may indicate that there are problems within the mouth.

Some of the signs of dental disease can be subtle and can include mild behavioural abnormalities and biting problems with reluctance to go on the bit and flex the neck which can vary on different reins. Other more severe and chronic signs of disease are quidding (dropping of partially chewed food), smelly breath, slow eating, food pouching in the cheeks, facial swellings, nasal discharge, colic signs and ultimately weight loss.

It must be remembered that some horses will have advanced dental disease and not show any clinical signs. It is therefore really important that you have your horse's teeth checked at least every 12 months, many horses require every six months.

Examination by a Veterinary Surgeon or a qualified EDT can start at any age from 2-3 years old onwards. The examination should be performed in a quiet stable environment and there should be enough head clearance for the horse so that it doesn't damage itself. In a large percentage of cases sedation is required to allow a thorough examination and to allow some more advanced procedures.

Firstly the incisor teeth will be examined for specific problems such as 'Parrot Mouth', retained deciduous (baby) teeth, fractures, extra teeth and abnormal wear patterns. All of these conditions are commonly encountered but very rarely affect the horse and therefore treatment is seldom indicated. After this the gag will be placed and the cheek teeth will be examined. These teeth are crucial to the horse and the way it eats and problems are frequently encountered.

The 'wolf teeth' are the first cheek teeth to be encountered if present. They are more common on the upper jaw and may or may not cause problems with biting. Some people advocate that they always cause problems and should therefore be removed but more recent views suggest that they should only be removed if large and displaced or if loose, fractured, or unerupted (blind). Sedation should always be used for the procedure and the horse should be rested for 1-2 weeks afterwards.

There are some specific problems of younger horses which include retained but partially loose deciduous (baby) teeth and tooth root infections as the permanent tooth erupts. Baby teeth can easily be removed if they are loose. Tooth root infections (periapical pulp infections) of the permanent teeth need further investigations usually with xray. These can respond to long courses of antibiotics but often the tooth has to be removed. The decision to remove a permanent tooth is not undertaken lightly as it is a difficult and time consuming procedure especially in a young horse and it usually requires a general anaesthetic.

The most common abnormalities of the teeth associated with both young and mature horses are sharp overgrowths of the cheek side of the upper teeth and the tongue side of the lower teeth. These can cause very painful ulcerated cheeks particularly if the area corresponds with the noseband. These points can be rasped easily with a patient horse but often sedation is required to perform a thorough job. If the sharp points are left uncorrected then a 'shear mouth' will develop over time. This is when the angle of the teeth is steeper than normal preventing the horse from chewing from side to side.

Large overgrowths (hooks) at the front and the back of the mouth are common in horses with even a mild form of 'parrot mouth' (overshot jaw). Again these should be corrected every 6 months with a mechanical burr. If the horse has large overgrowths these often have to be reduced in stages to prevent the sensitive part of the tooth from being exposed.

More problematic diseases of older horses include periodontal disease and distemata. This is when a gap forms between the teeth and also between the teeth and the gum which pockets food material that gets stuck. This causes gum inflammation and eventually the ligament attaching tooth to the gum and bone breaks down causing loosening of the tooth. If the tooth is subsequently lost the opposite tooth will continue to erupt without having any wear placed on it creating a 'step mouth' which eventually leads to a 'wave mouth' with an undulating grinding surface. In the early stages periodontal disease responds well to picking and washing out the food material and addressing any overgrown teeth. In the advanced stages if the tooth is very loose the tooth can be removed. If the tooth is removed or is missing then the opposite overgrowths must be removed routinely to prevent the 'step' mouth from forming.

Another relatively common disorder is when a tooth is displaced either into the cheek or into the tongue. This causes ulceration of the soft tissues and an area of food pocketing where periodontal disease can form. This should be addressed every six months to remove the sharp edges of the tooth and to keep opposite tooth overgrowth under control. If the displacement is severe then the tooth can be removed.

Fractured teeth are also commonly encountered at routine examinations. They are more common on the upper cheek teeth. Loose fragments can be removed at the time but the tooth usually becomes infected. Radiograph can confirm this and gives us an idea if the remaining tooth needs to be removed.

This is a summary of the commonly encountered abnormalities and their treatment. The most important point to note is that prevention is better than cure and regular dental check ups are an essential part of keeping your horse fit and healthy.