

Natural Horse Dentistry - What is the Point?

By Spencer LaFlure



When horses graze naturally, fourteen to eighteen hours each day, the abrasive silica in the grass and other vegetation naturally wears down the front teeth at the rate of eruption.

Most of us are familiar with natural horsemanship and its vast improvement on handling horses today. It has helped horses as well as riders achieve bigger and better goals harmoniously. Riders and trainers are using less tie downs, harsh bits, and man-made gadgets and are turning toward using savvy, soft ropes, and plain body language as horses themselves use with each other in the wild. Man is now working more with the horse and allowing him to find the desired response naturally. All horses are individuals and, like people, respond better if treated as such.

Which brings me to the point of what I call "Natural Horse Dentistry".

Like the old way of training and riding horses, man had a mold and the horse was broke to fit that mold. In today's world of horse dentistry people performing "dentistry" are also using the mold they were taught and making it fit on all the horses they do. I believe that if we can train naturally, we can do dentistry naturally also. I have found that doing dentistry naturally includes all of the following points.

POINT 1 - HEAD SYMMETRY

Naturally, horses' heads differ in shape. Therefore, special attention should be paid to the muscle and bone structure of the head. Before the technician even picks up an instrument, he or she should check the muscles of the face to see how the horse has been chewing (whether in an up-and-down or side-to-side motion). Is one eye, ear, or nostril higher or lower than the opposite (indicating a hang-up of the jaw)? Is there any swelling or discharge (abscesses present)? Are there any injuries, broken bones, a twisted jaw or asymmetries? Is the width of the space between the bones of the underside of the jaw narrow in comparison to the width of the head (indicating whether the top and bottom molars even meet or not)? Are the TMJ joints sensitive to touch (excessive incisor length and angle)?



Horses' heads differ in shape; therefore, special attention should be paid to the muscle and bone structure of the head. Photo by Coco

All these signs can tell a properly trained eye what to expect inside the mouth before ever looking in.

POINT 2 - BODY STRUCTURE

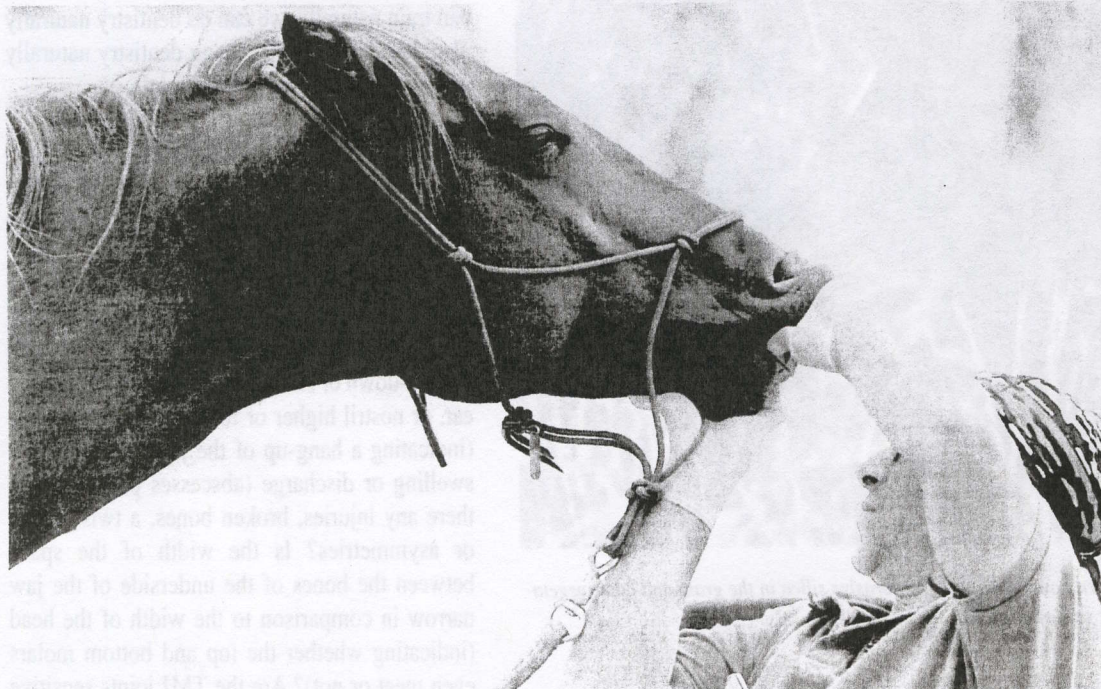
Like the head, all horses' bodies are built differently. Abnormalities in body structure can also tell what is going on inside the mouth. Is the horse bending his neck and flexing at the poll where he should or is he flexing between vertebrae C1 and C2 (indicating the jaw is hanging up not allowing for the neck and poll to flex)? Are the withers, croup, and flanks rounded with good muscle tone or are they atrophied (due to restrictions of motion of the lower jaw - left, right, forward, back)? Is there unexplainable lameness especially in the hocks (hooks or ramps on lower back molars can run up into the bladder meridian causing hock lameness)? Are there signs of chronic lameness or severe injury such as bowed tendons, founder, etc. (lameness can affect the wear pattern of the teeth and needs to be addressed as well)? Even if the teeth were addressed, after only a few months the same problems will reoccur because lameness can

be directly related to teeth and vice versa.

POINT 3 - FRONT TEETH (INCISORS)

After observing the head and body structure of the horse, the technician should now examine the teeth. When the lips are parted from the front, the first teeth that are visible are the incisors. Likewise, when the horse is in his natural grazing state in the wild, the first thing he uses to obtain nourishment is his incisors to nip and tear off the blades of grass. When horses graze naturally, fourteen to eighteen hours each day, the abrasive silica in the grass naturally wears down the front teeth. The rate of wear equals the rate of eruption. A horse's incisor length and angle at age 5 or 6 should naturally stay that way throughout the horse's life.

Unfortunately, with today's horses living in an unnatural environment (stalls, paddocks, and pastures), natural wear is not possible. Incisors are meant to be used for prolonged grazing. So, when first looking at those incisors, we will find them excessive in length in older horses as well as wedged or jagged, and in young horses, often with caps or with retained caps.



A horse's incisor length and angle at age 5 or 6 should naturally stay that way throughout the horse's life. Photo by Coco



In today's domestic situations, horses need balancing and reduction of the incisors, because eating hay does not wear them down naturally.

Which brings me to what I feel is very important at this point. That being, after checking front and back teeth and observing the pathology of all the teeth, I believe in doing work on the incisors FIRST. Once you find the natural angle and length of incisors according to the bars of each individual mouth, you proceed to set the angle to that which is natural. Extreme caution should be taken because it is easy to reduce them too much. This immediately relieves pressure on the TMJ, which has more nerves and proprioceptors than any other joint in the body and is directly related to balance in the motion of the whole horse. Understanding this, in general and especially in extreme cases, as in human orthodontics, this condition did not arise overnight and would be best treated over a period of time. In doing incisors first you can avoid over-equilibration of the molars (thus preventing the possible risk of the

horse shutting down or not being able to eat for extended periods of time). If the incisors are not balanced first, the speculum will not rest balanced, which can skew the technician's perspective of the mouth. Most of the time, when working on the molars first, what appears to be right will be wrong after the incisors are balanced, resulting in taking off far too much molar unnecessarily. Younger horses should have caps and retained caps removed first, allowing for the speculum to be placed on the front teeth without causing discomfort while molar tables are addressed.

POINT 4 - BACK TEETH (MOLARS)

After setting the incisors to proper length and angle, reduction of the protuberant teeth only is the critical difference between this procedure and what is often called "performance floating" (where the over-equilibration of the whole

molar table gives the appearance of rubber hoses - smooth and rounded). My goal when balancing the molars is to enhance the biomechanical movement of the lower jaw with the least amount of tooth reduction. I have found in so doing this, horses perform excellently, stay as balanced as they can be, and do not produce points to the extent that would normally be found in the horse's mouth. This is also based on yearly dental maintenance and it will generally take a period of two to three years to achieve natural balance per individual with yearly visits to continue after that. Sometimes the pathology of the mouth may require visits every 3-6 months.

Naturally occurring on the tooth of the horse, enamel folds, which are like sandpaper, grab hold of the horse's food bolus. For the most part, these being left untouched will maintain a much more natural surface for which the horse can masticate or chew his food. (If you put a piece of hay or grain between two nail files and rubbed them together and then put a piece of hay or grain between two rubber hoses and rubbed them together, which would break down the food better?) Also keep in mind that teeth are only about five inches long and erupt out of their sockets at the rate of 1/8 inch per year (top and bottom). This happens

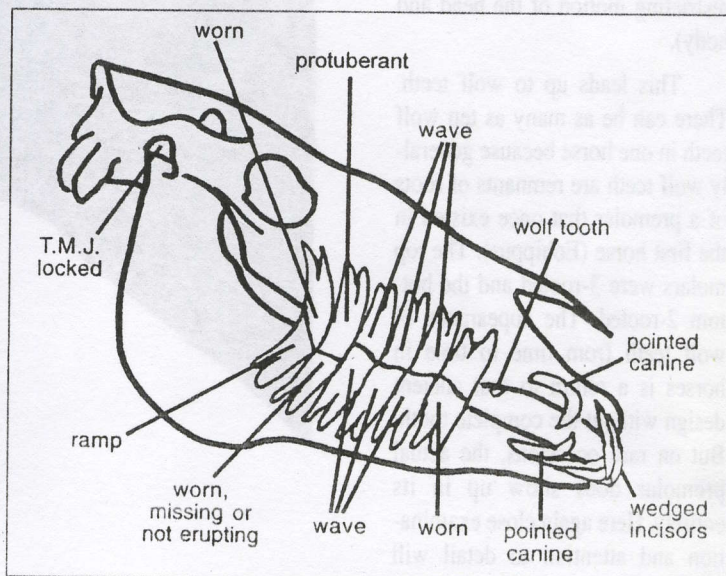
only until the horse is ~25 years of age at which time the teeth stop erupting and the softer dentin portion of the teeth is what remains. Unlike the hoof that grows constantly, you can't keep trimming teeth over and over again or pretty soon you wind up with no teeth at all at an early age. Far too often I see this happen in dentistry!

Molar table angles are directly related to the curve of the back of the lower jaw or mandible (curve of spee). The tighter that curve is (as in Morgans and Arabians) the steeper the angle. Longer-, straighter-jawed horses (warmbloods and drafts will have a lower angle). Molar angles should NOT be filed down flat!

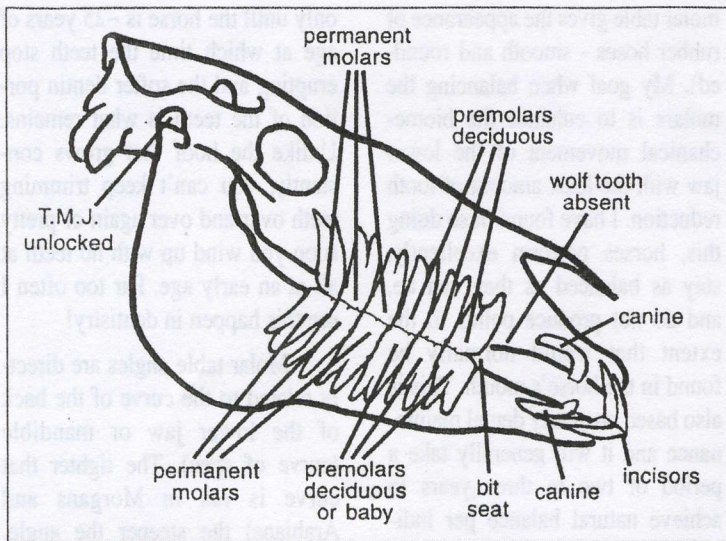
The points that are traditionally taken off during a normal "floating" are actually an excessive abnormal formation of a horse's molars caused by unnatural excessive incisor length and or angle. Also, horses of the ages of 2 1/2 to 3 1/2 years have vertical eruption of their pre molars (top and bottom) which will cause excessively long points on the edges of the molars. Once a horse's mouth is naturally balanced, it will better maintain balance and will NOT create these extreme points. This is similar to and true of horses in the wild, who graze 14 to 18 hours a day and maintain a natural



After checking front and back teeth and observing the pathology of all the teeth, I believe in doing work on the incisors FIRST. Photo by Coco



No three-point contact Courtesy of Judy LaFlure



Three-point contact - TMJ, molars, incisors Courtesy of Judy LaFlure

incisor length and angle with wear equaling eruption, and have minimal points resembling in size those of a zipper.

Via the process of natural selection horses in the wild are generally able to shed caps or baby teeth easily, allowing for the permanent molars to easily erupt. But far too often in the domestic horse, bloodlines that would probably not survive in the wild are perpetuated producing many dental abnormalities. For this reason your horse needs someone who can recognize retained caps (which can cause anything from colic to hindrance in motion) and unequal crown height (irregularity of the molar table when viewed from front to back, causing locking of the lower jaw restricting motion of the head and body).

This leads up to wolf teeth. There can be as many as ten wolf teeth in one horse because generally wolf teeth are remnants of roots of a premolar that once existed in the first horse (Eohippus). The top molars were 3-rooted and the bottom 2-rooted. The appearance of wolf teeth from time to time in horses is a return to that ancient design without the complete tooth. But on rare occasions, the actual premolar does show up in its entirety. Here again close examination and attention to detail will allow you to find any misplaced or

ectopic wolf teeth located on the inside of the molars (top and bottom) as well as the traditionally located wolf teeth. Special attention should also be paid to finding any 'blind wolf teeth' occurring horizontally in front of the first premolars. Blind wolf teeth will only occur in front of the upper premolars. Blind wolf teeth, though often incorrectly referred to as being 'impacted', actually were never intended to erupt. Any and all of these wolf teeth, which are preferably removed, can result in head tossing, resistance, and cranky attitudes. Far too often these teeth are overlooked and the



Close examination will reveal unseen wolf teeth, which should be removed. Photo by Coco

horse is labeled as a hard to handle horse when he should be labeled as a horse in pain.

POINT 5 - CHECKING YOUR WORK

When the technician finishes doing work on the teeth, he or she will manually move the lower jaw back and forth and side to side to check the occlusion or contact of the molars. This gives a good idea of how well the teeth meet. However, manually moving the lower jaw does not engage the powerful masseter muscle that compresses the dental arcades when the horse chews. In my evaluation, I allow for the idea that when the masseter muscles contract, the percent of occlusion will change. Therefore I accept lesser amounts of occlusion in the side-to-side and forward-and-back slide (80 percent rather than 100 percent) because the contraction of the masseter muscle will increase the amount of occlusion to 100 percent, or to the maximum percent of which that individual is capable. The bottom line is what you are checking for is a natural balance of equal pressure among the incisors, molars, and TMJ. Checking for this balance must be done while the horse's head is low, as in a nat-

ural grazing position, NOT while elevated.

POINT 6 - HANDLING HORSES

Natural horsemanship today involves compassion, understanding the horse's needs, and intent. The horse's needs should come first while doing dentistry, although this is not the norm in dentistry today. For the most part the technician is approaching the horse like a predator would.

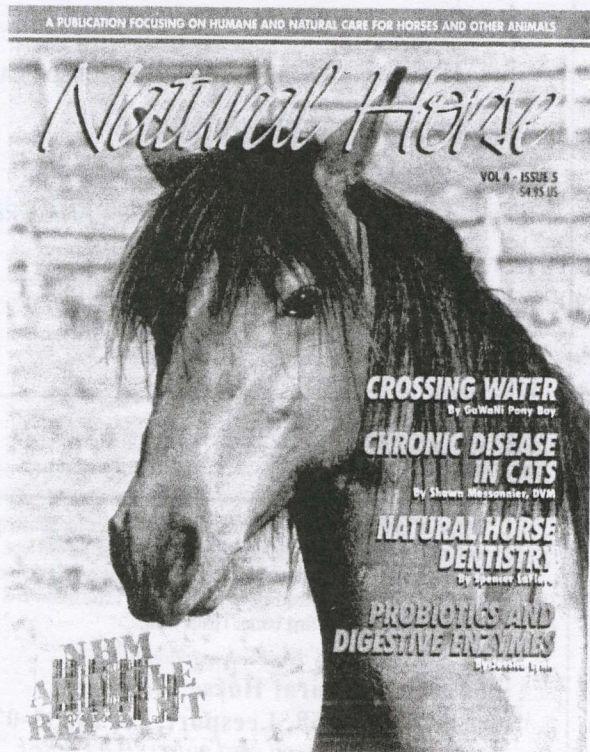
If the speculum (the device that keeps the horse's mouth open) is not used, it is impossible to see and feel everything in the back of the mouth or get the work done properly. Horses' molars go as far back as the eyeball. However, if the speculum is left cranked open for any length of time without periodic release, or opened too far as in the case of a TMJ problem (when incisors are excessive in length and angle to start with causing unnatural pressure and wear on the TMJ), the horse will be in pain and will not be as happy a camper.

If the horse's head is being suspended by a sling or propped up on a stand while sedated and the work is being done, it is in an unnatural head position and can pinch the spinal cord between ver-



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tebrae C1 and C2 (which can cause convulsions in the horse). This is why I prefer to work from wherever the horse would like to hold his head allowing for the dental equilibration in a stress free environment. I wear knee pads and spend a lot of time on them.

The use of restraints and other devices in equine dentistry creates undue stress for the horse, which isn't necessary when natural horsemanship is used. The extreme of this is the use of stocks and excessive sedation to allow for the use of air driven tools - far too often the culprit for over-equilibrating, one of the greatest tragedies of modern day dentistry, in my opinion. A mild amount of sedation should be all that is necessary to be able to focus on the details and angles when balancing the mouth.

I feel that horses today are getting the short end of the crop so to speak when it comes to horse dentistry. The horse tells us what he needs, yet often we are unable to read the signs. Educate yourself and know what to look for! Make sure your dentist knows what he or she is looking for and can determine what should be done for the horse's best interests, not only in doing dentistry, but when handling the horse as well. Horse dentistry

is a piece of the whole horse puzzle. There is no 'I' in 'team' and we as horse professionals need to work together to help our horses.

About the author:

Born during a pack trip through Ticonderoga, NY, Spencer grew up on his parents' Adirondack Mountains dude ranches. Spencer has had a lifetime of experiences with all kinds of horses. After a successful rodeo career, he trained horses, but decided he could better help the horses through dentistry. He received his certification in equine dental equilibration from the Academy of Equine Dentistry, in Glens Ferry, Idaho. He practices and lectures extensively, and returns often to the Academy to lecture, serve as an assistant instructor, and continue his own education. He and his wife Judy own and operate a ranch in Thurman, NY. The ranch is an educational riding facility. They practice and promote Parelli Natural Horsemanship, and specialize in children's summer camp.



I prefer to work from wherever the horse would like to hold his head - I wear kneepads and spend a lot of time on them. Photo by Coco

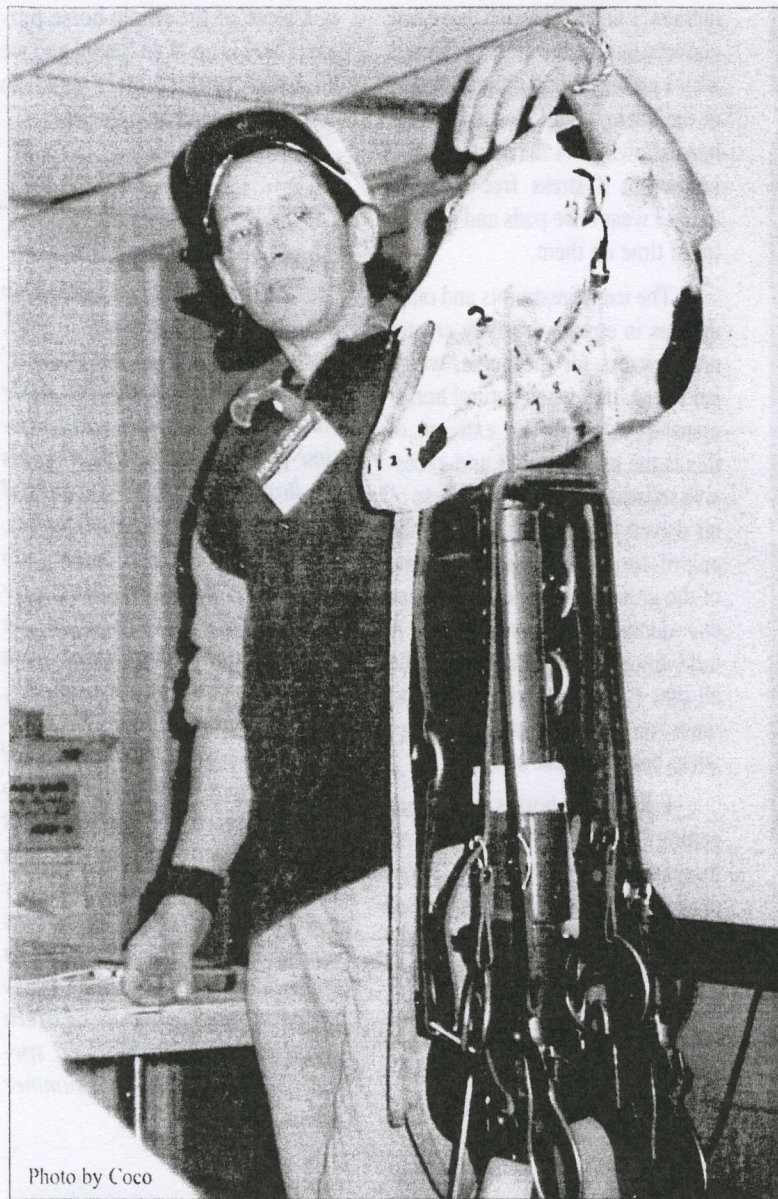


Photo by Coco

SIDE BAR

Natural Horse Dentistry - What is the Point? Your Horse Wishes YOU KNEW...

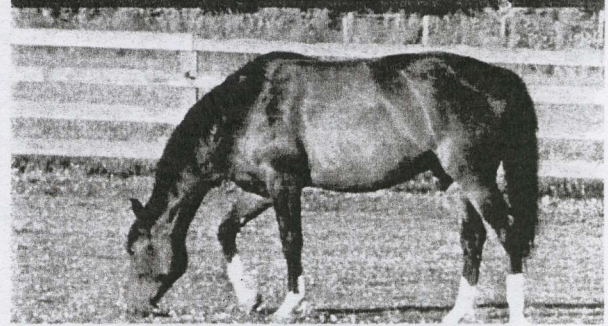
After five years of research on this procedure, Spencer presented his theory of the Natural Mouth (when performing dental equilibration) at the 2001 Parelli Savvy Conference held at the International Study Center in Pagosa Springs, CO. It received a wonderful response and made total sense to many people there.

This led Spencer to Australia to share his procedure with them. From there he went to Indio, CA and the jumping world. One of the horses he

did went on to win a \$75,000.00 Grand Prix for Dianne Grod. Spencer was also invited to work on babies at the Lacense Ranch in Montana run by Ron Willis who uses Parelli Natural Horse-Man-Ship. Ron commented on the remarked improvement it made on the horses in the 2002 colt starting.

Spencer has been asked to work with Dr. Heather Mack, VMD and her husband, who is also a veterinarian, at their Palm Springs, CA veterinary clinic. Hopefully Natural Horse Dentistry will help many more horses get better treatment when it comes to dentistry.

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