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Death in the Afternoon: Breakdowns, Bleeding and Bits

Breakdowns occur most frequently in the hot and humid months, because of fatigue. This partly explains the sad roll call of horses killed in action at Del Mar this summer. Fatigue is most commonly caused by shortage of breath and this, in turn, is caused by airway obstruction. "Roarers", therefore, are particularly at risk of breaking down, as are "bleeders". For this reason, it is important to add an examination of the muscles and nerves of the larynx to the standard necropsy protocol, otherwise relevant evidence on the cause of breakdowns will be overlooked. Unless necropsies can be carried out within two hours of death (impossible in most cases), evidence of pulmonary edema - the ephemeral pathology behind "bleeding" - will also be missed.

I agree with James Gorski's list of factors that contribute to breakdowns on the racetrack (Thoroughbred Times, August 22) but need to add the bad news that the list is incomplete. The good news is that, contrary to your correspondent's assumption, something can be done about reducing the numbers of breakdowns and improving the welfare of the horse. But it will need a concerted and continuing effort from many different groups of people.

The causes of breakdowns can be divided into two categories. Either the track hits the horse too hard or the horse hits the track too hard. Something can be done about the first category by the track owners and track superintendents. There has to be enough cushion to reduce the "…'ammer, 'ammer, 'ammer along the 'ard 'igh road" yet not so much that the track is as soft as a plowed field.

The second category is the responsibility of racetrack stewards, owners, trainers, jockeys, veterinarians, farriers and the stewards of the Jockey Club. Fatigue is a fundamental cause of breakdowns, because the leg muscles of a tired horse lose tone and no longer take the strain. When the foreleg of an exhausted horse hits the ground, the strain is loaded directly onto tendons, ligaments, joints and bones. The likelihood of breakdowns resulting from 'soreness' and sheer unfitness for racing is something that the veterinarian is responsible for anticipating, the trainer for acknowledging, and the owner for agreeing to act on. Fatigue from "shortness of breath" results from a number of factors. Two common factors are conformational defects of the airway and hereditary diseases of the respiratory system; items that are the responsibility of the veterinarian to diagnose, the breeder to avoid and the buyer to shun.

se of the bit as a method of control. By leaning on a bit, racehorses shift their point of balance forward and, as a result, put more stress on their forelegs. If Thoroughbreds were trained and ridden according to the principles of natural, as opposed to traditional or normal horsemanship, they could be raced with the lightest of bit control (or even entirely without bits) and foreleg stress would be reduced. The welfare of the horse and the image of racing would also be improved.

Racing history was made in Maryland, earlier this year. Robin Graham, a trainer at Laurel Park, conducted a two month trial of a new design of bitless bridle. This is neither a hackamore nor a bosal and it controls without depending on poll flexion. She herself rode 20 different horses in this bitless bridle, for training purposes, and found it to be "wonderful". In addition, she rode in a race at Pimlico, using the same bridle with a show bridoon attached, as did Anthony Locke at Hollywood Park.

A bit controls, invasively, by potentially painful pressure on a sensitive body cavity, the mouth, whereas the new bitless bridle controls non-invasively, by painless pressure on the skin of the poll and base of ear. The bit pulls, whereas the Bitless Bridle pushes The degree by which the bitless bridle lessens the impact of the forelegs can be demonstrated by listening to a video soundtrack of the same horse ridden with and without a bit. The stride is also lengthened, which in racing would translate to a faster speed.

Apart from improving a horse's gait, removal of the bit also improves a horse's breathing. Without a bit, a horse can stretch its head and neck naturally and avoid the poll flexion and airway restriction that bit control inevitably causes. It is not for nothing that the word rein, was derived from a Latin word meaning to hold back. Some horses that are "thick in the wind" make no noise as soon as the bit is removed.

Without a bit, the horse's respiratory system is not confused with digestive system reflexes. Horses cannot eat and exercise simultaneously. Yet this is precisely what we have been expecting of them for the last 4000 years. The bit stimulates digestive system reflexes that are incompatible with breathing, for example, salivation, movement of the lips, jaw and tongue, and dorsal displacement of the soft palate. Elimination of the bit is likely to solve many a 'soft palate' problem.

As upper airway obstruction (eg., "roaring", "thickness of wind" and soft palate displacement) is the cause of asphyxia-induced pulmonary edema ("bleeding"), removal of the bit or its relegation to a minor role in control can also be expected to reduce the incidence of bleeding as well as breakdowns. It is no coincidence that bleeding occurs most frequently in the hot and humid months and that the incidence of noisy breathing is also at its peak during this same breakdown period.

It will take a little time and study for people to realize that simply removing a piece of metal (and a tongue-tie) from a horse's mouth provides more effective and safer control of the horse; allows the horse to breathe freely; to move better; and to revitalize its whole attitude to work. A recent article in the New Scientist put it well, "Horses…prefer a bridle with a bit missing"; they are happier. As bit control is banished or reduced, racehorses will obtain more oxygen; spend less energy on breathing; have more energy for locomotion; be better runners; and be less at risk of breaking down or bleeding.

Finally, there is a crucial matter for the stewards of the Jockey Club to consider. Because of the annual increase in the coefficient of inbreeding that occurs in any population with a closed stud book, the Thoroughbred horse is getting more fragile with every succeeding generation. It will undoubtedly take less stress and less of an impact to break down today's Thoroughbred than it might have taken 100 years ago. A program of genetic conservation is needed to safeguard the future of this endangered breed.

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