

The 300 word letter in the Thoroughbred Times, published with the title “Remove the Shoes” is an editorial précis of this original article.

GET A GRIP

The foot of the horse is a triumph of engineering. Starting with a four-toed mammal the size of a fox terrier, its design has been shaped by 60 million years of evolution. The one-toed modern horse (*equus caballus*) evolved about a million years ago. Let’s put aside the first 59 million years of development and reduce the last million to a 24-hour time scale. Within this period, modern man (*homo sapiens*) did not evolve until about 11.10 pm. He first domesticated the horse around 11.53 pm and did not start nailing iron clamps on its toes until some time after 11.58 pm. Attempts to improve the horse by selective breeding commenced about 17 seconds before midnight.

This perspective assures us that the horse’s foot today cannot be markedly different from the unshod foot of horses in the Greek and Roman armies. The modern foot is also the same design that served well, over many a stony path, for the unshod Mongol cavalry. If permitted by man, the foot of the present-day horse is still capable of similar feats, as demonstrated by barefoot horses that compete successfully in 100-mile endurance rides.

Barefoot endurance horses are showing by example that racehorses could do likewise. Thoroughbreds in training never work over anything but carefully manicured ground. They carry far less weight than an endurance horse and they do this for much shorter distances. If they were barefoot they could do it with greater safety to themselves and their jockeys, and also stay sounder for longer. If safety and soundness are not reason enough for owners and trainers to consider this change for the better, add in the probability of greater speed.

With all due respect to Dr. David Nunamaker’s interesting idea for a new shoe, as described by Denise Steffanus in her article “*Grip and Slide*” (Thoroughbred Times, August 9, 2003), no shoe can fail to upset the finely-tuned mechanism of the natural foot. Nature has already evolved the perfect design for grip and slide in all conditions; from ice, snow, and slush, to rock, sand, and mud. Furthermore, nature’s design provides for unsurpassable shock absorption, an indispensable supplementary blood pump, and maximum awareness of foot placement.

Millions of years of evolution cannot be improved upon by man’s last-minute tinkering, no matter what the design of the shoe. On the contrary, the foot cannot carry out its vital functions when clamped. The foot should be permitted to expand when weight-bearing and contract when non-weight-bearing. Unless this happens, blood supply to the foot is impoverished, horn production becomes deficient, and circulation of blood to the rest of the body during a race is impaired. A shoe clamps the foot in the contracted state. A further indictment of shoeing is that the foot is numbed, impact forces are hugely increased and, because most flat racehorses are immature, growth of the coffin bone is prevented. A shod horse *walking* on pavement suffers three times the impact

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forces of a barefoot horse *trotting* on the same ground. The effect of this hammering on juvenile bones and joints is predictable. Because of their relative immobility, two-year-olds in training that are confined in stalls, for 23 hours out of every 24, also suffer a loss of bone density compared to their yearling status. In view of these and other man-made problems, it is not surprising that our elite equine athletes are so frequently disabled by bruised feet, sesamoid fractures, bucked shins, strained tendons, and chipped knees.

A horse does not, as is widely supposed, need shoes to protect its feet. The shoe does not protect the foot ... quite the opposite. The foot is harmed by the shoe and the rest of the leg is also subjected to dangerous stress. Horseshoes are indeed harmful to the health of the whole horse. When the foot is prevented from functioning correctly, the pastern, fetlock, canon, and knee are also placed at risk. This leads to bone, joint and soft tissue injuries and, in addition, a whole cascade of problems affecting not only the musculoskeletal system but also many other systems. For example, as circulation is impeded, the heart will be put under unnecessary strain during racing, congestion of the lungs is likely (another factor in the cause of ‘bleeding’), and breathing will be impaired. Horseshoes handicap horses; performance is adversely affected and the risk of accidents increased.

Evidence for the above statements can be found in the first two references listed below. Both books are quite short and eminently readable. Those who wish to probe deeper can study the magisterial third reference, which contains the fruit of 20 years of research by Dr. Hiltrud Strasser of Germany. All the books can be ordered online at www.strasserhoofcare.com. The fourth and fifth references were written in the hope that more veterinarians and farriers would follow Strasser’s pioneering lead and support her landmark contribution to the welfare of both horse and rider.

By adopting the management conditions required for Strasser’s barefoot method, horses could be made happier, healthier, less dependent on medication, and more productive. Such improvements in equine welfare at the backside stables and on the racetrack could do much for the image of racing. This would not be just a publicity stunt. Owners and trainers would be helping themselves by helping their horses.

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