

April 23, 2006

**Section:** Tri-Valley

**Article ID:** 3741640

## Mouth hygiene going to the dogs

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HERE'S something to chew on: by age 3, approximately 80 percent of dogs and cats have some degree of periodontal disease. Periodontal, as the term implies, refers to the tissues surrounding the teeth, namely the gingiva (gums) and jaw bone. For some pets, periodontal disease is mild; for many, it is severe, and for all of them it can lead to painful, irreversible damage to the oral tissues as well as other vital organs. This week's column will discuss the significance of this condition and what you can do at home to help prevent it.

How does periodontal disease happen? "Too easily" is the answer most veterinarians and dentists would give. Basically, all teeth are constantly bathed in slightly sticky saliva that contains normal oral bacteria. This mixture of salivary proteins and bacteria sticks to the teeth naturally and is referred to as "plaque".

The layer of plaque on the teeth may be invisibly thin at first, but plaque itself is all that is necessary to start the development of periodontal disease. The bacteria in the plaque begin to infect the adjacent gingival tissue, causing swelling and detachment of the gum from the side of the tooth and the surface of the underlying jaw bone. This creates a larger hiding place for bacteria, behind the edge of the gums.

But that is only the beginning. Minerals from the food, as well as those within the saliva itself, begin to add to the plaque layer on the teeth. Plaque quickly begins to harden and becomes calculus, or, as it is more commonly known, tartar. And we're not talking about the sauce here, folks. We are talking about a layer of mineralized plaque that is hard enough to wear down the bristles of a toothbrush, rather than the toothbrush wearing down the tartar.

Brush teeth frequently, before the plaque begins to harden into tartar, and the bristles of the toothbrush have a fighting chance. Wait until it's tartar and that layer of slime is here to stay.

And so goes the cycle. The tartar is constantly acquiring a new layer of plaque on its surface, which is constantly mineralizing and becoming thicker, and pretty soon the teeth have a visible layer of brownish rock covering the enamel. The problem is generally far worse for a dog or cat on the back teeth rather than the front, where it is easier to detect.

Most importantly, this occurs not just where it can be seen, but under the edge of the gums where bacteria in the plaque and tartar can proliferate relatively undisturbed, infecting the gums and jawbone, and ultimately leading to gum recession and tooth loss.

From there, the bacteria gain access to the bloodstream, which can lead to damage to the liver, kidneys and heart. Studies in humans and companion animals have repeatedly documented these secondary effects.

And did I mention halitosis, which is bad breath? Halitosis arises from bacterial by-products in the mouth. If your pet would continually benefit from a breath mint, this likely points to something far more serious than the odor itself: it probably indicates periodontal disease. Unfortunately, the fact that the term "dog breath" is commonplace testifies to how pervasive the condition is in our

companion dogs and cats.

So what can you do about this foul-mouthed condition? Well, bear in mind that a tooth does not know whose mouth it is in. The same way you take care of your teeth applies to your dog or cat, also. So perhaps the answer is found in the following question : Brushed your teeth lately?

You gotta brush 'em. And I'm not talking about their coat, I'm talking about their teeth. Special toothbrushes are made for dogs and cats that make the brushing process easier for pet owners. There are even small, thimble-like "finger toothbrushes" that have bristles on the outer surface, allowing a pet owner to simply use their finger as the toothbrush. But a regular toothbrush — youth-size for cats and small dogs, regular size for larger dogs — works just fine.

As for tooth

paste, I generally recommend that my clients use one of the veterinary toothpastes available (yes, it comes in chicken flavor!), but if a pet doesn't like it, then using plain water while brushing is better than not brushing at all.

For cats, I find it easiest to gently pet the corners of the mouth a few times with my thumb, which they enjoy. After 3 or 4 reassuring strokes , I apply a bit more pressure with my thumb and pull back on the corner of the mouth, exposing the back teeth. At that point, with the other hand, I gently scrub the outer surface of the back teeth with the toothbrush or finger toothbrush. I try to go as far forward as I can in order to brush the front teeth as well, although the back teeth tend to accumulate more plaque and tartar.

For dogs, I find it easiest to hold the muzzle closed with one hand and slide the toothbrush inside the cheek using my other hand. I brush the back teeth this way and work my way as far forward as I can to brush the front teeth. Most dogs accept this if you begin the process gently, perhaps even giving them a toothbrush with a small amount of chicken-flavored toothpaste on it to interest them.

Do I brush the inside surface (i.e., the tongue-side) of the teeth? I do not. If a pet would allow it then I would recommend it, but to have the jaws opened and a toothbrush inserted in the mouth in that fashion seems to be too threatening to most pets and the whole process is an uphill battle after that. If your pet will allow it, then brush the inner surfaces of teeth.

How often do I suggest people brush their pet's teeth? The truth is that it should be done daily. Any longer between brushings and the plaque on the teeth begins mineralizing into tartar, at which point it can no longer be brushed off. As I tell my clients, once a day is ideal, although if you can only get to it once every few days or once a week, that is better than not at all.

Secondly, as mentioned in last week's column, there are also special tartar- control dog and cat foods that scrape plaque off teeth better than regular pet foods.

And finally, there are a variety of chew toys and chew treats for dogs and cats that help delay tartar buildup. Please ask your veterinarian for his or her recommendations.

Take the time to brush your pet's teeth daily and the reward will be fresher breath, a pain-free mouth and healthier internal organs. And what is wrong with spending a minute a day with your pet this way, anyhow? When we talk about devoting quality time to keeping our pets' teeth healthy, it lends a whole new meaning to the term "bonding".

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