

A metal bit is an invasive foreign body in a sensitive body cavity. It frightens the horse, inflicts pain, obstructs breathing and interferes with the rhythm and grace of the stride. Mythology has it that the bit controls a horse but the reality is that the bit is the most common cause of a rider losing control. As the final link in the long and, therefore, potentially severe line of communication between the rider's hands and the horse's mouth, a bit is a device that must be handled with the delicacy and finesse of a neurosurgeon if it is not to become an instrument of torture and a liability. Even at the Olympic level, there are few riders who possess this mastery and can honestly claim that they never hurt their horse. Bit-induced fear and pain triggers flight, fight and freeze responses that include over [100 signs of negative behavior](#). Some of these signs, such as bolting, bucking and rearing are potentially fatal to both horse and rider. All of the signs constitute a welfare problem for the horse and an obstacle to achieving the harmony between horse and rider that is the goal of horsemanship and the reward of equitation.

Bit pain, or the highly disruptive fear of bit pain, induces a horse to defend itself in a number of different ways. It may, for example, toss its head, grab the bit between its teeth or place the bit under its tongue. When these reactions are triggered the rider has no control and her safety is in jeopardy. Mouth pain or the fear of such pain also induces such dangerous problems as headshaking, stumbling, rushing or refusing at jumps, and general inattentiveness. It renders a horse both unhappy and unhelpful and this results in disappointment and frustration on the part of the rider. No longer can a rider enjoy [the art and science of riding](#).

In dressage, a frame that is brought about by rein tension is not "collection." It moves the horse's point of balance forward, prevents true collection and puts more weight on the forelegs. Habitual leaning on the bit destroys that freedom of the neck so essential to an athlete. It also reduces hind limb propulsion and the effectiveness of some important energy saving mechanisms that depend on [neck mobility](#). Extreme poll flexion ([over bending or "Rollkur"](#)) brought about by the bit severely obstructs the horse's airway, risks injury to the neck and damage to the spine

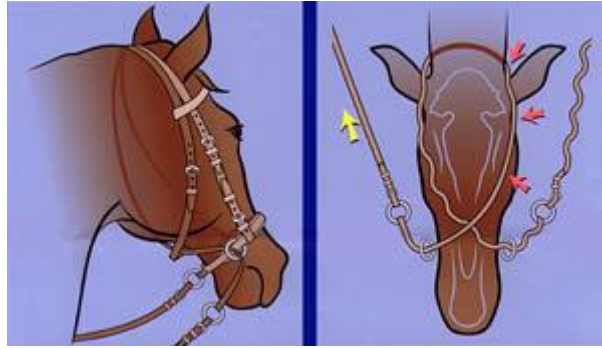
The bit induces reflex salivation and chewing, which are responses appropriate to eating not exercising. The chewing reflex invokes lip, tongue and jaw movement, all of which are physiologically incompatible with exercise and unobstructed breathing. Eating and exercising are two

diametrically opposed activities that should [never take place concurrently](#). Children know, instinctively, that they cannot both eat and run. Yet we are expecting just this when we place one or more bits in a horse's mouth. How would readers like to run with someone pulling on a metal rod in their mouth? Although a horse is in no danger of swallowing the bit, it may well "swallow its tongue", displace its soft palate, inhale saliva or precipitate a spasm of its voice box. All these problems are associated with an episode of "choking-up" or asphyxia in the racehorse. Asphyxia, in turn, is the cause of [pulmonary "bleeding" in racehorses](#).

Because the tongue is attached to the voice box (larynx), when the tongue moves so does the voice box. If the voice box, at the entrance to the windpipe is shifting about during exercise, this interferes with the free flow of air. Similarly, as the soft palate rests on the root of the tongue, any movement of the tongue causes movement of the soft palate. This, in turn, leads once again to obstruction of the airway, inspiratory stridor ("roaring") and asphyxia from elevation or [actual displacement of the soft palate](#).

Breathing and striding are physiologically coupled and, in the wild, the galloping horse takes [one stride for every breath](#). Any interference with breathing in the bitted horse inevitably interferes with striding. The gait loses its natural grace and rhythm, and the stride becomes shorter. In racing, shorter strides equate to slower speeds. In addition, the forehand becomes heavier, fatigue sets in earlier and the risk of a breakdown increases.

Finally, the bit is a universal cause of the [sore mouth syndrome](#). This includes many oral and dental problems, such as buccal ulcers, sore lips, bruised gums, wolf tooth irritation and lacerations of the tongue. Even more seriously, the bit commonly results in the [formation of painful bone spurs](#) on the bars of the mouth and in erosion of the first cheek tooth in the jaw. Collectively, the bit is responsible for a hundred or more behavioral signs of bit pain and suffering and [40 different diseases](#). All these signs and diseases, when bit-induced, can be avoided by eliminating the bit and using the BitlessBridle. The horse's mental and physical welfare is improved, riding becomes safer, performance is enhanced and both participants derive more pleasure from the exercise.



More effective, safer and painless hand signals foster harmony between horse and rider. The horse becomes calmer and more compliant and, in the absence of fear, can pay attention to all the aids. The mechanism of the BitlessBridle's action depends on a simple figure-of-eight strap design with two loops, one over the poll and one over the nose. The gentle pressure of strap on skin is distributed and dissipated over a large area and is never painful at any one point. The greatest pressure, such as it is, is applied to the bridge of the nose, with less pressure under the chin and along the cheek, and least pressure over the poll. The new bridle provides a rider ([or driver](#)) with a benevolent and non-adversarial means of communication by either nudging one half of the head (for steering) or hugging the whole of the head (for slowing or stopping).