

# A Bit of a Problem in Equine Welfare: What is the Role of Veterinarians?

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*Dr Robert Cook, Professor Emeritus in Equine Surgery at Tufts University, Massachusetts, has intimate knowledge and experience of the equine head, neck and respiratory tract after a long and distinguished veterinary career as an equine ENT surgeon and researcher. His impressive list of peer-reviewed publications covers many upper and lower airway topics such as exercise induced pulmonary haemorrhage, recurrent laryngeal neuropathy, guttural pouch mycosis, progressive ethmoid haematoma, epiglottal entrapment, dorsal displacement of the soft palate, chronic bronchitis, epistaxis, headshaking, and a range of aspects of ENT radiology and endoscopy.*

*Through this work he became increasingly aware of the multitude of health and welfare issues caused by the use of metal bits and has been publishing on this for the last 24 years. This substantial body of research, however, has been largely overlooked by mainstream equestrian industries, and indeed by the veterinary profession. Now at 92 years of age, Dr Cook is still writing articles on this topic, and advocating for change in the equine industry.*

The metal bit was introduced to equestrianism in the iron age (1200-1100BC); yet, in the 21<sup>st</sup> century equipped as we are with vastly superior knowledge and years of scientific evidence of the array of welfare issues caused by bit pain and interference with the upper airway, metal bits are still widely used in the equine industry. In Dr Robert Cook's most recent article in *Horses and People*, he says it's time to draw the iron age to a close (see box 1).

Dr Cook's article lays out the fascinating chronology of the use of bits from the iron age until today, the changes in animal welfare legislation and the formation of various equine welfare-orientated organisations, the scientific scrutiny of bit use and associated publications, and significant events in advocacy for the use of bit-free bridles.

The article is timely, as the FEI Equine Ethics & Wellbeing Commission has recently been completed. The social license of equestrian sport is increasingly under scrutiny, and Dr Cook highlights that the use of bits is one of the things that needs to change if equestrian sport is to maintain its social license to operate. In fact, as he points out, there is substantial enough evidence now that the use of bits directly contravenes with FEI's own 'Code of Conduct for the Welfare of the Horse'.

## Sustaining the social licence of equestrian sport (Cook 2023)

Abstract: The horse is a nose-breathing animal that, at liberty, runs with a closed mouth and sealed lips. The bit is an Iron Age tool that breaks the lip seal, suffocates, and hurts a horse. In horseracing, the bit is a probable cause of premature fatigue, falls, catastrophic accidents, and sudden death. Pain alone is evidence enough and reason for change. Equestrian sport administrators are urged to conduct bit-free trials and adjust their rules to comply with the physiology of the horse, i.e., to permit bit-free competition. A step that would get the process under way would be for administrators to discover for themselves the benefits of riding bit-free.



Box 1. Sustaining the social licence of equestrian sport (Cook 2023)

## What are the welfare issues?

Dr Cook summarises the welfare issues (and the scientific evidence behind them) associated with the use of metal bits. This includes bit-induced oral pain and the array of secondary behavioural and training problems that result, facial neuralgia, dental and interdental space pathology, breathlessness and hypoxia secondary to upper airway obstruction with secondary disorders such as exercise-induced pulmonary haemorrhage, and possibly increased risk of falls, and injuries. Bit-induced pain and airway interference is indisputable, with compelling scientific evidence (Cook 1988, 1999, 2003, 2011, 2019a,b,c, 2020, 2021a,b, Cook and Strasser 2003, Mellor and Beausoleil 2017, Cook and Mills 2009, Cook and Kibler 2018, Mellor 2019a, 2019b, 2020a, Tuomola 2022).

The facial signs of pain in the horse have been well documented over the last decade (Della Costa *et al.* 2014, Glerup *et al.* 2015) and on close scrutiny, many features of the 'facial grimace' can be readily identified in horses being ridden with a bit.

Dr Cook has also presented evidence of bit pain being a potential cause of sudden deaths by triggering the trigemino-cardiac reflex (Chowdhury and Schaller 2015, Cook 2022). Bit interference with the upper airway may also cause several common respiratory disorders that are currently classified to be of unknown aetiologies. This includes dorsal displacement of the soft palate, epiglottal entrapment, dynamic collapse of the larynx and trachea, scabbard trachea deformity, exercise induced hypoxaemia and subsequent recurrent laryngeal neuropathy, and negative pressure pulmonary oedema.

He further describes how bit usage quickly teaches a young horse an abundance of unwanted, bit-avoidance behaviours, for example gaping mouth, headshaking, tongue-retraction, tongue-over-bit, and choking-up (Cook 2012b, Mellor 2020a).

### What additional benefits arise from riding 'bit-free'?

A dramatic reduction in these conflict behaviours has been documented when horses are ridden bit-free (Cook and Kibler 2018). This finding has been replicated in a recent study where bit-free horses had fewer ridden hyperreactive behaviours (bucking, spooking, rearing and bolting) and better relative welfare scores for management, and during riding and handling compared to the horses ridden with a bit (Luke *et al.* 2023). As such, bit-free riding is likely to result in fewer rider injuries from falls resulting from these hyperreactive behaviours. Riding bit-free has also been associated with riders taking greater pleasure in riding and a feeling a better sense of harmony with their horse (Cook and Kibler 2022). As Dr Cook says 'once riders give bit-free a trial they will often vow to never again put a bit in a horse's mouth. The strongest resistance to the idea of riding bit-free comes from those who have never given it a trial.' This certainly fits with my personal experiences when I was introduced to bit-free riding by trainer Carlos Tabernaberry. I have never ridden with a bit since and certainly feel that my horses are much more relaxed during riding and that I have an enhanced relationship with them as a result.

### Why is the veterinary profession not more aware of these issues?

Of course it makes complete sense that the bit would cause pain, airway obstruction and related issues, when we take a minute to think logically about it. However, bit use has become so accepted that it is easy to be blind to these issues, until they are pointed out.

Dr Cook describes how for thousands of years, use of

metal bits has been 'standard practice'. As a result, many of the behavioural signs of bit-induced pain in the horse are so common that they are regarded as being normal for the horse and are overlooked. This common fallacy has been well named 'bit-blindness' (Mellor 2020a, b). Dr Cook goes on to admit that he had been a 'blind-to-the-bit' veterinarian and rider for 45 years before recognising the bit as a foreign body in a horse's mouth (Cook 1999, 2000). Similarly, I myself, despite the wealth of information already available by this time, was also a 'bit-blind' veterinarian and rider for 13 years before I became aware of bit related issues (Figure 1).

The majority of veterinarians graduating today are also just as 'bit blind' as Dr Cook was when he graduated as a veterinarian nearly 7 decades ago, despite the enormous advances in animal welfare science and equine medicine, and the greater understanding of, and recognition of, pain, alongside the growing body of evidence specifically around bit-induced welfare problems. Why is this? Why is something so important that impacts so many horses on a daily basis totally overlooked in veterinary education and by so many equine veterinarians?



Figure 1. Riding my horse, Connie, cross-country in 2010, having been a bit-blind veterinarian for 10 years.

### What are the wider consequences of 'bit blindness'?

The consequences of bit blindness in veterinarians also has worrying wider implications on our ability to recognise some forms of pain in horses, in addition to missing potential underlying causes of behavioural problems, airway problems, poor performance and sudden death.

Whilst the profession has developed exceptional advances in recognising some forms of pain, such as foot and limb pain, recognition of oral pain has appeared to lag behind. Indeed, advances in equine dentistry and addressing dental causes of oral pain, have occurred much more recently than advances in equine

orthopaedics, and recognition of dental pain is still very much an emerging area.

Some of the wider issues associated with lack of recognition of bit-induced pain, airway obstruction and poor performance are readily identifiable in the literature. For example, just this year a paper on medical causes of racehorse poor performance unassociated with lameness (Lo Feudo *et al.* 2023) identified equine asthma, exercise-induced pulmonary haemorrhage, dynamic upper airway obstructions, cardiac arrhythmias, and exertional myopathies to be common causes of poor performance, with no mention at all about the potential role of bits in the aetiology of these conditions. Furthermore, as is usually the case, evaluating response to removal of the bit was not part of the poor performance diagnostic protocol. Another study evaluated whether subtle lameness in racehorses was associated with changes in facial expressions (Anderson *et al.* 2023), concluding that there were inconsistent associations between lameness status and facial grimace scores. However, all horses were evaluated with bits in their mouths, and therefore likely had altered facial expressions due to bit pain, which was not considered or discussed in this study.

### What should we do as veterinary professionals?

In a recent review of mouth pain in horses, Professor Emeritus in Animal Welfare Science, David Mellor concluded:

“ So, how might we proceed? We cannot simply ignore the bit problem, which has now been identified so clearly. Inaction when a problem is not apparent is understandable. Inaction once a significant problem has been recognized is unacceptable. Recognition of such a problem brings with it an ethical responsibility to act (Mellor 2020a) .

As a profession, we clearly have a moral obligation to not only recognise this issue and pay attention to the overwhelming evidence for the realm of health and welfare problems caused by the use of bits, but also to act in a way to achieve positive change.

This issue is not only relevant to equine veterinarians, but also to: any veterinarians that ride horses or have children that ride horses; those that spectate in any equestrian sports; and any involved in welfare advocacy. In his review on bit pain, David Mellor lays out some recommendations for a way forward (Mellor 2020a) and; in my own opinion, as a profession we have an obligation to promptly implement the following:



Figure 2. Riding my horse, Nyx, in 2023, in a 'side-pull' bitless bridle. After being a bit-blind veterinarian for 13 years, I became aware of the issues associated with metal bits and changed to bit-free riding.

- Familiarise ourselves with the literature in this area
- All veterinarian horse riders should try bit-free riding to experience the benefits firsthand and lead by example by choosing to ride in a pain-free, bit-free bridle (Figures 2 and 3)
- Address this topic in veterinary undergraduate teaching and equine veterinarian CPD
- Participate in the education of clients and other equine professionals
- Consideration in diagnostic 'work-ups' by removing the bit in all investigations of airway problems, poor performance, lameness and behavioural/training issues
- Advocating for allowance of 'bit-free' riding in competitions and riding clubs
- Alteration of standard autopsy protocols (Cook 2022) to gain a better understanding of causes of sudden death, particularly applicable to racehorses
- Updating of position statements by professional bodies and organisations to reflect current knowledge



Figure 3. The 'Robert Cook cross-under' bitless bridle, modelled by my horse Nyx. Pain-free, bit-free bridles should be used in combination with good training techniques and only light pressure from the rider's hands.

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