

Poor Human Practices

Firing

SEBWAT parameter

(Standardised Equine-Based Welfare Assessment Tool)

Firing: severity

Firing: size

Welfare issue

- The animal displays evidence of the practice of firing on its body.
- Firing (also known as thermocautery) is the practice of burning or branding the skin with red hot irons or wires.
- Firing marks can be seen as lines, dots or patterns. They are commonly found on the limbs, but can be located anywhere on the body including on the face/head, neck, shoulders and/or hind-quarters.
- Firing of the palate (roof of the mouth) is carried out in some countries to treat “lampas” (swelling of the hard palate)¹.

Examples of different forms of firing marks.



Animal displaying an apathetic posture and firing marks.

¹ Brooke (2013)

Welfare significance

Pain and fear

- Firing is an extremely painful and traumatic procedure and will cause a great deal of distress to the animal.
- Fear responses and escape attempts during and after the procedure can make the animal's behaviour unpredictable, which is potentially dangerous for handlers, bystanders and the animal itself.
- The process has been found to cause pain and stress for at least 24 hours after the procedure².
- When animals are subjected to repeated firing, the trauma can lead to a state of depression, lethargy and even learned helplessness. (See the [Fear and Aggression](#) and [Apathy](#) summaries for further information on behavioural responses.)
- When firing was carried out historically by veterinary surgeons, the area to be fired would be anaesthetised. The animal would then be supported with analgesics (painkillers) until the wounds had healed, and completely rested (often for over a year for tendon firing).
- Even under these conditions the practice is now widely recognised as being an ineffective treatment causing unnecessary suffering^{3/4}, and detrimental to the health of the animal⁵. In many countries, the practice is considered as unethical and cruel⁶.
- When local healers or owners conduct firing without the use of anaesthetics and analgesics, the pain and suffering endured by the animal will be extreme, particularly as working equids are unlikely to be rested for a significant period of time after the procedure.



Close up of an injury where proud flesh has been generated.

Poor healing/skin damage

- Firing causes a thinning of the skin and produces an acute inflammatory response in the sub-dermis (the deepest layer of the skin)⁷.
- Where the skin over a joint has been fired (commonly the knee, fetlock or hock joint) the repeated flexion of the joint as the animal moves will pull the wounds open. This prevents the wound from generating new epithelial (skin) cells which will ultimately prevent the skin from healing correctly. The result will be extensive scarring and potentially the formation of “proud flesh” i.e. granulated tissue. Proud flesh can prevent the formation of epithelial cells and are rich in blood vessels which can lead to excessive bleeding if damaged. If severe, proud flesh can protrude beyond the area of the wound and can inhibit joint action⁸.
- A study into the effects of firing on limb tendons found that skin subjected to firing became thinner and weaker⁹, making it more susceptible to future damage.
- It was also found that scar tissue formed “cores” of permanent weakness within the tendon¹⁰ making future injuries much more likely. Some horses also developed areas of necrotic (dead) tissue on the firing site¹¹.



Firing marks on a joint displaying poor healing.

^{2,6} Hayward and Adams (2001)

³ Hayes (2007)

⁴ Schultz (2004)

⁵ BEVA (2010)

⁷ McCullagh, Goodship and Silver quoted in Hayward and Adams (2001)

⁸ Cable (2000)

^{9,10} Silver and Rosedale (1983) quoted in Hayward and Adams (2001)

¹¹ Larsen LH (1960) quoted in Hayward and Adams (2001)

Infection

- Any wound to the skin leaves the animal vulnerable to local or systemic infection.
- A compromised immune system caused by extended periods of stress and/or poor nutrition will reduce the animal's ability to fight infection.
- Large or deep areas of firing, and those over joints, will heal slowly which increases the potential for infection to set in.
- If an infection is able to penetrate into the tendon fibres or the bone (due to deep pin firing) then the prognosis for recovery is likely to be poor.

Difficulty eating and drinking

- When firing inside the mouth has occurred, the pain and swelling of the palate, tongue and lips can inhibit the animal from eating and drinking. This can potentially lead to dehydration, colic and loss of body condition, in addition to extreme pain.
- Severe pain coupled with delayed healing is likely to occur if animals are worked with a bit in the mouth before oral wounds have completely healed. In some cases, even after wound healing, there may be continued discomfort.

Possible causation

- Attempt to prevent or treat injuries. There may be a belief that the "counter irritation" of the skin or other tissues is an effective remedy for lameness and disease (which evidence has shown is not correct).
- Decoration of the animal. In some cultures, firing is used to create patterns on the skin or the equids or other animals (sometimes humans).
- Identification purposes. Equids may be branded in order to signify ownership or differentiate from others.
- Lack of access to veterinary facilities and treatments. Where veterinary services are scarce, under-resourced or unaffordable, owners are more likely to use local healers or traditional remedial practices.
- Traditional beliefs and practices. There may be peer pressure from other owners or those who conduct firing to continue the traditional firing practices despite no scientific evidence for its efficacy.
- Lack of basic health care knowledge. Owners may not understand the basic physiology of the animal and therefore why firing is an inappropriate response to, or prevention for, injury or disease.

Means of resolution

- Challenge the traditional belief in firing through the use of evidence-based discussion with owners and local healers.
- Promote injury and disease prevention through good nutrition, well-fitting harness, adequate rest and safe handling techniques. This will reduce the need for firing as both a preventative and remedial measure.
- Alternative, non-invasive, means of decoration such as braids, ribbons or non-toxic pigments, should be promoted.
- Alternative, non-invasive, means of identification, such as hair dyes or coloured ties around the animals' necks should be promoted.

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



Animals with other means of identification such as dyes (top) and coloured ties (bottom).

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