

Seeing is Believing

Do you know what's in your horse's mouth?

By Toots Banner, D.V.M.

Good nutrition, a comfortable place to live and good medical and dental care are top concerns for horse owners. Whether you've owned horses for 30 years or just purchased your first, this article is written to help you understand what takes place inside a horse's mouth – and how it can directly affect equine performance and comfort levels.

During the past 10 years, the field of equine dentistry has changed significantly for the better. Just as human dentistry evolved from the days of the Wild West (where teeth were extracted after merely a stiff drink for the patient), equine say cheesedentistry has recently had more advances in equipment, procedures and research than ever before.

We better understand how different dental irregularities affect the ability to chew, gain weight and create overall comfort during training sessions. Ultimately, good dentistry enhances the performance in the equine athlete.

What's Inside?

A normal adult horse with a full set of canines and wolf teeth has 44 pearly whites, which means there are 32 teeth behind the front teeth or incisors.

A full examination includes looking for any damage from sharp teeth, (including ulcers in the side of the mouth,) and irregularities such as hooks, ramps and waves, which are changes in the chewing surface .

To examine all these aspects, your horse should have the same complete exam as your family dentist practices on you, with a bright light and open mouth, prior to beginning work. Anyone practicing equine dentistry without a speculum and a good light source has a very real chance of missing problems and irregularities.

Age and Schedules

The first age to check a horse's teeth is within the first two weeks of life, because the newborn will erupt 16 baby teeth in that period. It is uncommon that any dental procedures would be done at that time, but if a deformity (such as an under-bite or overbite "parrot mouth") are discovered, then a plan of action for correction can be established. It is important to have the horse examined prior to biting and training (usually at 18-24 months) to balance the mouth and remove any wolf teeth. These deciduous "baby" teeth can get incredibly sharp – like icicles – which definitely have an effect on the comfort with the bit and reining. If you add a tie-down or any other training aid that causes the cheek to be pushed against these sharp teeth, it's no wonder that head tossing is a frequent

problem.

A youngster will begin losing baby teeth at approximately 2 ½ years of age. This natural progression starts with the central incisors, and is followed by the second and third premolars (referred to as the #1's, 6's & 7's in dental terminology). This adds up to 12 deciduous teeth, in a 6-month period, that are being pushed up out of the gum by the permanent teeth. These deciduous teeth are then referred to as "caps," which sit on top of the permanent teeth until the tooth is completely released from the gum. The cap often stays attached to a portion of the gum until the tongue or chewing push it free. Some caps don't release but are loose and packed with decayed feed material and must be removed manually. As the #6's come into wear, then the rostral (or front edge) is rolled, which is called a bit seat. This is done on both the upper and lower #6's and is performed by your dental practitioner to minimize any discomfort associated with bit pressure against the soft fleshy oral tissue against the tooth. Beware that some practitioners might remove up to half of the tooth while doing this procedure; this is both unnecessary and reduces the amount of chewing surface available.

Older Horses

Older horses frequently have the most severe dental problems. Dental irregularities that exist in their mouths have probably been there since the permanent teeth erupted. Unfortunately, this means they have probably ground against each other for years, which exaggerates the irregularity.

Patience and balance are the keys to getting and keeping these horses comfortable. All horses need thorough dental exams and maintenance yearly, on average. Some require more frequent procedures, due to irregularities such as a "parrot mouth," or a horse that cannot be fully corrected in a single visit. Dentistry should be considered a regular part of your horse's oral care just as the farrier is a regular part of your horse's hoof care.

Technology is improving, and even better and safer equipment is being developed each year. Through research and technology, the latest and best treatments are available for your horse's teeth.

Always Movinghorse teeth

A horse has what is called "hypsodont teeth" that wear and erupt continuously during their lifetime. They start out roughly 3 inches long and are down to ½ inch by the time they are 25-30 years old. The surface of the tooth that wears or chews is the occlusal surface that is the same surface that has many of these same previously described irregularities. A dental practitioner should alter the teeth as little as necessary to reduce

the irregularity, provide balance to the mouth and comfort to the horse. It is also important not to round or dome the tooth because it is difficult for the horse to chew roughage with a cue ball. The chewing surface should be leveled with rounded edges. There are certainly instances of those doing equine dentistry taking off too much tooth (it is the operator, not the tools, that cause this) as well as those who don't take off enough to balance, which is why good visualization and equipment is essential for today's equine athlete.

The concept of doing thorough equine dentistry is very important for your horse. Thorough equine dentistry includes floating, balancing the occlusal surface, and balancing the mouth.

Floating

"Floating," is rasping or blunting the sharp points that form on equine teeth. The points are usually on the cheek and tongue sides and can cut, abrade and pierce the surrounding soft tissue. The horse's upper jaw is wider than the lower jaw, and so it is offset and has a chewing angle of 10-15 degrees. Floating can be done with motorized equipment or hand floats. Hand floats can do most of the work that motorized equipment can, with some exceptions.

With motorized equipment, the procedure can be cleaner, less irritating, more efficient and quicker, which results in overall comfort for your horse. Just as we don't want to sit in a dentist's chair any longer than necessary, your horse's patience also runs out if the procedure goes too long.

Balancing the Occlusal Surface

After floating, the occlusal, or chewing surface, must be balanced. As I referred to earlier, the hooks, ramps and waves are the peaks and valleys that have occurred over the months and years of tooth eruption. Few horses have a level chewing surface, so most will need some degree of balancing. I have often performed dentistry on a horse for an owner that has had the teeth "floated" just a few months earlier. The horse may be still tilting its head, dropping feed or continuing with biting problems. The big awakening comes when the horse is sedated, a speculum is placed on and opened then a good light is shown into the mouth. To the observer's horror, the large rear hooks, mid-arcade wave or other irregularities that still remain in the mouth.

Balancing the Mouth

There are three main areas of interest regarding balancing: the incisors, the premolars/molars and the TMJ or temporomandibular joint. The TMJ is where the lower jaw or mandible hinges on the head, allowing the horse to

graze and chew. For the mouth to be balanced there must be even contact with all the teeth, including the incisors. If the rear teeth are floated properly and yet no attention is given to the incisors, this often leads to the incisors sliding across without any molar contact. If the incisors are reduced too much, this can create strain on the TMJ ligaments, causing soreness. It is important to make sure that all three areas are working together in unison.

Increasing Awareness

Over the past decade, tools have become available for equine dentistry, such as motorized equipment with specially designed guards to protect the oral cavity from abrasions and irritation.

Carbide blades, and now diamond chip blades, fit on hand floats and motorized floats for smoother "floating." Special units are used for periosteal treatment on dental pockets and gingivitis, as well as air abrasion for cleaning and equipment to do restorations. The field of equine dentistry is advancing to the point that there is now an advanced study or fellowship for equine dentistry for veterinarians through the American Veterinary Dental College.

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