Cruelty is defined as the infliction of avoidable pain. Now that a painless, safer and more humane alternative to the bit has become available, the mandatory use of the bit in competitive sport requires re-evaluation. Since use of the bit is now avoidable, such a rein-aid has to be reclassified from a welfare point of view.

A metal bit in the sensitive mouth of a horse frequently causes intense and sudden pain of short duration (acute pain). This is the stabbing pain of the sort that we experience if we bang both our shins. The two bars of a horse's mouth are knife-edges of bone that are much more sensitive than our shins. If a rider hits these with a rod of metal, perhaps as a result of loosing her balance and momentarily throwing the whole of her weight on the reins, she is - albeit unintentionally - hitting her horse in the head. This is something expressly disallowed by equestrian organization's guidelines on welfare and ethics.

Curiously, the same organizations are fully aware that the golden rule of saddle fitting is to prevent the rider's weight pressing the saddle directly on to bone. Yet this principle is never applied to the action of the bit. Paradoxically, metal on bone is condoned by all their rules. A horse that has spooked and unseated its rider will often bolt? The reason is that the horse received an almighty jolt in the mouth. A horse will run when hurt. The next time that harmless piece of paper blows across his path he will remember how much it hurt and the spook will escalate.

The practice of deliberately 'soring' the shins of Tennessee Walking Horses, so that they pick up their feet in the show ring, has been condemned and outlawed for years. It is rightly considered an outrageous practice. Paradoxically, 'bitting' a horse, a far more painful and widespread practice that affects every breed, every day, in a far more sensitive anatomical region, has been accepted for 5000 years. It is so enshrined as a standard practice, that when a painless and safer method of communication is developed, administrators of horse sports like the national federations and the FEI evince no enthusiasm for amending the rules to permit a more humane rein-aid. The same administrators turn a blind eye to the cruel practice of crank and flash nosebands, even though these expressly contravene their own code of conduct.

Think too of the sharp pain we experience when we accidentally bite our tongue. The horse's tongue is also a sense organ, yet it is frequently injured by the bit. Finally, think how the misery of a lip sore or a gum boil can spoil our day. Consider how often the bit chafes a horse's lips or bruises the gums.

But bit-induced pain is often long lasting (chronic) as well as acute. My review of horse skulls in natural history museums around the USA tells me that bit-induced bone spurs on the bars of the mouth are present in over 75% of the collections (Fig 1). This must be more painful for a horse than having active 'splints'

formation on both front legs, as the bars of the mouth are more sensitive and never get a chance to heal. No wonder horses get "down in the mouth."

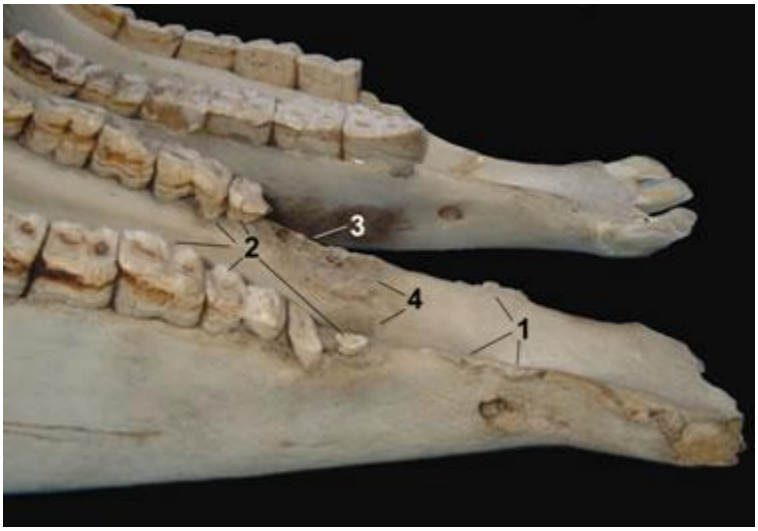

Fig.1. A bit damaged jawbone in the foreground compared with a healthy jawbone in the background.
Key: 1 = bone spurs on the bars; 2 = eroded first to third cheek teeth; 3 = empty socket where the first cheek tooth and half the second cheek tooth has been lost; 4 = osteitis from bone infection

The sensory nerve that reports this pain to the brain is the same nerve that reports tooth pain. Think what effect a chronic toothache has on our day and how it would effect our willingness to run.

But actual dental pain must also be something that a bitted horse frequently endures. Until a horse is five years old, his teeth are in a turmoil of eruption and his mouth must be sensitive on this score alone. In addition, the bit bears down on the horizontally disposed root of the canine tooth in the male horse (Fig. 2) and on any wolf teeth in the lower jaw, both erupted and unerupted.

Fig. 2. Showing how the root of the canine tooth (tush) in the male horse lies just below the bars

The museum surveys have also revealed that, as a result of horses defending themselves from the bit by grabbing it between their teeth, the bit commonly causes erosion of both the first cheek teeth in the lower jaw (Fig 3). In some cases, the erosion is so severe that the tooth is rubbed down to its roots, at which point it fractures and is completely shed (as in Fig 1).

Fig. 3. Bit erosion of the grinding surface and front edge of the first cheek tooth in the lower jaw. Roughness (small bone spurs) on bar

Finally, my research leads me to recognize that the headshaking syndrome in the horse is most commonly caused by bit-induced trigeminal neuralgia (nerve pain) (Fig 4).

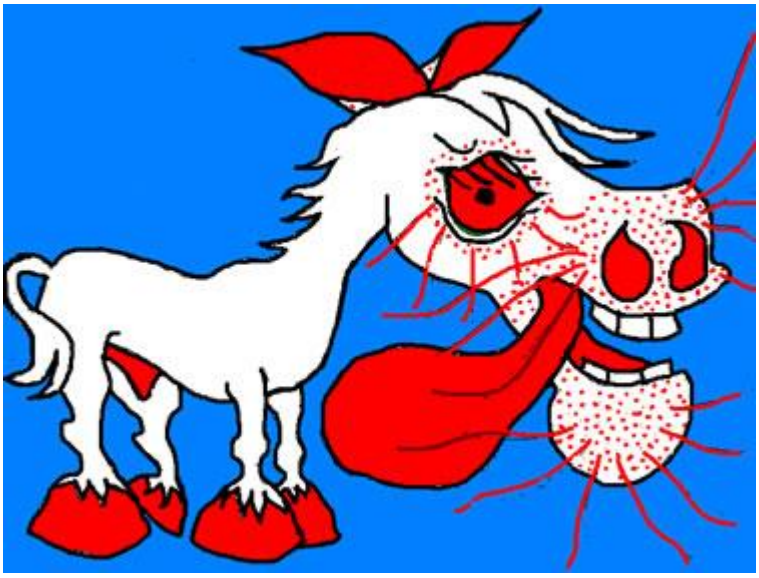

Fig. 4. A picture of a horse scaled according to the sensory nerve supply to its parts depicts the extreme sensitivity of the muzzle region. Long term use of a bit can result in nerve pain (trigeminal neuralgia) in the branches of the sensory nerve that supply the muzzle, together with referred pain in one or more of the associated branches that supply the face, eyes and ears. In the author's opinion, the bit is the most common cause of the headshaking syndrome in the horse (tic douloureux).

Unlike some animals when hurt, horses do not scream. Instead they exhibit evidence of pain by changes in behavior. If we learn to interpret the body language we discover that both acute and chronic pain is expressed by signs of fear. The topic of another article will be how these signs of fear can be classified under the four F's of flight, fight, freeze, and fidgeting.

The crossunder bitless bridle is the first painless bridle to be introduced. It enables riders to avoid inflicting unnecessary pain.

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