

# Food for Thought



*“The fundamental difference which all horse owners must recognise is that horses are not omnivores, like humans, and their systems are sensitive in a way that ours are not”.*



Incorporating Ada Cole  
Memorial Stables



*The Charity's purpose is to provide and promote the welfare, care and protection of horses, ponies, donkeys and mules.*

# Redwings Welfare

To formulate a healthy feeding routine, it is important to recognise that horses have a unique digestive system and therefore unique feeding requirements. In the wild a horse, pony or donkey will spend somewhere between 14-18 each day eating. This is not because they are greedy, but simply because their bodies are designed to eat food which has a low nutritional value, so they have to consume a great deal of it in order to acquire all the goodness and energy they need.

## Eating as Nature Intended

A horse will naturally forage for food like grasses and leaves which are mostly made up of fibre and water. Fibre is largely indigestible, and in most animals this passes through the intestines to be expelled as dung. Horses, however, have

millions of bacteria in their intestines which can break down a lot of the fibre and this process produces fatty acids which the horse then uses as an important source of energy.

By turning a horse out to grass, supplemented by hay or haylage when necessary, the horse not only benefits from eating a natural diet, but is psychologically gratified by being able to spend a substantial amount of their time eating, in accordance with their instincts. Horses that need extra energy to maintain body condition or cope with a demanding exercise routine should be offered hard feed as well as, not instead of a forage based diet. (For ideas on turnout solutions for podgier ponies see our laminitis leaflet).



*Looking at how nature has designed equines to feed is the best place to start when devising any feed routine.*

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## Teeth

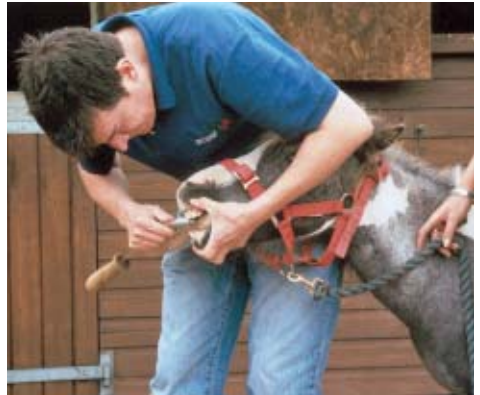
Biting and chewing are the first two stages of the digestive process and if problems occur here, the following stages can also be affected. Choke, diarrhoea, colic and weight loss can all be caused by dental problems.

Fibrous food is tough and needs a lot of grinding before it can be swallowed. This means that a horse's teeth work very hard throughout their life. The surface of each tooth is gradually worn down by the grinding action it performs. To compensate for this wear, teeth continue to emerge from the gums until a horse is well into their twenties. If a tooth is not worn evenly, hooks and sharp edges are formed which interfere with the grinding motion of the jaw. This can cause pain, bleeding and ulceration by cutting into the tongue, cheek and gums.

To ensure that a horse's teeth are both effective and comfortable to use, regular checks by a qualified and experienced professional are essential. Any sharp edges and uneven areas of the tooth surface can be levelled off with special equipment and the general health of the mouth assessed. Equine dentistry is an extremely specialised area and only a BEVA qualified Equine Dental Technician or experienced equine vet should be allowed to work on a horse's teeth.

If a horse shows signs of discomfort in the

mouth between check ups, always have the teeth looked at immediately. Symptoms vary enormously, but in particular watch out for quidding (dropping food), laboured chewing, reluctance to eat, grinding of the teeth, bad breath, weight loss, headshaking, reluctance to accept the bit and imbalance when being ridden.



*Teeth are often neglected in the routine care of many equines. Particularly as they age, dental checks are vital to maintaining optimum nutritional health.*

## Stomach

The horse is not a ruminant, like sheep and cows, meaning it has just one stomach. The stomach is also relatively small for the size of an equine, which is why they need to eat little and often, rather than ingest large meals in one go. Food will generally stay in a horse's stomach for just 2 hours, and although digestion begins here, the nutrition within the food is almost entirely absorbed by the intestines.

This does not mean that problems do not occur in the stomach. Ulcers are common

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and can be caused by stress, long periods without food or a concentrate, rather than fibre, based diet (research has shown that around 70% of racehorses have stomach ulcers). Some ulcers are mild and do not cause any ill effect, others may be more serious and lead to discomfort and pain for the horse.

Horses are unable to throw up food, or anything else, from their stomach. So overfeeding, or ingestion of poisonous substances can cause serious problems which many other animals, including humans, can remedy by vomiting.

## *Liver*

The liver is essential to the health of the whole body. It is a very resilient, hard working organ which filters out toxins as one of its many functions. Such is the durability of the liver that as much as two thirds of the organ can be destroyed before symptoms of disease become evident. Unfortunately, by this stage, the damage is often too extensive for the animal to survive.

It is widely acknowledged that the most common cause of liver disease in equines in the UK is ragwort poisoning. This is difficult to prove, however, as ragwort causes accumulative damage which can take place slowly, over many years. An equine may only have been exposed to ragwort for a short period of time or in small quantities, but shown no signs of ill-effect.

However, the liver will have been damaged and remain damaged for the rest of the equine's life. The liver can normally repair itself, but ragwort toxins block the regenerative process within the cells, causing them to die. The more damage sustained, the less reserve will be available to maintain healthy liver function should any further deterioration take place. Once the reserve has been used up, liver failure is inevitable. Extensive research is being carried out at Liverpool University to devise techniques to detect ragwort poisoning earlier so problems can be dealt with sooner.

The owner of any horse, pony or donkey should vigilantly keep their pasture ragwort free. Equines will not normally ingest ragwort voluntarily as it has a very unpleasant taste, but there are still risks (young plants do not taste as bitter and are easily picked up with grass, trampled ragwort dies and becomes palatable as it dries, horses in 'starvation' paddocks will eat ragwort rather than nothing). Ragwort in hay is a serious problem as the toxins survive the drying process but the off-putting, bitter taste of the plant does not. Organic hay should be treated with extreme caution for this reason.

## *Intestines*

In humans, most nutrients are absorbed from food while it is in the small intestine.

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*The intestine of an average horse is an amazing 27 metres long. This means that colic surgery is a major operation with a long recovery period needed.*

In horses, the small intestines are designed to absorb sugars and proteins whereas break down of fibre and absorption of fibre-based nutrients occurs later on, in the large intestine, mostly in a section called the caecum where the fibre-loving bacteria live.

Human bowels are kept in place by being connected to the body wall. Equine intestines, however, are much longer and hang loose within the body. This means there is much greater danger of an area of this vital organ becoming displaced or twisted. Twisted gut is one of the most severe forms of colic and

invariably requires major surgery to remove the damaged area.

Colic can also be caused by blockages more easily than in humans. Impactions may be triggered by a variety of factors including teeth problems, dehydration and sudden change of diet. Donkeys are particularly prone to impaction colic

Colic is a general term that describes pain in the abdomen. It can be caused by something as simple as a bit of trapped wind, or something serious like bowel displacement or intestinal tumours. It should always be treated as matter of urgency and vets always respond to colic as an emergency. There is an almost endless range of colic symptoms, but some of the more common signs include:

- Appearing dull and depressed.
- Lack of interest in food.
- Looking, pecking or kicking at the belly.
- Swishing the tail in agitation.
- Getting up and down repeatedly.
- Rolling in an agitated manner and not shaking afterwards.
- Sweating for no apparent reason.

A horse showing signs of colic may be experiencing pain in their kidneys, liver, spleen or urogenital tract, but the vast majority of colic cases are caused by problems in the intestines.

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The key to detecting colic early is to know your horse well and be alert to any slight changes in behaviour. This is even more vital for donkey owners as donkeys are not as demonstrative when it comes to showing signs of pain. Even minor symptoms may be all they exhibit when they are suffering from a very serious problem. A donkey with no appetite, for example, should be treated as seriously ill, whereas a horse owner can legitimately decide to monitor their animal for a few hours before calling the vet.



*Symptoms of colic may be very slight. The better an owner or carer knows their animal, the more likely they are to detect a problem early on.*

## Supplements

The range of dietary supplements available for horses is overwhelming and can easily give the impression that wide scale supplementing is essential to maintain a healthy horse. However, a balanced, nutritious diet should easily meet the vitamin

and mineral needs of most equines and many horse owners are not aware that too many supplements can cause problems rather than solve them. Copper, for example, can be fatally toxic in large quantities. Problems such as poor quality of hoof and/or coat, skin conditions and neurological disorders may be linked to vitamin or mineral imbalance. Providing a mineral lick or a good quality, balanced supplement may solve the problem, but it can be worth looking into the problem in more detail with veterinary support.

If there are any mineral or trace element anomalies, either deficiencies or excesses, in the local area where a horse is grazed, supplementing may be necessary in the particular substance.

## Preventing Problems.

The fundamental difference which all horse owners must recognise is that horses are not omnivores, like humans, and their systems are sensitive in a way that ours are not. An established dietary routine should be not be altered without careful consideration and any changes introduced very gradually. Even a new batch of hay, fresh pasture or change in water intake can cause diarrhoea or colic as the intestinal system and the fibre-digesting bacteria in the gut have to have time to adjust to even slight differences in what they are processing.

# Redwings Welfare Contacts

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## Golden Rules

- All equines should have a diet based on good quality forage.
- Little and often is the key to good digestive function.
- Water is an essential nutrient and should be constantly available.
- Good dental health is crucial to the whole digestive process.
- Always check the quality and quantity of dung as a sign of any internal problems.
- Look carefully at your horse's needs to decide which, if any, supplements are needed.

The following may be useful sources of further information:

### **British Equine Veterinary Association**

Wakefield House  
46 High Street  
Sawston  
Cambridge CB2 4BG  
01223 836970  
[www.beva.org.uk](http://www.beva.org.uk)

### **British Association of Equine Dental Technicians**

The Bungalow  
Bone Hill Road  
Mile Oak  
Tamworth  
Staffordshire B78 3PS  
01827 284718  
[www.equinedentistry.org.uk](http://www.equinedentistry.org.uk)

### **Redwings Horse Sanctuary**

Hapton  
Norwich  
NR15 1SP  
Horse Care and Welfare 01508 481008  
General Enquiries 01508 481000  
[www.redwings.co.uk](http://www.redwings.co.uk)

### **Spillers Horse Feeds**

29 Old Wolverton Road  
Old Wolverton  
Milton Keynes  
Buckinghamshire  
MK12 5PZ  
ENGLAND  
01908 222888  
[www.spillers-feeds.com](http://www.spillers-feeds.com)

### **National Equine Welfare Council**

[www.newc.co.uk](http://www.newc.co.uk)

# Redwings Welfare Information

Redwings' Welfare Team is proactive in the promotion of equine care and welfare, believing that access to accurate and up-to-date information is vital if owners and carers are to meet the needs of their animal.

Redwings' welfare leaflets are designed to provide an overview of many important issues which are encountered regularly in welfare cases with which the Sanctuary is involved. The series includes information on the following topics:

- **Laminitis**
- **Hoof Care and Farriery**
- **Worms and De-worming**
- **Food, Digestion and Energy**
- **Behaviour**
- **Veteran Horses and Retirement**
- **Horse Psychology**
- **Donkeys**
- **Equine Welfare and the Law**

To request copies of leaflets or to speak to one of the team about any equine welfare issues, please feel free to contact the department by post, phone or email.

## **The Welfare Team**

Redwings Horse Sanctuary

Hapton

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NR15 1SP

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