Poor Human Practices Underage Working



SEBWAT parameter

(Standardised Equine-Based Welfare Assessment Tool)

Age Work type

Welfare issue

- The equid is too young and underdeveloped for the work being performed.
- The SEBWAT guidance notes provide details on how to estimate the age of equine animals.
- The age at which an equid is physically mature varies between species. Generally smaller horses and ponies reach physical maturity by age 3-4 years old, and larger draft breeds can take longer than this.
- Donkeys and mules are slower to develop than horses and therefore mature later.
- In SEBWAT, the first age category includes equids up to 3.5 years. All animals in this age group are considered too young for weight-bearing work, and some animals in the next age group (3.5 - 7 years) may also be too underdeveloped for the type of work being conducted, due to individual breed/species differences as described above.

Welfare significance

Severe pain and suffering

Underage working, and particularly weightbearing work, is likely to cause discomfort and lameness both in the short- and long term, in additional to psychological issues, and thus is a serious welfare concern.

Physitis

- Like all mammals, immature equids have spaces between the ends of their bones filled with cartilage (known as the metaphyseal growth plates). As the animal grows and matures, the bones lengthen and the cartilage matures into bone (ossification), which causes these spaces to 'close up' (in adult mammals this space has completely closed as bones fuse together).
- Physitis refers to the inflammation of these growth plates, and is characterised by localised heat, pain and swelling. There may also be lameness or stiffness.
- Physitis is sometimes referred to as 'growing pains', but when the inflammation is due to stress or trauma from overwork, the growth plate can suffer a crushing injury due to excessive weight bearing. This leads to chronic and incurable lameness.



Young mule.



Donkey adults and foal at a brick kiln.

Developmental Abnormality

- When immature bones are placed under stress this can affect their growth. If the growth plate has been damaged, uneven growth can occur; this means that one side of the bone grows faster than the other, resulting in an angular deformity¹.
- This deformity affects foot placement, which in turn affects the wear pattern of the hoof, i.e. a limb bent outwards will put additional stress on the inner wall of the hoof, and vice versa.
- If this abnormality is not identified and corrected before the bone finishes growing it will become permanent and can lead to chronic, incurable lameness.
- In other instances the limb can take on an 'hourglass' shape, when the growth plates at the ends of the long bones become enlarged or flared².
- Chronic lameness associated with joint pain can lead to asymmetry in the animal's skeleton or musculature (i.e. differences in one side of the body compared to the other); for example, uneven muscle development on one side of the body, or one hip joint higher than the other when viewed caudally (from behind).
- These musculo-skeletal abnormalities become increasingly difficult to correct as the animal gets older, so exposing young equids to these stresses is highly likely to lead to a lifetime of lameness, pain and compromised welfare.



Leg deformity, traditional treatment was applied to the skin in attempt to heal lameness.

Cartilage and Joint Damage

- As well as damage to the ends of the bones, underage working can also damage the cartilage in between the two growth plates.
- The cartilage can harden due to the inflammation (*sclerosis*).
- There could also be varied irregularities within the growth plate, such as *lysis* (rupture) or even premature closure (bone bridging across the cartilage plate)³.
- If not detected and addressed early, extensive areas of damaged cartilage can develop, which will trigger arthritis (degeneration of the smooth surface areas within joint capsules) and the prognosis for soundness in adult life is poor⁴.
- Osteochondrosis is a condition affecting horses (it has not been reported in donkeys⁵) in which the cartilage within the growth plates is damaged. The cartilage fails to ossify (turn to bone), resulting in cartilage defects, such as a separation of the cartilage from the underlying bone, cracking and weak spots.
- Fragments of cartilage can even break off within the joint (osteochondritis dissecans) as a result of excessive force on weak bones or cartilage. Osteochondritis dissecans can occur in most joints, but occurs most frequently in the hock, stifle and fetlock joints⁶.
- Where osteochondrosis develops in the spine it can lead to instability, leading to a neurological condition known as 'wobbler syndrome'⁷.

Psychological Effects

- In addition to the negative physical effects of working equids too young, it can also have harmful psychological effects on the young animal.
- If young animals are subjected to discomfort due to any of the factors above, this can establish a negative association for the animal between work and pain, which can be very difficult to erase.
- This also increases the risk of negative interactions (such as shouting or whipping) from the handler in the mistaken belief that the animal is being 'naughty' or 'lazy', when in reality they are in pain or unable to move properly.

^{12.3} Cable (2005)
^{4.5.7} Brooke (2013)
⁶ American College of Veterinary Surgeons (2016)

- Equids have excellent memories for unpleasant situations, so introducing a young equid to such situations risks creating handling and behaviour problems at an early stage in life, which can increase the animal's welfare risks later. (See the *Fear and Aggression* summary for further information on welfare risks associated with these behaviours.)
- In addition, working very young equids means they have less opportunity and energy for socialising and play, which are very important developmental activities. Equids not given the opportunity to socialise normally don't learn to communicate with other equids and therefore are more likely to display fear or aggression behaviours towards conspecifics. These can lead to bullying, fights, injuries and negative intervention from owners.

Exhaustion

- Young animals do not have the strength, stamina or concentration levels of mature animals and so will tire more quickly.
- Exhaustion increases the risk of stumbling, falls and interference injuries, particularly if the animal already has a conformational tendency towards these forms of interference. (See the Interference section for more information.)
- It may also mean that the animals are too tired to eat or drink sufficiently after work, leading to weight loss, dehydration, or even colic.
- Owners may mistake tiredness for unwillingness to work, particularly if comparing the output of the young equid to a mature animal.

Possible causation

- Owners may feel under pressure to put their young animals to work as early as possible so that they can start earning money (and particularly to earn enough money to cover the costs associated with keeping the animal).
- Owners may not understand about equine skeletal development, or that an equid does not progress directly from foal to mature equid.

Means of resolution

- Education of owners about the importance of not working equine animals too early should emphasise that short-term gains from working a young animal are hugely outweighed by the shortening of the animal's useful working life, increased days off work due to lameness and reduced productivity. In addition to the (potentially chronic) pain and suffering of the animal. Owners should be encouraged to appreciate that there is a juvenile stage, when the animal may look like an adult, but does not yet have an adult's physical strength or stamina.
- Owners should be educated about welfare friendly 'starting' and training methods for young animals, and the importance of building strength and stamina slowly over time (conditioning)⁸.
- Minor angular deformities can be slowly corrected by corrective farriery to balance the hoof and allow the bone to straighten; this requires a highly skilled farrier and cooperation of the owner. More severe deformities are likely to require surgical intervention, (such as the use of screw plates), which is not realistic in the working equine context.
- Osteochonditis dissecans treatment depends on the location and severity of the problem, but often involves surgery to remove fragments. If the osteochondritis lesion is not removed, the prognosis for future soundness (proper gait) will be reduced⁹.
- Providing regular rest breaks and opportunities to play and socialise with conspecifics will greatly benefit young equids being introduced to work.

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

⁸ Lesse-Lasserre (2012)

⁹ American College of Veterinary Surgeons (2016)

References

American College of Veterinary Surgeons (2016) *Osteochondritis Dissecans in Horses*; https://www.acvs.org/large-animal/ osteochondritis-dissecans-horses, accessed April 2016.

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

Cable, C.S. (2005) Growing Pains: Physitis; The Horse; http://www.thehorse.com/articles/14767/ growing-pains-physitis, accessed April 2016.

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

Larson, E. (2012) Understanding Equine Osteochondrosis; The Horse; http://www. thehorse.com/articles/28971/understandingequine-osteochondrosis, accessed April 2016.

Leste-Lasserre, C. (2015) *Understanding Herd Dynamics*; The Horse; http://www.thehorse. com/articles/35555/understanding-herd-dynamics, accessed April 2016.

Leste-Lasserre, C. (2012) *Conditioning Young Horses*; The Horse; http://www.thehorse.com/ articles/29430/conditioning-young-horses, accessed April 2016. Sellnow, L. (1999) *Bone Formation With Exercise*; The Horse; http://www.thehorse.com/ articles/10315/bone-formation-with-exercise, accessed April 2016.

Smith Thomas, H. (2007) *Health Problems* of Young Horses in Training; The Horse; http://www.thehorse.com/articles/19347/ health-problems-of-young-horses-in-training, accessed April 2016.