

s cars, trucks and tractors took over horses' jobs in the early twentieth century, the emphasis on ensuring the health of a horse's mouth declined. According to veter-

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inarians specializing in comprehensive equine dentistry and oral health, by the late twentieth century, quite a bit of experiential knowledge was lost.

"Back in the late 1800s, equine dentistry was pretty high-quality because of all the horses being used for power transportation and fieldwork," said Dr. Scott Marx of Advance Equine Dentistry based out of Parker, Colorado. "A lot of what we are doing is not new, but it kind of started being rediscovered, if you want to call it that."

Dr. Marx started his mobile practice that focused on comprehensive

Mythbusting modern comprehensive equine dentistry

PHOTOS AND STORY BY LINCOLN ROGERS



equine dentistry in 2000. Before that, he was an army officer and paratrooper who then moved on to earn a degree from Colorado State University's College of Veterinary Medicine in 1995. In that timeframe leading up to starting his practice, Dr. Marx experienced and observed a lack of knowledge and focus on the field regarding comprehensive care of a horse's mouth.

"In the 1990s we started looking at it again," said Dr. Marx. "The problem in the early stages of us relearning equine dentistry is we didn't know as much as we thought we knew, so we did a lot of things we shouldn't have, at the time. We looked at the teeth like a block of wood rather than as living tissue and we looked at it oftentimes as there was a set standard that every mouth should look like. We had our set of criteria and every horse was going to follow that criterion when we were done. The

problem with that is that every horse's head isn't the same. So things we might have done then, we are not going to do now, because we know better."

#### **MUCH ADVANCEMENT**

Although the techniques, tools, and knowledge in the field of equine dentistry are much advanced from the mid-1990s, Dr. Marx and Dr. Kari Sanderson's mobile equine dentistry business still works hard at educating and raising the awareness of horse owners about the importance and benefits of comprehensive equine dentistry. Sedating a horse, resting the horse's head on a pad, using a speculum to keep their mouths open, employing lights, scopes, and motorized tools are all a part of the current practices used by veterinarians like Dr.'s Marx and Sanderson. As an expert in the field of comprehensive equine dentistry - Dr. Marx lectures and conducts equine dentistry seminars for veterinarians and veterinary students internationally and is also licensed in Australia.

"One of the reasons for routine maintenance on a horse – I am going to say this assuming the dental work is done thoroughly and completely and not just somebody scraping a rasp on a tooth – is we know we are going to relieve pain," explained Dr. Marx. "We are eliminating the pain from cuts on the cheek and cuts in the tongue. Another aspect is that we can make the teeth last longer," he added. "If we see a tooth that is starting to get over long, we can take that back. If we take down an overgrowth, the opposite tooth will grow out and it will balance out between the top and bottom. Once we get those teeth evened out, that will distribute the chewing forces across the rest of the



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arcade (rows of teeth). If we equalize those chewing forces across all the arcades, it actually slows down the eruption rate, so it lasts longer that way. Plus we are preventing premature wear of the teeth."

Adding to the benefits Dr. Marx knows comprehensive equine dentistry will provide, he also described benefits he believes better equine <u>oral health</u> may provide.

"We may increase the handling of the horse," he said. "Oftentimes what will happen with a performance horse, and this varies among horses, but if they start getting a little discomfort in their mouth, they are going to fight the bit. And when you are talking about winning or losing by hundredths of a second, you just lost. So we have a lot of people with performance horses, as soon as the horse isn't doing as well as it did, we will come in and work on the teeth and the performance will go back to what it was. Whether it is barrel racers, hunter jumpers, dressage, or western, we see that a lot."

Another benefit of proper equine oral health concerns feed. "Another thing, if they can chew better, you are going to have a higher feed efficiency," said Dr. Marx. "So not only do they have the potential to gain weight, but they also decrease feed bills because they are not going through as much hay."

"We make such a difference with so many horses," said Dr. Sanderson, who obtained her Doctorate degree from Colorado State University in 2012 and has been working with Dr. Marx the last six years. "What I like best about doing this is knowing we are doing right by the horse and being able to recognize the little things that can make such a big difference. I enjoy being able to help the horses in that respect."

Others in the field, such as Dr. Marc McCall, a veterinarian with thirty-five years' experience and who works out of Cherry Creek Equine in Elizabeth, Colorado, stress the importance of comprehensive equine dentistry. "I think it is the thing I do that relieves more pain for horses than any other procedure," said Dr. McCall. "It is an essential part of owning a horse and I think it is a hidden part of the horse to a lot of people."

"It is pretty dang important," agreed Ashley Konig, an experienced Veterinary Technician with Colorado State University's Dentistry and Oral Surgery Service team. Konig was

authorized to speak for CSU's equine dentistry program for this article. "We use a scope to actually look in a mouth here at CSU, so we catch a lot of stuff. If you can catch things early, it is much better for the horses, as then it doesn't involve a sinus situation. A lot of times we have to do sinus flushes, as their teeth have abscessed up into their sinus cavity. With equine dentistry, preventative care is key."

#### **MYTHS AND MISCONCEPTIONS**

Despite advances made in the methods and tools used for equine oral health, myths and misconceptions remain among horse owners and practitioners who hold outdated views on the subject. Raising awareness and educating against those myths is an ongoing process for experienced professionals in the field.

"We are still at a point where many horsemen have been indoctrinated by an older philosophy on dentistry to think that floating a horse's teeth is equal to dental care, but those are two different things," said Dr. Jack Easley of Easley Equine Dentistry in Shelbyville, Kentucky. Dr. Easley is a recognized expert in the equine dentistry field, with a resume' that includes thirty-plus years of lecturing and promoting equine veterinary dentistry throughout the world and serving on the editorial review boards for Equine Veterinary Education, Equine Veterinary Journal, and the Veterinary Dental Journal. Dr. Easley has also literally written the book on equine dentistry.

### **MYTH:** Floating a horse's teeth are all the dental work they need.

"Floating a horse's teeth is taking off some sharp enamel points and all horses have sharp enamel points," said Dr. Easley. "You are not diagnosing dental disease by floating the teeth. It is like brushing your teeth and thinking you are never going to have a cavity or a cracked tooth or periodontal disease. Horses are still going to have problems because of crooked teeth, teeth that are out of place, teeth that don't develop normally, or a cracked tooth, and those don't get diagnosed with a routine floating. With a good detailed oral exam, you can identify most of those problems early on and get them



Colorado's Dr. Scott Marx, and Dr. Kari Sanderson's mobile equine dentistry business works hard at educating and raising awareness about the importance and benefits of comprehensive equine dentistry.

treated before the horse is showing outward signs of dental disease."

# MYTH: A good veterinarian doesn't need to use sedation and/ or a good horse doesn't need to be sedated for dental work.

"It is impossible," stated Dr. Easley in regard to doing a thorough oral exam without sedating the horse. "You can't have the horse relax with a mouth speculum in and the mouth opened wide and be able to go in with a dental mirror and examine the teeth in detail. There is no way anybody can do that on an unsedated horse. You can do a cursory examination on an unsedated horse and say that the horse has a problem, but you can never say a horse doesn't have a problem with an unsedated oral exam."

"People gauge the quality of the work based on whether or not they use sedation," said Dr. Marx about the myth. "I could work without sedation, but I would do a bad job. If we are going to do a true examination, we have to sedate the horse, we have to put on a full mouth speculum, we have to have a bright light on and we have to use a mirror. If we don't do

that, it is not that we may miss things, but we WILL miss things."

# MYTH: Motorized instruments take off too much tooth or they cause thermal (heat) damage to

"People that either don't understand the instruments or learn how to use them perpetuate this myth," said Dr. Marx. "A motorized instrument does not take off too much tooth, the operator does. If the operator knows what they are doing, it is gentler on teeth than a hand instrument. If we are using a disc, (tools with water cooling and suction), it is much gentler and I can go up into the mouth and see a spot on a tooth and I can go in and feather it quickly. One study showed it took at least two-and-half minutes on one tooth before the tooth would heat up, and this is with a non-irrigated instrument, while another study showed somewhere around 35 seconds per tooth. We have timed this and typically we are on a tooth for one to two seconds."

"I think the thing people need to keep in mind is these better designed, more efficient power tools used by

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a properly trained individual are extremely precise instruments that can do high-quality work in the mouth," said Dr. Easley. "You can damage horses with power tools if you use them indiscriminately or overdo what you are attempting to do – the same kind of damage hand floats can

do if you are not careful and precise – but what they have allowed us to do is very precise, good quality dental work, much better than we could do when we just had hand tools at our disposal."

According to Dr. Easley, current methods and tools should make the process positive for the horse. "When

you get through doing an oral exam and doing a routine dental floating or correction of any dental wear abnormalities that the horse has, the horse should always be more comfortable the day after you do that, not painful the day after you do it," he said. "It doesn't cause the horse to be uncomfortable or the mouth to bleed or anything like that to do this work. If that is the case then you are not being very careful with what you are doing. Horses should eat better the next day, not worse the next day."

"We spend a lot of time on owner education," said Dr. Marx about their appointments. "We want them to understand what we are doing and why we are doing it. We really like it when the owner is there because we want to show them what we are doing. If horse owners understand what we are doing and why, and they have seen it, then they understand the importance of it."

"It is an important area of equine health, and most owners never see inside the horse's mouth," summed up Dr. Easley. "I think that is one of the reasons why there are so many myths and so much superstition about equine dentistry is because somebody can float a horse and tell an owner anything and they will never know the difference because they never look in the mouth. I think it is important that horse owners understand why their horses should have regular checkups and have their teeth taken care of regularly."

### Comprehensive Equine Dentistry

### Will

- Relieve oral pain
- Extend tooth life

### **May**

- Improve chewing ability/feed efficiency
- Result in weight gain
- Improve performance
- Resolve biting issues

