

SEBWAT parameter

(Standardised Equine-Based Welfare Assessment Tool)

Spinal contact

Gait

Withers/spine lesions

Welfare issue

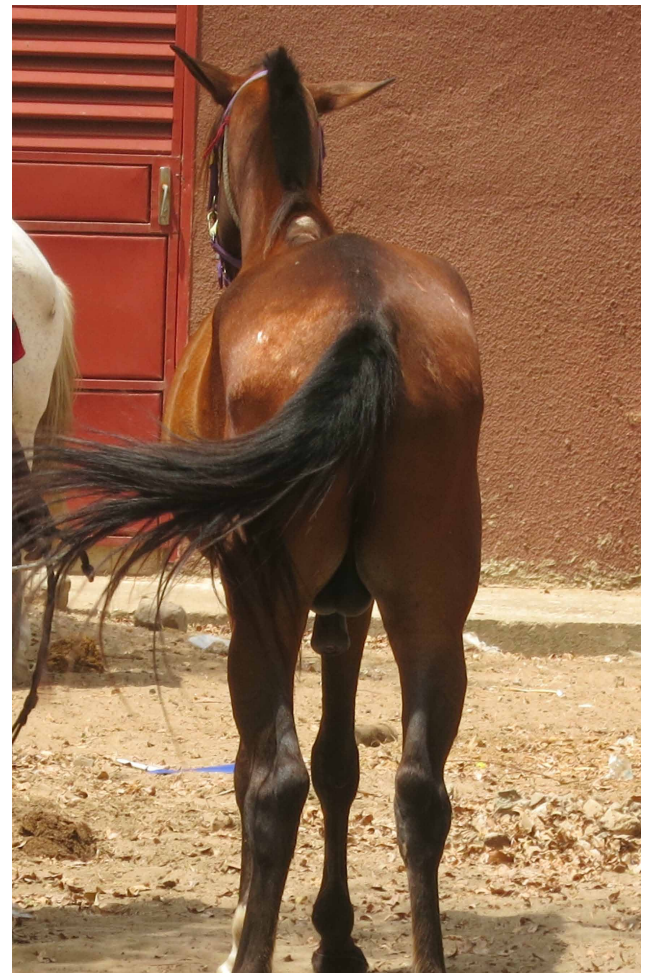
- The equid displays evidence of pain on gentle contact with the spine.
- This may be a mild reaction such as tensing of muscles of the back or neck, or flinching of part of the spine being touched; or a larger reaction such as bending the spine, moving away, lifting the head, kicking or biting. Restricted movement, and unwillingness to move the spine, can also indicate pain.
- If the pain is severe or chronic, the animal may display avoidance behaviour to prevent the spine being touched at all.

Welfare significance

- Equids have relatively inflexible spines compared to other species¹. This provides greater strength, enabling them to carry heavy loads and to be ridden, but when spinal problems occur the added pressure from carrying or pulling a load can worsen the effects.
- Spinal pain is a key welfare issue because it can be difficult to identify, so animals may be living with undiagnosed pain for long periods of time.
- Pain tolerances are affected by an individual animal's temperament, so gradual changes in temperament or behaviour may not be noticed by owners for a long time, or may be viewed as laziness or reluctance to work. This could result in beating or other punishment from owners in an attempt to make the animal work more, missing the cause.
- Aggressive behaviour in equids is very closely linked to pain², so aggressive animals should always be assessed for painful conditions before owners attempt 'corrective' actions or punishment.

Musculo-skeletal problems

- Spinal pain can have long-term consequences on the animal's musculo-skeletal system by causing uneven muscle development on one side of the body due to atrophy (wasting) of the damaged muscles, or overusing some muscles to spare and protect the painful areas.
- Signs of abnormal muscle development include asymmetrical hip or shoulder conformation and lameness.
- A Brooke study in Pakistan found that donkeys with more severe pain responses to manipulation of the spine showed worse muscular asymmetry of the shoulders³. It also found that spinal pain responses were more likely in donkeys with higher lameness scores.



Asymmetrical pelvis.

¹ Jeffcott (1998)

² Brooke (2013)

³ Reix et al (2014)

Chronic pain

- Chronic pain can lead to the development of other problems including a suppressed immune system, which reduces the ability to fight infection; disturbed rest or loss of appetite leading to loss of condition. It can also lead to the animal becoming increasingly withdrawn and depressed until an apathetic state is reached.

Signs of back pain

- Difficulty straddling to urinate/defecate.
- Avoidance, aggression or tensing in response to being touched or groomed over the back, loins or hind quarters.
- Avoidance, aggression or tensing in response to attempts to put on a blanket, saddle or harness.
- Avoidance of or reduced lying down or rolling.
- Reluctance to pick up the hind limbs.
- Rushing forward or pulling in an attempt to run away from the pain, or conversely moving slowly and uncomfortably, showing reluctance to move forwards.
- Difficulty moving backwards⁴.
- Lameness and changes to the animal's gait.

Possible causation

- Spinal pain can be a secondary result of pain elsewhere causing the animal to change its posture.
- Unnatural postural changes and gait adaptations can transfer physical stress to different parts of the body, e.g. hoof pain causing the animal to walk in an unnatural way, leading to back pain.



Abnormal posture.

Falls and accidents

- A common cause of spinal pain is accidental trauma injury e.g. due to a fall or traffic accident.
- Fractures of the thoracolumbar area (the area from the withers to the rump) are seen as a result of rearing up and falling over backwards. Sometimes this is done deliberately by owners to 'teach' the animal not to rear, which is a serious welfare concern.
- The lumbar spine (the tail-end of the spine) can also be fractured by the animal falling on its tail or by being hit from behind e.g. by a vehicle. Lumbar spine fractures have a grave prognosis.
- Fractures are slow to heal and the intensive treatment required may not be practical in the working equine context, so euthanasia may be necessary.

⁴ Jeffcott (1998)

Spinal pain due to work

- Back pain may be directly associated with overwork and overloading of badly designed carts and harness⁵.
- In equids used for riding, soft tissue damage is commonly caused by poorly fitting saddles. Visible evidence includes lesions and pressure sores, but there may also be invisible bruising and ligament damage.
- A study showed that 71% of working donkeys in Pakistan had a lesion or scar in the spinal area⁶. These injuries are painful in themselves but also implicate poorly fitting harness as a likely reason for back pain and stiffness.



Checking response to spinal contact.



Severe spinal lesion caused by a poorly fitting and overloaded pack.

Means of resolution

- Working with owners and harness makers could encourage the use of well made, well-fitting and well maintained harness⁷ and carts to protect the spine.
- Owners/handlers should be educated on recognising lameness and spinal pain, and encouraged to reduce over-work and over-loading wherever possible.
- Using warm compress and gentle massage or “strapping” the back muscles after exercise can reduce muscular back pain. Simple massage techniques can be taught to owners and do not require expensive equipment.
- Analgesics can be used to reduce pain to allow recuperation to take place but care must be taken that they do not simply mask the problem. They should be combined with efforts to identify and resolve the underlying problem, and provide rest with a gradual return to work whenever possible.
- Some animals may have weaker back conformation than others, so it should never be assumed that all animals can carry the same load.

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



Pack designed to provide spinal clearance.



Pack designed to provide spinal clearance.

^{5,6} Reix et al (2014)

⁷ Brooke (2013)

References

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

Broster, C. E., Burn, C. C., Barr, A. R. S., Whay, H. R. (2009) *The range and prevalence of pathological abnormalities associated with lameness in working horses from developing countries*. Equine Veterinary Journal 41: 474-481.

Horses and Horse Information (2011) *Equine Back Pain and Injuries: Horse Arthritis, Poor Saddle Fit and Riding Stress Could Cause Soreness*; www.horses-and-horse-information.com/articles/0396backp.shtml, accessed April 2016.

Jeffcott, L. (1998) *Equine Back Problems*; The Horse; www.thehorse.com/articles/10461/equine-back-problems, accessed April 2016.

Reix, C.E., Burn, C.C., Pritchard, J.C., Barr, A.R.S., Whay, H.R. (2014) *The range and prevalence of clinical signs and conformation associated with lameness in working draught donkeys in Pakistan*. Equine Veterinary Journal 46: 771-777.