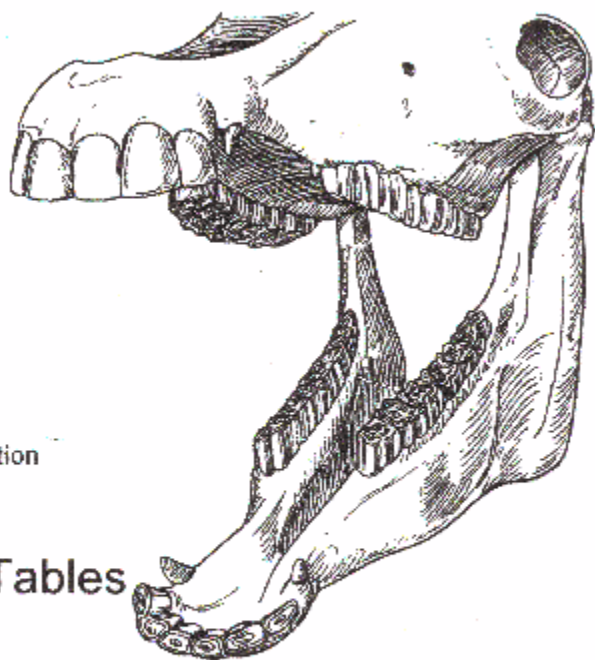


Q&A from a Horse Dentist



Q&A FROM A HORSE DENTIST

Grant D. MacKinnon C.Eq.D.

Certified graduate of the Academy of Equine Dentistry & proud member of the Association of Equine Dental Equilibration

The Dipsy Do's (don'ts) of Molar Tables

Don't change the table angles

Lately I have addressed many horses that have had previous dental work performed, (anywhere from two weeks to ten years ago) with one thing in common – their natural molar table angles had been altered.

As a point of reference, illustration 1 clearly shows what the natural molar table angle should be. The top molar arcade (row of teeth) is longer on cheek side and the bottom arcade is longer next to the tongue.

Illustration 1

It is an equine dentist's objective to establish and maintain a uniform molar table angle throughout the entire arcade. To alter the natural table angle to any degree is to set the horse up for malocclusion and malfunction of the grinding surface.

It is of pinnacle importance that a horse be able to move his jaw freely forward, backward and side to side, not only for comfort but function. This is what equine dentistry considers "understanding the oral bio-mechanics of the horse's mouth" or "the function of the horse's jaw".

Two of the most common places in a horse's mouth that inexperienced practitioners overlook (or incorrectly mechanically alter) is the very back molar (tooth #11, see illustration 2, left side) and the very front molar (tooth #6, see illustration 2, right side). Reason: the back tooth is a difficult location to get to if one does not use the proper instrumentation. As for the front tooth, it is much easier to access therefore many tend to take too much off and/or change the angle.

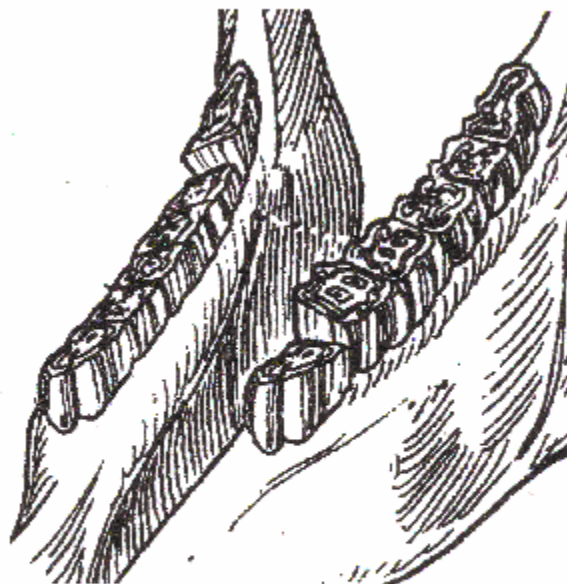


Illustration 2

New product inventions have come with the new found acclaim of equine dentistry and some practitioners are attempting to complete a performance float with something they consider an all-in-one rotary disc float. If proper dentistry could be performed with one instrument, I'd be using it. The fact of the matter, one instrument can't. A good example is illustration 1, the skull structurally widens at the back of the horse's throat; you would think there would be plenty of room for instruments to get all the way to the back but instead, the soft tissue of the throat and enlarged base of the tongue, leave little room for maneuvering. Not only that, but the discomfort of anything but food

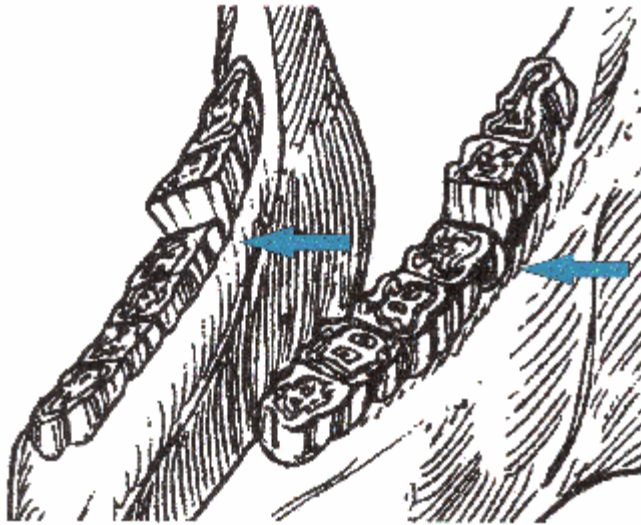


Illustration 3

process leaves a mark on any high surface so your dentist will know how much to grind away. If they leave a tooth higher than they should, your grinding surface does not work efficiently with the opposing side. Painful chewing loses its efficiency and with one phone call you're back in to get it fixed. Well, unfortunately for your horse, they can't vocalize their discomfort, but they can tell you by how they perform, react to your cues and eventually lose condition.

Changing natural table angles reminds me of a barn I worked at some time ago. I was referred to this facility after a local practitioner was called about an older mare losing condition. It was particularly hot and sunny; late in the day I was handed a skull of an older horse and was asked about the teeth. Before I could comment they related this alarming story: one of their older broodmares was losing weight and with winter fast approaching they called someone to attend to her. They were told it was her teeth. After the teeth were attended to they turned her out with the rest of the herd. She made the winter and again addressed her teeth in the spring. Not long after foaling, she died. They rounded up the foal, addressed its nutritional needs then caught up with the demands of cattle ranching. One day, on round up, they happened onto the carcass of the old broodmare. They marveled at how efficient nature was; fox pups were housed near by, growing fat and sassy but her skull happened to be sitting next to an ant hill. Surprisingly, the tissue was almost completely removed exposing the mare's dentition in its entirety.

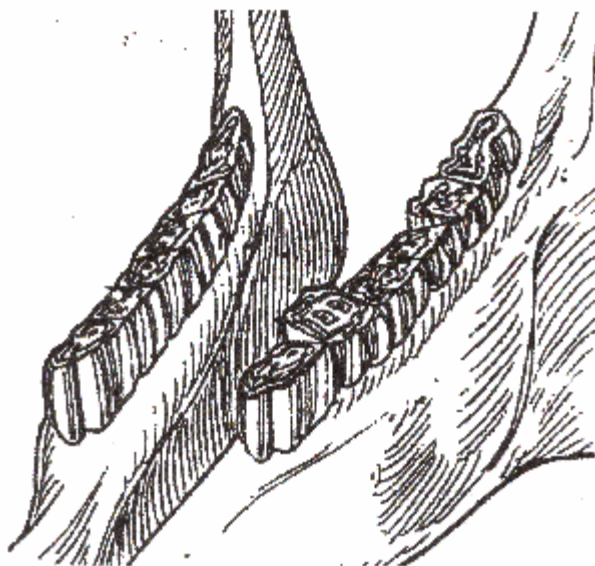


Illustration 4

would trigger a gag response to us and their cheeks and tongue automatically work to push instruments off the teeth in an attempt to remove them from their mouth. Horses however don't have a gag response but their tongue does work feverishly to remove the foreign object.

The front molar angle change generally come from being more accessible and ignorant of the critical nature of maintaining uniformity. When the angle of one tooth is changed the ability to eat and perform becomes compromised. This concept can easily be understood if you remember the last time you went to the dentist to fill a cavity, after completing the filling they put a piece marking paper between your grinding surface and asked you to chew from side to side. This

Because of how the teeth looked, they brought it up to the house. The alarming part of this story was that the skull I was shown had been addressed twice in six months.

Reaching for the skull I could see that the lower molar arcades were floated flat on the first four molars. The natural table angle had been removed and the last two teeth on each side were left virtually untouched leaving a dramatic ridge between the #9 and #10 (see illustration 3). A closer examination of the skull revealed a fracture between the last tooth floated flat and the tooth left untouched. The jaw bone near the fracture was discolored, most likely caused by infection that settled in the bone. I understand fully that old horses pass on, I also understand that it is conjecture on my behalf to say that the horse's death was caused by the break in this mare's jaw. However it makes me wonder that after an aged horse's mouth had been addressed (twice in six months) and the

molar tables were that uneven and coincidentally was where the fracture occurred. **Here are the facts:** it is impossible for a horse to chew with the natural table angles removed; it is also impossible for a horse to get enough grind with only two teeth for the body to get proper nutritional value out of their feed especially while in foal, it is possible for teeth to fracture when high points are left and if a tooth is left untouched as in this case, the horse will work harder to close it's jaw together in order to chew, undue stress can cause injury at the weakest point. Whether the lack of nutrition (inability to properly grind), infection in the bone or some other outside influence caused the death of this horse I will never know. However, the teeth left in this condition, especially after being seen by someone standing as an expert in the field of horse dentistry should never have occurred.

Illustration 4 shows some of the crazy things I have seen under the auspice of professionalism. Table angle changed, some teeth addressed, others not touched, one tooth left higher than the rest of the arcade. All of this is avoidable and the reason why I harp on horse owners seeking after a certified equine dentist. In order for an individual to be certified as an equine dentist they must know how the teeth erupt and how the jaw functions in relation to chewing and performing and they must prove competence in removing sharp edges without changing the table angles. Improper angle changes are the number one reason for horses to ride and eat worse after dentistry than before.

Additionally, the top and bottom arcades must be a mirror image in order to grind effectively. When the angles are altered it not only effects the individual tooth that had been altered it inadvertently changes the angle of the opposing tooth, prematurely wearing teeth and locking up the forward/backward or side to side movement of the jaw. A horse's dentition is literally his longevity. If he can't chew, he can't eat. I can confidently say that there is not an over abundance of eager horse owners willing to feed a mash three times a day to their horse after their teeth have been prematurely worn away. When angles are altered or removed from teeth, even if a certified horse dentist is able to re-establish the angle, several years of dentition are removed in the process.

All of this tells me that uniformity in the molar table angle and level are of great importance to the function and comfort of the horse. Remember, all undesirable actions are compensatory to some point of pain and attributes to a horse's balance and ability to perform. If you are experiencing undesirable behaviors while riding your horse, have a certified equine dentist take a look, to get the answer '*straight from your horse's mouth*'.

If you have a question about your horse's teeth and how they might relate to his health or performance call 1-306-747-2724, 1-403-936-5394, 1-208-420-2701 or e-mail mackequine@sasktel.net.