

## But They Don't Smile!

Perhaps the most neglected area of pet care that I see is oral hygiene. "Huh?," you say, "what I'm supposed to brush my dog's or cat's teeth?" To which is added "Doc, what's in that Pepsi?" I must admit, I am as guilty as the next person, as fitting proper dental care of my pets into my already packed day just doesn't seem to fly . . . ever.

What are the facts? I believe anyone who has ever gotten close to their pets mouth, allowed their bulldog to lick them, had a cat sleeping on their pillow, is well aware that that smell just does not inspire. It just doesn't. Well, the odor is called halitosis which is medicalese for bad breath. As if you didn't know it was bad breath. But the causes are the problem, and the consequences of ignoring or excusing halitosis can lead to anything from tooth loss to kidney or heart failure, and in the case of cats, even cancer. Yes, even cancer. I'll explain.

Most of the time "doggie" or "kitty" breath is caused by bacteria colonizing the tooth surfaces as plaque, essentially food particles and lots of bacteria. Ultimately, the plaque becomes calcified and becomes 'calculus', which you know as tartar. This is the bodies attempt to control the bacteria and contain them. Plaque is what your dentist teaches you to remove by brushing. Calculus is what he or she needs to remove during a scaling procedure, or "teeth cleaning." When the breath becomes downright foul, the bacteria have often penetrated the periodontal spaces, creating pockets where they can hide and do whatever it is that bacteria do in their spare time, which they appear to have plenty of. Periodontitis can then progress to bone infections, can cause severe decay of the roots and ligaments of the teeth causing looseness and eventual tooth loss, or can be the source of bacterial penetration into the bloodstream, where distant problems can arise. More on that later. I mentioned cancer, so rather than leave that until the end, I will discuss how that happens first. In cats with severe dental disease, the inflammation of the gums and periodontal spaces can become so severe that the cells can actually undergo a sort of metamorphosis called squamous metaplasia. All that means is a change that involves a sort of flattening of the cells microscopically. In some cats, however, if the inflammation is allowed to go unchecked, the metaplasia becomes progressive and can end in squamous cell carcinoma, a highly aggressive localized cancer that can cause severe destruction of the bone and soft tissue components of the mouth. All from dental disease.

In both dogs and cats with chronic (long-standing) oral disease, it is not uncommon in the middle and later years to see the end result of the invasion by bacteria, in particular in the presence of kidney disease. To put things in perspective, we see an average of one dog or cat a week in early or late stages of kidney disease with a direct or indirect link to previous or current dental disease. That is an awful lot of pets with serious problems. We sometimes end up going backwards to find the cause, as a sonogram and lab work show us kidney damage that when assessed, was caused by intense and continued attack by bacteria, with chronic dental disease as the only evident source. Heart valve disease in older dogs and cats has a similar origin. Bacteria are able to colonize certain valves in the heart, the mitral in particular. With time, the presence of the bacteria cause thickening of the valve until it reaches a point that the valve no longer closes tightly. We hear this as a heart murmur through a stethoscope, but again a sonogram (echocardiogram) will show a particular type of thickening, and with the presence of severe dental disease, we are able to determine a likely connection.

So what can be done to insure your pet's oral health, and avoid some or all of the above mentioned problems? In fact, many things are available that are quite effective at removing

plaque before it becomes tartar, before it invades the periodontal spaces, before the bloodstream is invaded, and before health begins to decline.

In general, soft food causes more food particles to adhere to tooth surfaces and allow plaque to develop than hard food. Have you ever seen anything that said “tartar control” that was mushy? I therefore am a strong advocate of a dry-food only type of diet for dogs except for when there are specific conditions requiring canned food. Cats don’t chew their food like dogs, and do not process Carbohydrates appropriately, so dry food may not be recommended in this species. In addition, dogs should be encouraged to chew as much as possible. There are many commercially available chew toys for that purpose. Cats should be encouraged to move when the sun shining on the rug moves . . . . it won’t do anything for their teeth, but it will get them moving around a bit.

Brushing a dog’s or cat’s teeth is both feasible and recommendable, and again, there are many available brushes and dentifrices for this purpose. In all honesty, though, it is a rare person that will persevere in this venture for enough time to make a difference. There are also special dental chews for dogs and cats available through veterinarians, and these work wonderfully well by enzymatically destroying plaque before it becomes tartar.

Finally, regular veterinary visits will help identify those pets whose mouths might be headed towards an avoidable problem. A good rule of thumb is once a year for young adults, twice a year for middle aged and older pets, and any time you detect a foul or unusual odor from your dog’s or cat’s mouth. Modern veterinary dentistry is remarkably similar to its human counterpart, these days, and much can be done to restore even a chronically diseased mouth to health. I mean I am not looking for Scope-fresh, but if you make that lemon-tasting pucker when Fido approaches, get him to your veterinarian.