Animal Health
Body Lesions

SEBWAT parameter

(Standardised Equine-Based Welfare Assessment Tool)

Head/ears
Neck
Breast/shoulders
Forelimbs
Knee
Withers/spine
Ribs/flank
Girth/belly
Hindquarters
Hindlimbs
Tail/tail base
Genital/rectal

Welfare significance

- The equid displays lesions (wounds) on the skin in the specified body area.
- Note: lesions in the corners of the mouth and around the eye area are covered in the *Lip lesions* and *Eyes* sections respectively. Lesions associated with the human practices of *firing* and *hobbling* are covered in those sections.

Welfare significance

- Lesions on any body part will cause pain and discomfort. Equids with severe or persistent lesions experience chronic pain, and will work less efficiently than healthy, pain-free animals. This may trigger negative interactions from owners, such as beating, in an attempt to make the animal work more. Over the long term, animals are at risk of becoming apathetic (see the *Apathy* section for more details).
- Any wound to the skin leaves the animal vulnerable to local or systemic infection. Lesions are at risk of bacterial infection, commonly by staphylococcus bacteria which causes an itchy (pruritis), crusty lesion which is usually extremely painful – a condition known as pyoderma. This is often associated with damp skin, poor grooming and contact with blankets, harnesses or cart equipment, particularly if the animal is sweating and the equipment is dirty[1].
- A compromised immune system caused be extended periods of stress and/or poor nutrition will reduce the animal's ability to fight infection.
- Lesions can attract blowflies and screw-worm flies which lay their eggs in the wound. Maggots hatch from the eggs and invade the animal's living tissue, causing irritation and pain as they move around and burrow into the tissue. The larvae of the screw-worm fly cause very serious lesions and untreated cases may be fatal[2].

Body lesions on the withers / spine.

Possible causation

Working equipment

- Poorly constructed, poorly fitting or poorly maintained harness, pack and cart equipment cause friction and pressure on the skin, which over time causes lesions.
- Poor hygiene, i.e. dirty, wet skin and dirty equipment increases friction and also the likelihood that lesions will become infected.
- Badly made or poorly maintained harnesses can also break during work and cause a serious accident/injury to both the animal, user and others.
- The following body areas are particularly prone to harness-related lesions: breast/shoulder, withers/spine, girth/belly, tail/tail base.

[1] Brooke (2013)
[2] Hayes (1992)

Beating and other human causes

- Work-related lesions may be caused by the handler or driver whipping or beating the animal. These lesions are commonly found on the hindquarters, gaskins (upper thigh), male genitals and flanks.
- Whipping causes pain and fear and is evidence of underlying problems such as poor handling technique, inadequate training (i.e. the animal not understanding what is being asked of it), or poor nutrition or lameness causing tiredness or lack of energy.
- Aggressive riding practices may also cause lesions on the flanks, due to the rider's heels or spurs.
- When the noseband material is hard, e.g. chains or spikes are used over the nose, this often results in lesions or deformity due to rough handling.

Whipping lesion on genitals.

Knee lesions indicating a fall.

Falls and accidents

- Lesions on the knees indicate the animal has suffered a fall. This could be due to uneven terrain, exhaustion, poor hoof shape, lameness, hobbling, or being made to work too quickly, amongst other causes.
- Falls may also cause lesions on the head or shoulders if they make contact with the ground.
- Collision with vehicles or obstacles in the working environment is a common cause of lesions on the limbs and trunk of the body.
- Lesions are commonly caused by hazards in the work or rest environment, such as nails, wire, broken glass, scrap metal etc.

Fungal infection

- *Dermatophytosis* (known as 'ringworm' although the condition is fungal, not parasitic) presents as scattered, circular, superficial skin lesions which will become crusty if left untreated.
- It is usually itchy and affected animals will often rub against fixed objects which then become a source of re-infection, and a cause of further abrasive lesions. Ringworm can also be transferred to humans and other animals by direct contact or via infected equipment[3].
- *Dermatophilosis* ('mud fever' or 'greasy heel') is commonly found on the caudal pasterns[4]. The condition is made worse by moisture and abrasion and is characterised by inflamed skin with tufted hair and crusted scabs. If the infection worsens, the skin can develop deep cracks or fissures (cracked heels) and the animal may become lame.

Other animals

- Injuries can occur from fighting with other equids, caused by kicks or bites, particularly between stallions, by females in heat, or animals that do not know each other.
- Equids can also be injured by biting dogs and hyenas, or by horned animals such as cattle or buffalo.

[3,4] Brooke (2013)

Means of resolution

Prevention

- Regular grooming and washing by the owner or handler helps keep the skin clean and free of sweat and debris, and also provides an opportunity to identify and address lesions at an early stage.
- Ensuring harness and equipment is well fitting and well maintained will reduce harness-related lesions.
- Working with owners and harness makers to encourage the use of padding to raise harness above the withers, and the replacement of chain and twine with softer materials are important to prevent recurrence of harness-related lesions[5].
- Regularly removing the harness (e.g. during rest breaks) allows air to reach the skin and for the skin to dry, reducing the risk of friction sores. This also has the benefit of allowing the animals more effective rest when not actively working.
- People demanding equids for use (e.g. tourists, taxi service users) should be educated that only animals that are healthy, comfortable and free from lesions should be used for riding or carriage excursions, therefore increasing the incentive for owners/users to reduce lesions.
- Maintaining healthy body condition reduces the risk of lesions, as there is less natural padding on the animal's body.
- Living and working areas should be regularly checked for such hazards and repairs implemented when required.
- Fighting can be reduced by ensuring all animals have equal access to resources such as food, water and shade. Lower ranking animals may need to be fed and watered separately from more dominant equids to prevent bullying and to ensure they receive a sufficient share of resources.

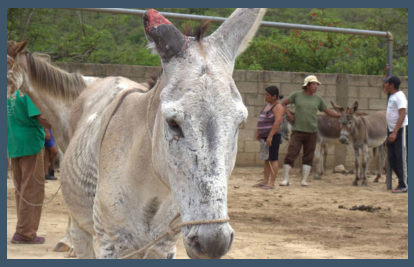
Treatment

- Hair around the lesion should be clipped (if possible without causing further damage) and cleaned with topical antiseptics. Large lesions may need to be bandaged or covered to protect from flies and further infection.
- Veterinary intervention should be sought for large or deep lesions which may require deep cleaning and suturing. Antibiotics or antifungal treatments may also be required depending on the cause and extent of the lesion.
- If equipment is the cause of the lesions, this must be changed or improved (e.g. with padding) to prevent recurrence.
- Animals with lesions due to infective agents, e.g. ringworm, should be isolated to avoid spread to others; equipment should not be shared.
- Rest period off work.

Refer to the Working Equid Veterinary Manual, Community Engagement work plans or strategies and the Handling Guidelines before conducting an intervention..

Animal unharnessed at rest.

Animal not unharnessed or unloaded to rest.



Ear injury from fighting with other donkeys.

References

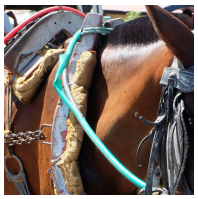
The Brooke (2013) *The Working Equid Veterinary Manual*; Whittet Books, Essex.

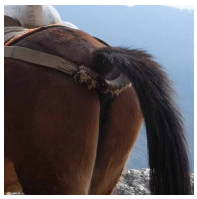
Hayes, M.H. (1992) *Veterinary Notes for Horse Owners*; Stanley Paul, London.

[5] Brooke (2013)

Root Causes of Lesions

The table below illustrates some common locations for lesions along with likely causes and suggested means of resolution:

Area affected	Causation	Means of resolution
Breast and shoulders 	■ Breast plate or neck collar too tight, so sits too high and puts pressure on the chest area/base of windpipe. ■ Breast plate or neck collar too loose, so sits too low moving around and causing friction the chest area. ■ Cart overloaded or two-wheeled cart loaded with the weight behind the axle, causing it to tilt backwards placing additional pressure on the breast plate or neck collar.	Ensure that the breast plate or neck collar is well fitted and the correct size for the animal. Thin animals or those with narrow chests will benefit from more padding. A narrow or thin breast plate spreads the force over a smaller area is worse because of increasing pressure. Two-wheel carts should always have the weight placed over the axle to ensure they are well balanced and easier for the animal to pull.
Withers 	■ Saddle, pack saddle or harness too large and so there is no clearance of the withers. ■ Saddle, pack saddle or harness too small, causing pinching of the withers. ■ Load too heavy, causing the saddle or pack saddle to press onto the animal's back. ■ Equids with a low body condition score will have more prominent withers that rub against the saddle or harness. ■ Muscle wastage in the back/shoulder area due to lameness or will make the withers more prominent. ■ Saddle or harness placed too far forward on the animal's back, causing contact with the withers.	Ensure that the saddle, pack saddle or harness is well fitting, of the correct size for the animal and is correctly fitted when saddling/harnessing. If the load is so heavy it causes a well-fitting saddle to press into the animal's back, the load should be reduced. Correct feeding for the animal's type and workload will help to maintain body condition, whilst recognising and treating lameness early will help avoid muscle wastage (see the *Body condition and Lameness* sections for more details).
Girth and belly 	■ Home-made girths such as rope, chain, twine, etc. cause friction. ■ Girth over-tightened in an attempt to make a poorly fitting saddle stay in place. ■ Sweating increases friction in the girth area. ■ Cart shafts too narrow causing friction against the animal's sides.	Ensure that girths are well made, well maintained and of the correct size for the animal. Girths should be made from smooth, flat leather or webbing and should lie flat against the animal's skin. The narrower the girth, the more pressure is placed on the animal's skin so a wider girth or one with more padding can reduce pressure and be more comfortable. Keeping harnesses clean and supple will reduce friction and make it more comfortable for the animal to wear. Daily grooming and washing of the animal will remove sweat and dirt that can cause the harness to rub. Ensure that the cart is the correct size for the animal.
Hind quarters 	■ The breeching strap runs around the hind quarters of the animal across the buttocks. A breeching strap that is too tight will cause pressure, whilst one that is too loose will cause friction and not function effectively. ■ Equids with a low body condition score will have thinner hind quarters with pointed buttocks, which rub against the harness. ■ Muscle wastage in the hind quarters due to lameness or will make the breeching strap too loose. ■ Other lesions in this area can be caused by the driver/handler whipping, beating or poking the animal.	Breeching straps are essential to prevent the cart running into the back of the animal causing injury, so should not be removed, but need to be well fitting and well maintained. Correct feeding for the animal's type and workload will help to maintain body condition, whilst recognising and treating lameness early will help avoid muscle wastage (see the *Body condition and Lameness* sections for more details). Improving the animal's condition will increase its energy and work ability, which may reduce prodding/whipping by owners/users, as can improving driving technique.

Area affected	Causation	Means of resolution
Tail and tail base 	■ The crupper has a loop which the tail passes through. Its purpose is to prevent the saddle or harness from slipping forwards along the animal's back. ■ A crupper with a loop that is too tight for the tail to fit through comfortably will rub. One study found that the most severe lesions were associated with more padded straps and that cotton straps caused worse lesions than synthetic ones[6]. ■ A crupper that is too short will pull on the base of the tail causing pressure and friction. ■ Home-made cruppers made from rope or twine will increase pressure and friction causing damage to the skin. ■ Faeces, urine, sweat and dirt can build up in the crupper area under the tail increasing friction and causing any lesion present to become infected. ■ The presence of ticks under the tail can increase the skin's sensitivity to friction from the crupper. Also, the crupper rubbing off attached ticks leaving the mouth parts behind can cause a lesion and/or infection to develop under the tail.	Cruppers should not be used as an alternative to a well-fitting saddle or harness. If used, they should be of the correct size for the animal and should be well made and maintained. Keeping harness clean and supple will reduce friction and make it more comfortable for the animal to wear. Daily grooming and washing of the animal will remove sweat and dirt that can cause the harness to rub. Regular inspection and removal of ticks will benefit the animal (see the *Ectoparasites: ticks* section for more details). The owner/handler should regularly check under the tail for signs of developing lesions.

[6] Burn et al (2008) quoted in Brooke (2013)