

Equine Dentistry

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Let's first talk about anatomy (ugh!). Horses teeth are very different from human teeth due to the continual eruption of the teeth through the gums throughout the horse's life. The teeth are worn down by chewing. When you lift a horse's lips, you see the incisors, these are the teeth used to grasp and shear grass and hay. The teeth that are not easily seen are the molars and premolars (cheek teeth). These teeth grind up food into small pieces. Like humans, horses have deciduous (baby) and permanent teeth.

A general time frame for the eruption of a horse's first (deciduous) teeth is:

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| • 1 st incisors (central) | Birth to 6 days |
| • 2 nd incisors | 6 weeks |
| • 3 rd incisors | 6 months |
| • Premolars | birth-14 days |

The adult (permanent) teeth come in at the following ages:

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| • 1 st incisors (central) | 2 $\frac{1}{2}$ years |
| • 2 nd incisors | 3 $\frac{1}{2}$ years |
| • 3 rd incisors | 4 $\frac{1}{2}$ years |
| • Canines | 4-5 years |
| • Wolf teeth | 6 months |
| • 2 nd premolars (cheek teeth) | 2 $\frac{1}{2}$ years |
| • 3 rd premolars | 3 years |
| • 4 th premolars | 4 years |
| • 1 st molars | 9-12 months |
| • 2 nd molars | 2 years |
| • 3 rd molars | 3 $\frac{1}{2}$ years |

Knowing the eruption times of the teeth can give you a good guideline of how old a horse is. Another landmark that can help you age a horse is the *Galvayne's Groove*. This is a groove that forms at the gum line of the buccal (outside) surface of the 3rd upper incisor when the horse is 10 years old. It slowly moves down the tooth until the horse is 20 years old. For example, the groove should be $\frac{1}{2}$ way down the tooth when the horse is 15 years old. The upper 3rd incisor also forms a hook on the corner at 7 and 11 years old. As the horse ages, their incisor teeth get longer, more acutely angled, (stick out more), and more triangular.



I am commonly asked about canines and wolf teeth... Who gets them? Which teeth are they? Should they be removed? Wolf teeth are small, nonfunctional teeth located just in front of the cheek teeth. They are most common on the upper jaw, but rarely can be found on the lower jaw. There is no sex predilection for wolf teeth, and the horse can have one, two or no wolf teeth. They come in at 6 months and can vary in size. A veterinarian commonly extracts wolf teeth before the horse is bitted to prevent any problems with bit interference. This is usually done during the horse's first dental exam (2- 3 years old). The canines

are located midway between the incisors and the cheek teeth, primarily in males, but occasionally in females, coming in at 4-5 years old. Their original function in the wild is for fighting, which is why they are predominant in males. The canines are not removed, but a veterinarian may reduce them if they are long or sharp.

Routine Dental Exams and Care

Many people ask why horses need their teeth floated if they lived for thousands of years without dental exams??... Because humans have domesticated horses, we have changed their regimen from continual grazing to scheduled feedings with processed grains and hay. Moreover, because man has removed "natural selection" of horses with the best teeth (those with the best teeth chew their food better; therefore, digest their food better, and are stronger and faster). Many domesticated horses today have poor teeth conformation and are more predisposed to sharp teeth and teeth problems. Not long ago, it was almost unheard of for a horse to live in its 20's. Now, it is very common to have many horses living into their late 20's and early 30's. I truly believe this is due to better dentistry, food, modern medicine and surgeries now available.

A horse's upper jaw is wider than the lower jaw. Thus, if the teeth are not evenly worn down, sharp points can form on the outside surface of the upper molars and premolars, and inside surface of the lower jaw's molars and premolars. These points can cause pain, and even ulcers, when the horse chews or is bitted. This causes decreased food digestibility, dropping food, having large undigested food in the manure, or weight loss if it's severe. In performance, sharp enamel points can lead to head tossing, resistance to the bit, or less than optimal performance. It is a common misconception by owners that if the horse's body weight is good, then the horse's teeth are good too. In many cases, the owners are just compensating for poor or sharp teeth by feeding the horse extra feed to offset the reduced feed digestibility.

This is where your veterinarian comes in. "Floating" is a general term used to describe equine dentistry. It has evolved extensively in the last 25 years. Floating teeth used to be a simple procedure where "floats" (hand-held rasps) were used to rasp down and smooth the sharp edges of the teeth. Now, Powerfloats and specialized power dental tools are used to make this procedure better and easier for the horse and veterinarian. This has advanced equine dentistry to a new level where the overall dental procedure is improved and abnormalities can be easily corrected.

During the dental exam, sedation is commonly used to make the procedure go more easily. It relaxes the horse, keeps the horse quiet and still, and prevents any negative memories by the horse. Speculums are commonly used. There are many different types of speculums- we prefer the full-mouth speculum to keep the horse's mouth open during the exam. It is not painful to the horse, allows better visualization, and prevents the veterinarian from accidentally being bitten. During the exam, the veterinarian will also check for hooks, retained caps, wolf teeth, teeth alignment, ramps, waves, and infection.

Hooks are overgrown molars or premolars that are caused by uneven alignment of the teeth. These hooks can interfere with chewing, the bit, or even penetrate into the horse's gums. They are usually located on the first or last cheek teeth. These can be corrected with a specialized burr or powerfloat. Retained caps are deciduous (baby) premolars that are not shed. These can be easily removed. Ramps are the sloping of the molars and premolars due to uneven grinding of the teeth. This can be corrected with the powerfloat. Waves are the up and down uneven sloping of the cheek teeth- like "waves" in the ocean. Again, this can be balanced during the dental procedure. During the oral exam, your veterinarian will also check for any loose teeth or infection. Signs of infection include foul breath, nasal discharge, facial swelling, slow mastication or decreased food consumption.



We perform incisor corrections, canine reductions and occlusion balancing. Incisor corrections are performed when they are uneven or injured. Canine reductions are the reduction and/or rounding of the canines if they are too long.

Horses should have a dental exam performed annually starting between ages 2-3 years old. A common misconception by owners is that if the horse is young, a dental exam is not necessary. On the contrary, young horses' teeth actually tend to be sharper than older horses. Also, it is best to "fix" any problems while the horse is young rather than waiting too long making it difficult and costly to remedy any problems. Keeping your horse's teeth and mouth healthy will result in better feed utilization, better performance, and a healthier, longer life.

Dr Traci Hulse is an experienced Equine Dentist in both routine and advanced equine dentistry.