

## Donkeys

By Joe Anzuino BVM&S MRCVS (The Donkey Sanctuary)

The donkey is not a horse. It has a distinct and separate functional, social and economic role in many countries overseas. In terms of anatomy, physiology and pathology donkeys and horses are very similar, with some notable exceptions. However, the behaviour of these two species is quite different. To prepare yourself for working with donkeys overseas a good understanding of equine medicine and the socio economic environment of where you are working is vital. The successes of many interventions are dependant on a clear focus beyond just the medical manifestation of any problem, and solutions are found only after extensive engagement with all persons involved.

Donkeys are fairly tough creatures and are well adapted to the dry, sparsely vegetated environments in Africa where they evolved and where evolutionary pressures have favoured fitness and welfare. However, the further donkeys are removed from their normal environment and the greater the restrictions that are placed on them, the more they become dependent on human management to maintain welfare. As a consequence they can suffer greatly from ignorance, neglect or lack of resources. The greatest problems are often seen in urban and peri-urban areas, particularly where donkeys have recently been introduced to these environments. Lack of nutrition, foraging areas, intense work, lack of suitable harnessing and padding and lack of veterinary or farriery care can lead to severe health and welfare problems. These are often not easily addressed in any sustainable way. Approaches taken by charities working in this area include

- Training on management e.g. hoof trimming, nutrition, basic medical care and harnessing
- Supply of free medical care, harness systems or parts and other services
- Modification of carts, buildings or areas where donkeys work
- Development of associations, micro credit, advocacy and welfare legislation development
- Increasing social awareness in affluent classes and developing positive attitudes to donkey in school children and people working with donkeys.

### Medical Notes

Donkeys are susceptible to similar infections to the horse. However, there are inter-species differences. In many cases donkeys are less significantly affected by these infections though in some diseases, such as glanders and influenza, a more severe form can present in the donkey. A brief summary is shown in the appendix.

Colic is quite common in certain urban/peri-urban areas due to scavenging and inappropriate feeding. The ubiquitous presence of large strongyles, which are virtually extinct in the UK, along with lack of anthelmintic use may also play a factor. Surgical treatment is not usually a viable option in many countries. Surgical cases and hopeless cases of colic (once accurately identified) should be treated conservatively, particularly with pain relief, until the owner is prepared to consent to euthanasia or the donkey dies.

For medical cases of colic the use of oral fluids, in certain cases, can be a cheap and effective adjunct to other treatments. Foal size stomach tubes are often used for donkeys and it is worthwhile knowing how to pass a stomach tube in a donkey. This procedure can be slightly more difficult than in a horse.

### **Parasite control**

Parasite control has traditionally been the mainstay of many equine charities overseas. Ivermectin (cattle s/c products) at 0.2mg/kg given orally has been shown to be cheap and effective for a wide range of parasites. Anthelmintics are routinely given by charity organisation according to the environmental and management conditions. In bimodal rain fed areas donkeys may be dewormed at the end of the dry season and wet season. In other cases they may be dewormed as the opportunity arises, sometimes perhaps selecting only the thinner donkeys for deworming. However, in contrast to the confined pasture systems in the UK there is little empirical evidence demonstrating the effectiveness of deworming programmes in improving weight gain or reducing colic in donkeys. Free deworming schemes are popular with donkey owners and can often serve as a means to muster donkey owners in order to develop other programmes relating to health and welfare. The ethics and effectiveness of this compared to other approaches is currently being assessed.

Ref: Donkey: hero or villain of the parasite world? Past, present and future. Veterinary Parasitology 125 (2004) 43–58 (please email for copy)

### **Euthanasia**

In non – industrialised countries animals are often killed without stunning, usually by having their throats cut. In some areas, particularly where there is no tradition of eating donkey meat, old and infirm donkeys may be abandoned. In some abattoirs a hammer is used to ‘stun’ the donkey prior to slaughtering them for meat.

Magnesium sulphate is often used for field euthanasia by vets though this is far from ideal. An alternative, viable, more humane option may be an overdose of thiopentone. 5g of a rapidly injected concentrated solution can kill or at least anaesthetise a small donkey. Once the animal is unconscious it can then be killed painlessly by agents such as Magnesium sulphate or Potassium Chloride which would not be recommended for use on their own. Somulose, except for the human safety issues, is an ideal product but not likely to be readily available. Pentobarbitone is effective but carcass disposal can be a problem as it presents a particular risk to scavengers.

## **Harness problems**

Inappropriate harnessing systems, construction materials, prolonged work and over loading can cause wounds that are prevented from healing by continual trauma. In areas where traditional systems of harnessing still use local plants or hides and where donkeys are only occasionally used to carry loads, they suffer less than those in more commercial environments. In more commercial environments merchants and drivers often have few traditional husbandry skills. They sometimes only rent the donkeys and often fully exploit them.

Skin wounds will often heal provided inhibiting factors, such as infections, contamination and continual trauma, are addressed. The basic principles of washing the wound with saline and either not loading the donkey or loading it in such a way that the wound is protected, plus identifying and removing the cause of the wound can yield good results in many cases.

Fly worry and habronemiasis are frequently associated with wounds and need to be addressed with fly repellents and ivermectin. Sarcoid transformation is not infrequent and very challenging to treat successfully. There are many [cases where they are best left alone](#).

Approaches to the improving harness related problems include making owners aware of the cause of the problem, motivating change by emphasising the utility benefits of a healthier animal and providing viable alternatives. Viability depends on factors such as affordability, efficacy, durability and acceptability of design modification. Local harness makers are sometimes trained to make suitable systems but affordability often limits their sustainability. (see booklet : Harnessing and hitching donkeys, horses and mules for work by Anne Pearson available free from the DS)

## **Hoof problems**

Usually hoof wear is balanced with hoof growth. In situations where a donkey is not walking sufficiently, the ground is too soft or there is disease or a conformation defect in the hoof then over/ distorted growth may occur. Hoof abscesses are common. There are basic principles to trimming a donkey hoof which is very different in shape and structure to that of a horse. Learning to trim donkey hooves is an important and rewarding skill to learn. Basic tools required include a rasp, nippers, knife and sharpener. Donkeys, especially those walking long distances on roads, are sometimes shod by traditional farriers. These farriers can also undertake other treatments such as firing and bleeding which may be harmful.

## **Nutrition**

Donkeys have evolved to utilise sparse, fibrous vegetation and have a greater digestive efficiency than horses. Recent work commissioned by the Donkey Sanctuary has calculated Digestible Energy (DE) requirements of non working donkeys in the UK and Mexico; this is 90-145kj/DE/kg LW for the UK depending on season. Though it is possible to calculate a ration based on feed analysis and DE required, the use of condition scoring is one of the best and most convenient ways to monitor and assess energy deficiencies. Two

main systems are used; the 10 point system shown in the appendix and a simpler 5 point system used by the DS in the UK.

In extensive systems drought and seasonal variation can lead to large fluctuations in weight. In urban and peri-urban areas, by products are used to feed donkeys. These can vary from traditional maize stovers and bran to more imaginative alternatives, such as tea leaves in India or old tacos in Mexico. Cattle feed is sometimes given. However, there is the need to avoid such products containing urea. Also, in some areas these compound feeds can be of such poor quality that they amount to no more than expensive fibre.

(see Donkey Nutrition by A Pearson on Veterinary Care of Donkeys [www.ivis.org](http://www.ivis.org))

## Ageing

Ageing donkeys by dentition is similar to ageing horses. Donkeys can show the same extensive variability after 5 years. Ageing is a useful technique to learn as many owners have no idea what their donkeys age is if they have purchased them as adults. Eruption times are similar to horses though wear pattern is variable because of anatomical difference between individuals and species, as well as the different nutritional environments

- Donkey front corner teeth may not be in wear until 9-10 years old cf horse at 6 years
- Dental stars may appear at 8-12 years
- Usually no galvayne groove
- Seven year hook not a reliable indicator in donkeys
- Infundibulum may persist for some time in donkeys

## Appendix

[Click here](#) for diseases and how they affect donkeys, drug formulary and a description of body condition scores.

## Further Information - Internet

1. [International Veterinary Information System](#) ( IVIS)  
- Veterinary Care of Donkeys Matthews N.S. and Taylor T.S. (Eds.)
2. [ATNESA](#): Animal Traction Network for Eastern and Southern Africa
3. Equine Industry [Welfare Guidelines](#) Compendium for Horses, Ponies and Donkeys
4. [Condition Scoring](#) (.pdf)

## Further Information - Books

1. Harnessing and hitching donkeys, horses and mules for work.  
Pearson, R.A. et al University of Edinburgh, CTVM, ISBN 0-907146-14-7.
2. Saunders Equine Formulary – Knottenbelt
3. Equine Wound management (Saunders) -Knottenbelt
4. Manual of Equine Practice (Saunders) – Rose and Hodgson
5. Manual of Equine Field Surgery (Saunders) - Wilson et al .
6. Nutrition and Health of Donkeys in the Tropics. Special Issue Vol.37 Suppl.1. 2005.  
Tropical Animal Health and Production.

## Main UK welfare organisations working with donkeys overseas

- [The Donkey Sanctuary UK](#)
- [Brooke](#)
- [SPANNA](#)
- [ILPH](#)

Charities directed at improving human welfare by incorporating donkeys in some of their programmes include:

- [Practical Action](#)
- [Vetaid](#)

[The Donkey Sanctuary](#) is available to offer advice and support on all issues relating to the health and welfare of donkeys and mules. The vet department can be contacted for general veterinary advice on donkeys or 'seeing practice' at the Sanctuary in the UK ([vets@thedonkeysanctuary.com](mailto:vets@thedonkeysanctuary.com)).

Alternatively for queries relating to donkeys overseas contact the overseas department ([DSoverseas@thedonkeysanctuary.com](mailto:DSoverseas@thedonkeysanctuary.com)) or directly the Head of Veterinary Services (Overseas) – email below.

The latest edition of the Professional Handbook of the Donkey will be published soon. A copy is available free to any vet or vet student on request from the Sanctuary. The new edition contains chapters on; The dull or inappetent donkey; Colic; Hyperlipaemia; Dental problems; Parasites; Respiratory problems; Dermatological conditions; Wound management; The donkey's foot; Conditions of the eye; Pharmacology; The geriatric donkey; Infectious tropical diseases; Anaesthesia & sedation; Surgery; Nursing care; Paraveterinarians (community animal health workers); and Performing a post mortem.

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