



Equine Dentistry is making the transition in the horse

industry from what we once knew as a "float" to what is now known as a "complete equilibration" or "three-point-balance". Horse dentistry is now being performed at new levels of professionalism and the basic float just won't do. More and more competitive horse owners have realized the importance of putting their horse into "balance" often making the difference between winning and losing.

Three-point-balance today is the same as what was known by horse dental specialists in the late 1800's when horses were a vital integrated part of daily life. A "float and balance" was considered the proper way to maintain horse's health and teeth. Unfortunately, the horse was turned out and forgotten when they were replaced by the automobile; and oil changes became common place instead of a routine dental check up for the horse. It was only after a good many years pleasure riding developed popularity with those of wealth but the normal chewing pattern of a horse still created sharp points on the edge of their molars due to the unique shape of their teeth becoming "points of pain". When a halter or bridle was introduced, inadvertently the cheeks, tongue and pouchy flesh of a horse's mouth were pushed into these sharp points. The horse would indicate they were in pain by tossing his head, pushing away with their head, pulling back, nosing out through the bit, and becoming difficult to catch, bridle or halter. Unfortunately, a quick scrub on the sides of these "cheek teeth" became what we know today as a "float" but was only a partial answer to many horse related riding problems of the day. Since horse's teeth always grow, sharp edges and new points of pain develop in only a few short months. In recent years, the horse industry has boomed and the demand for professionalism and proficiency in the horse dental field encouraged the development of the equine dental trade. It is through the demand of horseman world wide that a clear understanding of horse dentistry became a requirement.

Understanding three-point-balance

So, what is the ancient practice of three-point balance and how does a horse lose it's "balance"? It is important to first understanding the difference between "three-point-balance" and a basic "float" that will help us understand why expectations have changed. "Floating" teeth merely remove sharp points from the sides of the teeth, next to their cheeks but a "three-point-balance" not only removes the sharp points from all of the horse's molars but insures the horse's jaw, molars & incisors are in balance through a specific process of adjusting the chewing surfaces, removing irregularities and cutting the incisors down to meet in alignment with the molar table. This allows the three points of balance an opportunity to work comfortably together.



Severe Smile Mouth



Incisors Etched Prior to Cutting



Held Open to Show the Finished Work

Captivity is a horses teeth worst enemy

Captivity alone has caused the need for regular dental care. Observation of horses in the wild show researchers that their teeth, as well as their feet, are properly maintained by the environment in which they choose to dwell. While in captivity, we as conscientious horse owners must care for their teeth much the same as we care for their feet. If a horse's teeth are left unattended, many issues become compromised and a downward cycle of poor performance, health, & behavior begin to be a problem.

Hooks & ramps lock up a horses' jaw

One of the most common ways for a horse to lose balance is directly linked to the way they are fed. The understanding comes from knowing that horses use their molars to chew every bite of food and with every "chew", small particles of tooth surface from the molars are ground away. However, tooth particles from the incisors are only ground away evenly when a horse nips grass as a daily food source. Therefore, when horse owners provide hay, pellets or grain, the nipping is done for them. Eventually a horse's incisors are so long that they prevent the horse's molars from grinding together properly. Incisors that are too long cause soreness in and around the joint that swings their jaw. The farther the molars are held apart by overgrown incisors, the harder a horse has to work at chewing their food. This causes

pain in a horse's joint as they are forced to chew wider and harder than normal. An easy comparison of understanding would be the soreness we would feel after chewing a large piece of bubble gum, "all day".



Fact is that the only time a horse's teeth line up is when their lips are on the ground (the way they were designed to eat). For whatever reason, horse owners feel the need to provide food in bunks, above ground level. This method of feeding elevates their head and forces their jaw back, knocking the three points of balance out of alignment. Since they grind small particles of their molars with every chew; an elevated head causes their molars to wear unevenly. This uneven wear pattern develops hooks on the front of the upper molars and ramps on the back of the lower molars, literally locking their jaw out of alignment. A horse suffering with hooks and ramps forces a horse into a tug-of-war with the rider as they try to find and keep a position of comfort; therefore, as speed increases when riding, the head comes up and the nose moves out in front of them (generally to the level of their feed bunk). Head tossing, nosing through the bit & unable to turn without a stiff neck are all common and annoying behaviors caused by hooks and ramps. Behavior problems differ with every horse and their level of tolerance to pain.



Severe Hook



Severe Ramp



Protuberant Tooth

Research findings, encouraging

"Three-point-balance" research stands firm, encouraging its reintroduction in North America and is becoming routine to thousands of horses. In-depth studies of horses with their teeth routinely and correctly balanced, grind their food correctly providing horses with good nutrition. Horse nutritionists stand firm with sound statistics of a horse's ability to grind up feed and the link to properly processing and passing feed evenly through a horse's system (colic). The research shows that when food is properly processed it reduces voids throughout the horse's system. Good nutrition therefore provides for better health. Healthy horses in turn have stronger hooves, a better coat and a stronger resistance to illnesses. Horses with their teeth routinely and correctly balanced perform better; when they are able to freely move their jaw, the horse begins to listen to the rider and not the pain in their mouth. As a matter-of-fact, studies are now showing an increased number of professional trainers that are finding great success when they have their horse's teeth balanced prior to introducing equipment or getting on their back for the first time. Another research study has recently proven that when the teeth have been "balanced" in broodmares and stallions, breeding programs become more consistent showing higher conception rates and fewer losses.



Displaced Tooth, Problem Started from Youth



Side View Shows the Severe Displacement



Displaced Tooth Pushing into the Laminae



Extra Tooth Removed, Incisors Finished

Comprehensive dentistry is important

Dr. Clay Stubbs, D.V.M., specializing in equine for over 25 years believes that comprehensive dentistry for horses is as important as dentistry for people. A horse's mouth is complicated and finding a qualified Equine Dentist is a must when it comes to proper balance. Equine specialists note that ensuring the health of your horse's teeth rank right up there with good nutrition and regular hoof care but preventative maintenance by a competent horse dentist is the key to a horse's good health and longevity.

Look for a Certified & Qualified Equine Dentist

Why is it so important to have a "horse dentist" complete the dental examination? Whereas it is in humans; doctors and dentists specialize in different areas of the body. Horse dentistry is very intricate, and like human specialists, veterinary and dentistry work is equally specific. For example, equine dentist certification requires a minimum of 500 hours in the horse's mouth and must be proficient in all areas of dentistry. An equine dentist must know the specific angles of the molars for proper lateral (side to side) grind. Molar tables in a horse's mouth are not flat and if they are floated flat, a horse will be unable to grind their food. An equine dentist must also know the incisors degree of angle in relationship to the bars and molar tables. If the angles are made too steep the molars won't touch, making it difficult to chew; if the angles are not steep enough the incisors will not be able to come together, making it nearly impossible to nip grass. An equine dentist must know the vital importance of accurately aging a horse. Teeth are soft at certain ages and hard and brittle at other ages. Specific instruments used at some ages should be restricted at others. An equine dentist must know young horses need extra care. A young horse is changing 24 teeth between one and five years old. They shed 24 baby teeth and find homes for 12 additional permanent teeth in five years, making 36 teeth that they need to find space for. Some baby teeth refuse to fall out on their own and can easily act as splinters in a young horse's mouth. Bones are setting and teeth are soft therefore extra care should be taken when looking into the mouth of a young horse. Horses between the ages of two and a half and five years old should be looked at every six months to ensure all their teeth are meeting in the middle. Wolf teeth and canines can also be a problem when biting a horse. You can quickly find your horse unable to grind their food, nip off grass and still suffer from pain if the horse dentist is not certified and qualified. Dr. Stubbs says "I can't stress enough how important it is for horsemen to find a competent equine dentist." Unfortunately, there are not many certified horse dentists in Canada as of yet and they are even more difficult to find in rural areas.

Grant D. MacKinnon, C.Eq.D. is a certified equine dentist and one of only a handful of qualified dentists traveling and specializing in equilibration or three-point-balance. MacKinnon received his training from the Academy of Equine Dentistry, one of a few specialty schools, located in Glens Ferry, Idaho. As of this writing, Grant has over 30,500 hours of practical dentistry experience that he brings with him while working with veterinarians, training facilities and individual horse owners alike. Grant has been invited back by the Academy to teach others from around the world, the fine art of Equine Dentistry for the last eight and a half years. He continues to find himself intrigued with new developments in the ever changing field of equine dentistry and strives to continually learn as he teaches. MacKinnon is committed to strengthen his work on Equidae with the sole intent of improving the health, performance and comfort through the horse's mouth. MacKinnon is committed to his dental practice and notes, "proper dental care with regular maintenance is such a small part of the overall investment we make to ensure a comfortable and cooperative riding companion".



MacKinnon's horse dentistry business, MacKinnon Equine Services, Ltd. provides a traveling educational clinic called "Behavior Problems & Horse Dentistry, Does My Horse Need a Dentist?" The clinic addresses questions pertaining to poor performance, behavior problems and poor condition that "might just be his teeth!"

MacKinnon Equine Services, Ltd.

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Behavior Problems & Horse Dentistry

Does My Horse Need a Dentist?



- ✓ Poor Performance
- ✓ Behavior Problems
- ✓ Poor Condition

It might just be his teeth!