

Article by Spencer LaFlure, The Tooth Fairy

It seems that we can all understand how nature intended balance to be for the equine foot. As the horse roamed its domain, excess growth wore away naturally by herd movement across the terrain. This natural wear by lifestyle and environment is also true of the equine mouth, though perhaps it has been overlooked for a long time. "Out of sight, out of mind", the concept of "form to function, function to form" is well understood these days. What I am going to share with you in this article is not my opinion but rather that which seems to fit the horse naturally.

In its natural state, the horse would graze 14 to 18 hours a day on grasses with silica's that wore or abraded the teeth in such a manner that the front teeth wore as they erupted. These incisors, as they are called, are the key to balance in the mouth. The length and angle of the front teeth were meant to be equal in comparison to that of our domestic horses at around age 5 and should remain that way throughout the lifetime of the horse. It is at this point, beyond the age of 5, that the front teeth of our domestic horses exceed the appropriate length and angle. Here is where you begin to get abnormal rotation of the TMJ (Temporal Mandibular Joint); the joint where the jaw hinges to the skull. The rotation of this joint dictates the wear pattern of the molars. So the *point* of Equine Dentistry is to treat the cause, not the symptoms, by maintaining a natural length and angle of the incisors *first*. Further balancing of the molars cannot be accomplished without proper balance in the front of the mouth.

Equine dentists use an instrument called a speculum to assist the horse in maintaining an open mouth to receive treatment. It looks very much like a headstall with the exception of an adjustable mouthpiece that sits just inside the horse's mouth with two metal plates for the upper and lower front teeth to rest on. These plates are level unto themselves, so as the horse opens its mouth, any imbalance in the incisors will then be shifted to the molars, appearing to be a deviation in the horse's mouth originating *there*, because the TMJ has cartilage and the jaw rotates from there. The TMJ is the hinge point of the jaw. That is why it is so critical to start with the incisors first. The angle of the TMJ is the exact opposite angle of what is known as the molar table (contacting surfaces of the upper and lower teeth). All of these factors, taken into consideration, are what amount to anatomical balance, according to the individual horse.

Many of today's equine Dentists apply centric, or centered alignment to the mouth; that is, applying a static "leveling", standard to *every* equine mouth they treat. The focus common among dentists currently, is occlusion. This means, simply, the meeting, or flush contact, of upper and lower tooth – on-tooth surfaces. However, because of the adaptable nature of equine tooth eruption, occlusion is present in all horses even *before* dentistry is applied. *Concentric occlusion* is what horses have present already in their mouths when they show up at the dentist. It should then be up to the dentist to *anatomically* align the mouth, so that it fits the individual to its optimal range.

The fact of the matter is that the focus should be on reestablishing proper biomechanics to the horse's jaw. Motion of the jaw is 50% of the total mechanics. The tongue rotates in the opposite direction to that of the jaw. The combined efforts of the two are what move the food bolus from front to back. This being said, if the length and angle of the incisors vary from what nature intended, it causes the jaw to rotate in a more vertical motion; up and down, rather than from side to side in a circular motion.

You would think that losing 50% of the mechanical ability in a moving part would be rather disruptive; but, because of the processed feeds and concentrated rations we give our horses, we see very little difference in weight gain or loss. The real clue indicating the need to balance the equine mouth

concerns the ability of travel and motion of the jaw. This is directly equal to the ability of motion of the horse's entire body in all directions.

So, how do we check for biomechanics of the jaw? Rather than pushing the closed jaw from one side to the other; which most people are familiar with, you can properly check the horse by cueing it to contract its own massitors. This provides a demonstration of the true biomechanical range of the jaw. (Consider this: if the above mentioned technique worked, human dentists would use it on us to check the surface to surface contact of our teeth, rather than the traditional carbon paper and "bite" technique.) The horse is cued by the dentist, by inserting fingers into the side of the mouth, initiating a chewing motion reflex response. Numerous human dentists have shared with me the fact that all species of animals maintain a state of disclusion of teeth, or non-contact, while at rest or in activities other than eating. If the teeth were in contact while moving, it would cause damage to the surfaces of the teeth. So, occlusion, or mastication of food is only accomplished when the individual contracts its own massitors, or muscles that control the jaw.

The horse has proven to me that accomplishing balance is achieved by starting with the equilibration of the incisors first. Generally, a primary angle of adjustment is necessary there. If there is a great deal of change to be made; this should be gradually done, over time, as it is in humans. After all, it took a long time to develop; it should take a while to fix.

I believe that no more than a Ferrier needs a grinder to balance a foot should a dentist need power equipment. Speaking of equipment; most equine dental tools are not ergonomically designed to fit in the horse's mouth, let alone help balance it. I've spent 3 years designing hand instrumentation that ergonomically fits the horse, as well as the practitioner. This lends itself to bloodless horse dentistry and less discomfort after dentistry.

Another popular thought in Equine Dentistry today is the rolling or rounding of the first molars called premolars, to produce what is called the bit seat. Over-modification of any mechanical part is generally fine – in theory – but blows up when you put it into practical application. We then have to step back a second to understand this.

The horse is born with its first three molars; they are in contact, although they have no real use until the horse is about 6 to 8 months of age. In that time period, nature then establishes the appearance of another key balance point of the mouth the incisors or front teeth. These teeth (incisors and premolars) are basically *all* that are present in the mouth until about age two, at which time the plates or sutures of the skull fuse together. I believe that by this, Nature dictates these teeth are of primary importance to balance the head as it develops. When a bit seat is placed on the tooth, it takes away most of the leading molars surface – to – surface contact. Removal of this contact from a cornerstone of the mouth creates a lateral (side to side) instability of the TMJ. Amazingly, this shows up externally in a visual hollowing out of the horse's flanks! When you don't put in a bit seat to these premolars (allowing for maximum surface to surface contact) I've found that there is a greater stability to the TMJ and performance is enhanced.

What are we truly trying to accomplish with Natural Balance Dentistry?

Natural balance in the mouth and the jaws ability to move forward, backward, left and right, up and down, is equal to the whole body's ability to do the same. The jaws range of motion dictates the necks range of motion, which in turn dictates muscle mass in the rest of the body. I wrote a thesis about 3 years ago (copies available) stating that whole horse restoration could be accomplished by whole mouth equilibration. The key starting point, as I have said before, is addressing the incisors first and proceeding

from there to balancing the mouth in an anatomically correct way to fit each individual horse. For three years, *I have been trying to disprove my own theory*, and as of yet, *there isn't one instance that this theory has not held up*. The outcome is this: the least modification of Nature has generally been in the best interest of both man and beast.

I believe that dentistry is a piece in the equation of the total balance available to our horses today. Owners should be aware that there are many complementary fields of natural practitioners available to help your horses be the best they can. You know, NASCAR has pit crews to help the team to achieve ultimate performance you have a team, too. Natural Dentistry is a part of that team.

For more information on the [Advanced Whole Horse Dynamics](#) learning centers, and especially on Spencer Laflure (AKA the Tooth Fairy) and his innovative discoveries that are changing the equine dental world, contact (518) 623-9967.