The Dick Vet Equine Practice

Easter Bush Veterinary Centre Roslin, Midlothian EH25 9RG

0131 445 4468

www.dickvetequine.com



Donkey Fact Sheet

There is a tendency to treat donkeys as if they are small horses, but donkeys are different! Read on to find out why...

Why Get a Donkey?

Donkeys are full of character (Fig. 1) and are fantastic fun to get to know and care for. Donkeys are versatile animals and can have many uses including for children to ride, for driving and showing, light draught work, a companion animal or simply as pets. An average donkey of approximately 11 hands high or 160 kg can carry up to 50kg (8 stone) on its back or can pull up to twice its bodyweight on level ground. Prior to getting a donkey, it is important to be aware that owning a donkey is a long-term commitment; the average age for donkeys in the UK is 27 but donkeys can live to over 40 years old!



Fig. 1: Donkeys are full of character and can be very entertaining!

Donkeys are not like horses; they differ physically, mentally and emotionally. Donkeys are more stoical in their behaviour and tend to startle less than horses. Compared to horses, donkeys show limited fear response to novel situations and this can be mistaken for stubbornness rather than fear. Teaching a donkey requires a different mind set to teaching a horse; they can not be rushed into doing something they don't want to do! Donkeys are very social animals and like company and develop very strong emotional attachments with other animals (Fig. 2). Because of this, it is not advised to keep donkeys as lone animals.



Fig. 2: Donkeys are social animals; they like company and form strong bonds with companions.

Feeding and General Management of Donkeys

Donkeys (*Equus asinus*) are natural browsers and will graze up to 16 hours a day on a diet of high fibre plant material. They are very efficient at metabolising their food and therefore their energy requirements are lower than a similar sized pony. This makes them easy to overfeed, which can lead to serious health problems such as hyperlipaemia, laminitis and other organ dysfunction. Ideally, donkeys should be fed 1.5% of their body weight in dry matter for maintenance. A donkey at grass will not require more than straw to supplement their grazing, even if they are in light work. As donkeys originate from regions where vegetation is dry and sparse, they have adapted to a high fibre diet and thus pastures in the UK are much more nutritious than the donkey needs and grazing may need to be restricted in the spring and summer. If they are not kept on pasture, a diet of 75% barley straw and 25% hay is adequate for most of the year. The proportions are reversed to 75% hay & 25% straw in the winter with a gradual change between seasons. It is also important to provide them with a mineral lick, free access to clean water, and a vitamin supplement in the winter.

When kept at pasture, donkeys should each have at least a half-acre of grazing area available (Fig. 3). A stable area of 3.3m^2 / donkey should ideally also be available year round. Donkeys' coats tend to be longer and coarser than those of the horse, and they do not produce as much natural grease as horses. Donkeys are therefore more susceptible to climatic conditions such as rain, wind and snow making rugs and/or shelter necessary in the winter.

Donkeys form very strong bonds with other donkeys and animals, and even short term separation from a companion can be stressful. When a friend dies, you may even need to leave them together for at least 30 minutes to help them "understand" the loss.

Routine annual worming programs are highly encouraged, and they should be kept up to date with vaccinations for influenza and tetanus as well.



Fig. 3: A minimum of half an acre per donkey is required for grazing.

Detection of Disease

The donkey and the horse are closely related, and many of the conditions that affect them are similar. However, detecting illness in the donkey can be made more difficult by its stoical nature. Dullness and 'depression' may be the only symptoms exhibited. These subtle behavioural changes may also be accompanied by anorexia. This means that a donkey may be in the advanced stages of a disease before it is noticed or a diagnosis is reached. Your vet will therefore take a call out to a dull donkey very seriously as it could potentially be a very sick animal, and it is important to get to know them so you can detect any subtle changes.

However, dullness does not always indicate disease in donkeys as they are naturally quiet animals, and other things such as separation from a friend can induce these signs as well.

Some Common Health Problems: Why Does My Donkey Look Dull?¹

- Non-specific (38%): No abnormalities on clinical exam or blood tests
- Colic (19%)
- Hyperlipaemia (15%)
- Hoof problems (5%): commonly laminitis and pedal sepsis
- Kidney disease, respiratory disease and pancreatitis (8%)
- Miscellaneous (10%): arthritis, dental problems, fractures, companion loss, etc

Colic in the Donkey

Colic refers to abdominal pain, a clinical sign with many causes. It is similar to the condition in horses but the distribution of common causes (above) and signs can be somewhat different. Various types of colic may present differently, and they are often assessed on the basis of history, pain, heart rate, respiratory rate, gut sounds and other clinical exam findings. Signs of dehydration are not always obvious as donkeys tend to cope better with dehydration than horses due to their adaptation to arid climates. The heart rate of a donkey with colic is often increased above their average normal of about 44 beats per minute. Their normal respiratory rate is 16-20 breaths per minute and this may also increase with colic, depending on the cause.

Common Causes and Treatment of Colic in Donkeys²

- Impactions (59%): mostly pelvic flexure, occasionally small colon
- Unexplained (13%)
- Other (12%): Colitis, peritonitis, stomach ulcers, ovarian disease, fractures, etc
- Spasmodic colic (6%), neoplasia (4%), diarrhoea (3%), pancreatitis (3%)

Treatment: Treating colic in donkeys is very similar to horses, and the goals are to eliminate pain, correct dehydration and restore gut motility and passage of faeces (manure). Painkillers, oral/IV fluids, periods of starvation and turning out may help.

Surgery: If a diagnosis is not made after a clinical exam, various factors are taken into consideration in deciding if a donkey needs surgery. Factors to consider include the duration of colic, distended intestines palpated on rectal examination (may not always be possible in smaller donkeys), abnormal peritoneal fluid, reduced gut sounds, a large quantity of gastric reflux, perceived severity and unrelenting pain.

Hyperlipaemia

Hyperlipaemia is a potentially life-threatening condition that is not uncommon in donkeys. It results from negative energy balance when fat reserves are mobilized and sent to the liver to be converted to glucose for energy. However, donkeys are not very good at turning this system off afterwards, and so blood fat levels continue to increase which can lead to liver and kidney degeneration and failure.

This condition can present subtly at first including behaviour changes such as dullness and decreased appetite. It is therefore important to pay close attention and alert a veterinarian early to any abnormal signs. It can be diagnosed visually in a blood sample as the blood will appear cloudy and have a blue sheen to it. Some risk factors are listed below³.

- *Obesity:* High fat content leads to higher fat reserves and insulin resistance. Make sure your donkey does not get fat and monitor their weight carefully
- Age and Sex: Older donkeys and mares are more at risk
- Late pregnancy/Early lactation: Additional energy needs increase their risk
- Cushing's Disease: Cortisol antagonizes insulin enabling more fat to mobilize
- Laminitis: Associated with insulin resistance
- Stress, Other Concurrent Disease & Surgery: Stress or any disease causing a negative energy balance increases risk, as does the starvation period encompassing surgery

Treatment: The basic treatment of hyperlipaemia involves treating any underlying conditions or stress, symptomatic treatments (including painkillers, multi-vitamins and antibiotics), fluid therapy and nutritional support to keep them in positive energy balance (± insulin, glucose and heparin). Even with dedicated care, the prognosis for donkeys with hyperlipaemia is also extremely guarded.

Foot Problems and Care in Donkeys

Donkeys' hooves are more upright, smaller, tougher and more elastic than those of horses (Fig. 4). Hoof problems are common in donkeys and proper care is essential to minimize their occurrence. It is good to be familiar with their feet and pick them up to clean them out regularly. Donkeys should be kept on clean, dry bedding, and well drained fields. Feet should be trimmed once every 8 weeks by a farrier who has some experience with donkeys.



Fig. 4: Donkeys' hooves are more upright than horses' hooves.

Donkeys evolved to live in arid desert conditions, so the wet UK weather can make them more prone to conditions such as foot abscesses, seedy toe (weak hoof walls) and thrush (infection of the frog and sole). These animals will require more frequent attention to their feet

Laminitis is a common problem and it is important to restrict their weight and limit access to lush grazing and frosty grasses. When changing feed levels make sure this is done gradually over a period of a week or more, and it is important to use high fibre and low sugar feeds.

Other Conditions and Useful Information

Respiratory Disease: Some of the main causes of respiratory disease in the donkey are viral and bacterial infections, parasites, allergies and anatomic problems. They are prone to many of the same problems as horses, the most serious of which being strangles caused by the bacteria *Streptococcus equi*. Viral and bacterial infections in donkeys manifest as a donkey that looks ill with respiratory signs, which may include coughing, nasal discharge and fever (average temperature in donkeys is 37.1°C, which is slightly lower than the horse).

Donkeys are asymptomatic carriers of the lungworm *Dictyocaulus arnfieldii*, which can cause respiratory disease/coughing in horses and ponies. It is therefore important to treat both donkeys and in contact horses with ivermectin or moxidectin when they are co-grazed. To prevent respiratory disease it is important to keep them in a clean well ventilated environment, vaccinate against flu, worm them regularly, and be familiar with signs of respiratory disease (coughing, increased respiratory noise/effort/rate, nasal discharge, appearing unwell).

Dental Disease: Dentition in donkeys is very similar to horses though the eruption times of teeth tend to be later. They also suffer similar problems, so regular rasping and dental exams are necessary. Dental signs tend to be noticed less in donkeys since many are not ridden and don't wear a bridle, but this is no reason to neglect this important area of health and comfort.

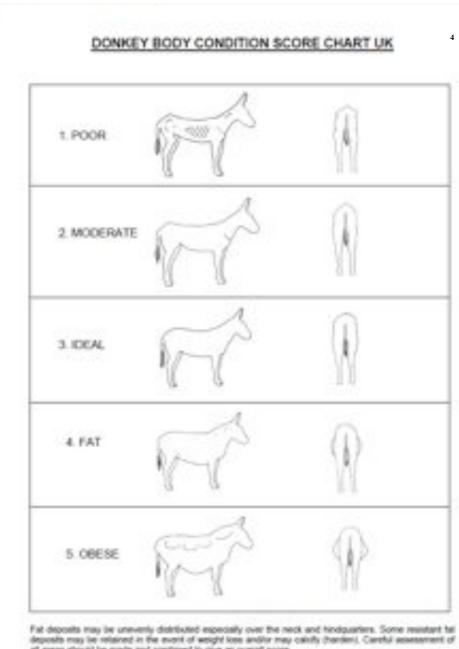
Parasites: The parasites that affect donkeys are also comparable to those in horses with a few exceptions. For example, there are 10 species of small stronglyes that are specific to donkeys. The roundworm *Parascaris equorum* is associated with horse foals and adults develop immunity, though this is not the case in donkeys and they continue to be susceptible. Worming regimes are very important and your vet can help you devise an effective one. Also see lungworm information in respiratory disease section.

Castration: The gelding of a male donkey (or jack) is generally undertaken using general anaesthesia. The standing procedure commonly done in horses is not usually used for donkeys due to their greater testicular blood supply. Closed castration under general anaesthetic is preferred. While this may be more costly, it is much safer with less risk of post operative complications.

Breeding with Horses: Since it is not unheard of for donkeys and horses to be bred together, it may be useful to mention a bit about genetics. While horses have 64 chromosomes, donkeys have only 62 and therefore cross breeds will have only 63 chromosomes, which is why they are infertile.

Terminology: A mule is the product of a horse mare bred to a jack, and a hinny is the offspring of a stallion crossed with a female donkey or jennet (commonly called jennies).

The Donkey Sanctuary provide a wealth of information on donkeys on their website: http://drupal.thedonkeysanctuary.org.uk/donkeycare



deposits may be relained in the event of weight loss and/or may calcify (harden). Careful assessment of all areas should be made and combined to give an overall score.

References

- Svendsen, Elisabeth D. (2008). The Professional Handbook of Donkeys (4th Edition). Yatesbury: Whittet Books.
- Svendsen, Elisabeth D. (1992). A Passion for Donkeys. London: Whittet Books.
- The Donkey Sanctuary Website http://drupal.thedonkeysanctuary.org.uk/
- Benirschke, K., Brownhill, L., Beath, M. Debra J. (1962). Somatic Chromosomes of the Horse, the Donkey and their Hybrids, The Mule and The Hinny. Journal of Reproduction and Fertility 4 319-326

Svendsen, Elisabeth D. (2008). The Professional Handbook of Donkeys (4th Edition). Yatesbury: Whittet Books. Page 29
Svendsen, Elisabeth D. (2008). The Professional Handbook of Donkeys (4th Edition). Yatesbury: Whittet Books. Page 38
Svendsen, Elisabeth D. (2008). The Professional Handbook of Donkeys (4th Edition). Yatesbury: Whittet Books. Page 52-53

⁴ http://drupal.thedonkeysanctuary.org.uk/files/donkeys/BodyConditionScoreChart.pdf