

This information was generated by Rowan Emrys, C.N.M.T., an independent distributor for DYNAMITE® Specialty Products. The views expressed herein do not necessarily reflect those of DYNAMITE® MARKETING, Inc. No claims are expressed or implied, and this information is not intended to diagnose, prescribe or cure.

As a twenty-three year veteran of the human dental field, I probably take more interest than most in the whole concept of dental health and may be more aware than the average individual as to the whole body ramifications that poor dental health can presage.

The role of nutrition in dental health

A Cleveland dentist, Dr. Weston Price [www.westonprice.org], went on a long journey back in the early part of the twentieth century learning how diet affected both dental and overall health. He published his incredible story in the 1930's and the title, recently re-published, essentially tells it all: Nutrition and Physical Degeneration. Bolstered by hundreds of very telling photographs, he shows how "primitive" peoples' dentitions changed for the worse after they adopted "modern" dietary practices such as white flour/sugar products, soda pop, denatured foods of all kinds, etc. Teeth crowded into narrow maxillary (upper) and mandibular (lower) vaults; protruding front teeth causing malocclusion (improper fitting together) of back teeth so they could not properly perform their chewing duty; dental caries ("cavities") and gingivitis (gum disease) became the norm as did infected teeth pouring large amounts of pus into the blood stream (one infected tooth can pour up to 4 oz. of pus a day into the blood stream); and on and on.

We see similar results in horses: parrot mouths, under/over-shot jaws, weak bones in both upper and lower jaws, poor tooth development, early loss of teeth, etc. Of course some of this is probably due to genetics (after all, we have not been breeding for healthy oral cavities) but poor or unbalanced nutrition also affects subsequent generations. We have removed horses from their natural diets of mineral-rich grass and herb grazing, with occasional pockets of seed heads (grain), over hundreds of acres of highly-mineralized soils and instead, we substitute with such fare as relatively small grassy turnouts if lucky, but mostly with little "flakes" of legume hay grown on depleted soils and large quantities of highly sugared grain. Essentially we are giving them the equivalent of Sugar Pops, soda and Twinkies and I know of very few individuals who would consider those items to be a nutritious diet.

Additionally, the ability to chew properly is essential for the digestibility of the food in order for nutrients to perform their jobs of building strong healthy tissues and brains. If we wish to use our herbivorous horses for our pleasure or money-earning capabilities, they must be able to eat effectively and efficiently in order to attain the nutrients hidden within the cellulose structure of green growing plants, their natural diet.

Equine dental mechanics

Horses, like humans, have two sets of teeth. They are born (or receive them shortly thereafter) with their deciduous, or baby, teeth which eventually total 24. These start falling out when the youngster is between 2 & 5 years old and are replaced by their permanent, or adult, ones. From the age of 1 year on up, the young horse will also get 12 new additional cheek teeth, possibly also 4 canine teeth ("tushes" or fighting teeth; mostly

in stallions and geldings erupting around 5 yrs of age) and from 0-4 wolf teeth (mostly males who are checked for them generally when being gelded but enough mares get them to check) which may erupt or stay imbedded, "blind," in the bars of the jaw causing great discomfort to the horse when bitten.

If you look at your horse directly head on, you will notice it grinds its food from side to side with its "cheek" teeth (pre-molars and molars) while its front teeth (incisors) are actually used to "snip" grass from its earthy bed. By mostly dry lot feeding (and we, too, are guilty of this!), we inhibit the normal wearing process on the incisors allowing them to grow overlong. After a time, they can be long enough to prevent the upper and lower molars from contacting each other thus eliminating that most vital grinding step from the digestive process.

The molars themselves have a finite length erupting around 5 mm per year which would be equal to the natural rate of wear. In old age, a horse may simply have no more reserve crown to erupt. For wild horses, this usually means death by starvation; domesticated horses however, have the option of **DYNAMITE® PGR** (soaked) and nicely chopped hay cubes (also soaked).

Because equine teeth are "folded" rather than simple columns like ours, areas of the occlusal or chewing surfaces will wear at different speed rates causing the hardest portion of the tooth, the enamel, to be left alone in certain areas. It is this enamel which forms those sharp "hooks" we have all heard about. These protrusions can cause great discomfort (including possible ulcerations) to the tongue and other intra-oral soft tissue. We recently heard of a horse with a hook grown large and high enough to actually interfere with the essential side-to-side grinding motion. The teeth can also wear unevenly in "waves" or slant to one side or the other which may be an indication of some muscular or vertebral imbalance.

The dental exam

Horses suffer in silence but they do speak loudly with their body and their actions if we only take the time to learn the language. If your horse is not on an annual dental exam schedule (and you can start with yearlings or even younger if problems are suspected), signs of it requiring one include, but are not limited to: head shaking/tossing/shyness; dropping food from mouth; feed packing (you will see bumps on the outsides of the molars because of accumulation of feed); facial pain, swelling or deformities; bad breath or smell from nose; biting problems; reluctance to eat; "acting out" when being ridden or driven; pulling the head to one side when being ridden or driven; undigested feed in the manure; colics & impactions of the throat; eating larger amounts of feed than normal without gaining weight; losing weight & condition, dull coat; frothing & excessive salivation; nose bleed; sinusitis with or without nasal discharge; respiratory problems if swellings in the nasal tract; loss of performance; draining jaw abscess; . . . and more.

While we would never dream of going to our internist or general practitioner to have our teeth cleaned, straightened, or filled, why do we accept this with our horses? Annual "floating" by your regular vet has long been accepted practice

(Continued on page 2)

(Continued from page 1)

but modern research is showing not only is this not always sufficient, but, depending on the skill level of the vet, can be downright harmful. Far better to have a good equine dentist perform your horse's oral exam and to take realistic measures to restore oral balance.

UK vet Dr. Hanne Engstrom, [www.equinedentistry.info], says about an equine dental exam:

"The vet should look, touch and feel to examine the teeth and the mouth thoroughly to check for any abnormalities or loose teeth. Don't be happy until your vet has taken a flashlight or a headlamp and actually LOOKS into the mouth, and also puts his/her hand in to FEEL everywhere. There is unfortunately no way you can do this thoroughly and safely without a speculum and their effectiveness has a lot to do with how it is used and how respectful you and the vet are when approaching the horse with it. Most horses unfortunately need to be sedated to do this safely and thoroughly. The horse should be examined for abnormal eruption patterns, malocclusions, wear pattern, sharp points, loose teeth, cracked teeth, pockets, infections, retained caps etc. Soft tissue is examined for scars, wounds, ulcers, cuts...also the tongue. The temporomandibular joint (that attaches the lower jaw to the skull) should be checked, as it in some horses can be very sore and actually cause restricted movement, headaches and even emotional upset. The lateral movement of the mandible (lower jaw) should be checked for normal extension and effective molar grinding. All masticatory (chewing) muscles should be checked for soreness or swelling. And only then is the necessary treatment performed. Some vets prefer to use power tools (vital for large areas of overgrowth) but it is important that he/she not take off any more of tooth substance than absolutely necessary or you can literally reduce the life span of the horse."

To mitigate after-effects of sedation, we suggest pre-exam extra **DYNAMITE® Ester C/Hisorbadyne/SuperStress** and a post-exam round of **Excel**. Also helpful is to dose your horse with **Tranquil** before the visit; this can result in less than half the sedation being required which means fewer toxins loading the liver. Other dental assists from **DYNAMITE®** are **Release** on the TMJ afterwards, **Trace Minerals Concentrate** in the syringe of water as a mouth rinse, for any nicks and cuts that may have happened and **DynaPro** for sure for several days, as they may not chew as well at first.

Bits and discomfort

At the very age when we ask much of our young horses in training situations (especially racehorses), they are in the process of shedding their baby teeth and acquiring their adult ones. It seems ironic that this is when we choose to introduce a bit to them. Sharp enamel and discomfort from shedding and erupting teeth is something that should seriously be considered a potential problem.

However, at any age when we stick a bit in the horse's mouth, tighten a nose band around its nose and pull on the reins, it can be very painful if there are sharp points which

can cause soft tissue ulcers. Some bits are deliberately designed to cause pain and can seriously injure the tongue and other structures in the mouth if not used extremely carefully. In fact, Dr. Cook (see below) says that in a museum survey of 65 skulls from adult horses, 75% exhibited bone spurs on the bars of the mouth.

It also seems rather ironic that we teach out horses to yield to pressure and yet we get angry at them for "poor behavior" when they try to yield to the pain in their mouths. Instead of listening to them and alleviating their problems we send the message "do it or else" resulting in disrespect for the horse and dishonoring of ourselves.

One vet disturbed by the existence of bits at all, claims they are the cause of many breathing problems in horses. W. Robert Cook FRCVS., Ph.D., Professor of Surgery Emeritus at Tufts University School of Veterinary Medicine [www.bitlessbridle.com or Dr. Cook: 410-778-9005], has therefore designed an incredible bitless bridle more kind and more effective than the hackamores we used for years. Those we have talked to who have tried it state they will never go back to the old ways. The following is from his paper On 'Mouth Irons', 'Hoof Cramps', and the Dawn of the Metal-Free Horse [www.strasserhoofcare.com]

"Many equestrians might be surprised to read that with the development of a new design of bitless bridle, comprehensive rein aids can, for the first time, be communicated painlessly, without causing the many adverse behavioral problems that are caused by a bit. Furthermore that, unlike the bit, the new bridle does not interfere with breathing and striding, or trigger contraindicated digestive system responses. As a result, horses can now be controlled better in all disciplines, will perform better, and be safer to ride and drive without bits than with bits. Happily, one does not have to be a professional horseman to reap these advantages. Because removal of the bit eliminates at least 50 problems caused by the bit, the art of both schooling and riding is simplified. There being no disadvantages or contraindications for use of the new bridle, essentially no learning curve for the horse, and very little for the rider, the advantages are readily available. Even the greenest novices are saved from themselves by a method of control that can neither hurt nor confuse a horse. Their progress is no longer blocked by bit-induced problems and they more readily become proficient riders because, as they are no longer inflicting pain, their horses are more compliant."

Conclusion

In order to truly be responsible for our horses we must see to their total health including their oral health. First and foremost in this endeavor is to feed as natural a diet as possible (remember the silica of a grass diet is vital for dental health), follow the **DYNAMITE® Program** for optimum nutrition, and try and prevent problems through timely dental checkups. Of course, as in every profession, there are some equine dentists who graduated at the top of their class and some at the bottom. As with looking for any specialist anywhere, be sure to ask for referrals from both general vets and satisfied clients in order to locate the best possible equine dentist in your area. ■