

Health Care Focus

Dental Care



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Dental Disease

Dental disease is one of the most common medical conditions in pets. Over 80% of dogs and over half of cats beyond the age of 3 have active dental disease.

Dental disease involves bacteria that live in the mouth and release enzymes causing inflammation of the gums (gingivitis), breakdown of periodontal ligaments leading to loose teeth, and erosion of the tooth surface that can lead to cracked or broken teeth. Bacteria within the mouth colonize the surface of teeth, both above and below the gum line, and form a protective film called plaque. This plaque is not visible but serves as a type of protective shelter for the bacteria to live and multiply. Though some of this plaque is removed by a pet's tongue and chewing habits, these actions alone are not enough to combat the bacteria. If allowed to remain on the tooth's surface long enough, this plaque begins to mineralize and form the thicker material we call tartar. This tartar causes additional inflammation, irritation, and damage to the tooth and the tissues around it. It again acts as a protective shelter for the bacteria that are living beneath it.

Periodontal disease is a more specific term that is used to describe inflammation, infection, and even destruction of tissues surrounding the tooth. Periodontal disease is a very painful condition. Unfortunately, many times our pets will not demonstrate signs of this mouth pain as they compensate by chewing on the opposite side of the mouth to avoid painful areas or will swallow food whole without chewing at all.

Disease causing oral bacteria can also lead to tooth root abscesses/infections which, when left untreated, can destroy bone or lead to fractures of the jaw.

Cats in particular can develop additional painful oral conditions due to dental disease. These include conditions called stomatitis and tooth resorption.

Stomatitis is a severe inflammation that affects most oral tissue, and not just the gums or tissues around the teeth. These tissues include those surrounding the tongue and the throat region. Though stomatitis is not completely understood and is likely caused by multiple factors, it is suspected that these cats develop a type of allergy to the plaque on their teeth which in turn leads to this painful inflammatory reaction.

Tooth resorption is very common in cats and occurs less frequently in dogs. It is a progressive destruction of the tooth that results in slowly deepening "holes" on the tooth surface. Since the center of the tooth root (known as the pulp cavity) contains nerves and vessels, the lesions become intensely painful as the sensitive parts of the tooth are exposed.

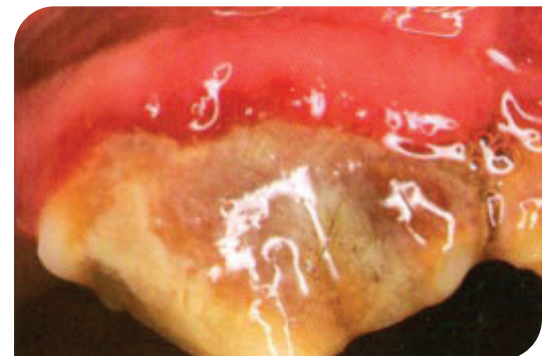
With any type of dental or oral disease, ulcerated or bleeding gums and oral tissue serve as open portals to the circulatory system where the bacteria spread into the bloodstream (known as bacteremia) and travel to other regions of the body, hence causing infections and damage of organs such as heart valves (endocardiosis), the kidneys (pyelonephritis), and/or the liver (hepatitis).

In addition to all of the other detrimental effects that dental disease can have on our pets, a recent study showed that one of the leading associations of kidney disease that results in kidney failure in cats is from bacteria related to dental disease.

Signs of Dental Disease

As outlined above, pets are very adept at hiding signs of pain. This is partially because they are derived from wild counterparts. Genetics has conditioned them to not show signs of illness or pain until it is very advanced. If they were to show signs of weakness in the wild then they would likely become targeted as prey very quickly. It is important to recognize that your pet could be suffering from dental disease and pain without showing clinical signs.

Some clinical signs that can develop related to dental disease include the following :



- Pawing or rubbing at the mouth, grinding of the teeth, jaw chattering, or flicking of the tongue
- Excess salivation/drooling which may or may not contain blood
- Dropping or spitting food from mouth, difficulty swallowing
- Swallowing food whole instead of chewing or chewing in obvious discomfort
- Finicky appetite, decreased interest in food, and/or preference for soft wet food over dry hard food
- Swelling or wound on the face can sometimes indicate a tooth root abscess
- Bad breath (halitosis)

When attempting to evaluate your pet's teeth at home, be cautious not to get bitten. Even a mild mannered and non-aggressive pet could react if a painful tooth or area of the mouth is touched. Signs of dental disease that can be evaluated at home with oral exam can include dental tartar and gingivitis (redness of the gum line at the base of the teeth). Many times when people attempt to evaluate their pet's teeth they are able to view the teeth towards the front of the mouth without difficulty. However, the large chewing teeth at the back of the mouth are the most challenging to view and often times they are most severely affected . **It is best to have your pet evaluated for dental disease by a veterinarian if signs develop and at least every 6 months if there are no signs.**

Diagnosis

Diagnosis of dental disease starts with a physical examination by your veterinarian. Your veterinarian will evaluate your pet's teeth and gums and screen for problems that indicate disease such as tartar, gum inflammation (gingivitis), oral tissue inflammation (stomatitis), gum recession, tooth root exposure, loose or fractured teeth, and resorptive lesions.

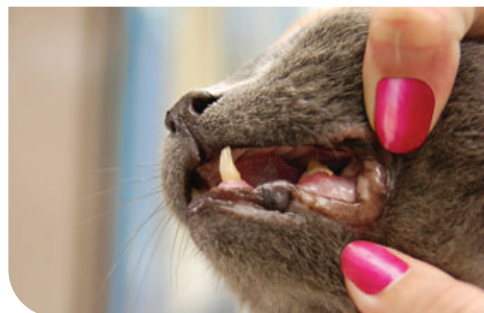
Although examination is a great screening tool for dental disease, the full extent of your pet's dental disease cannot be determined by oral examination alone. This is because the part of the tooth that is seen above the gum line (called the crown) is just the "tip of the iceberg". The majority of the tooth is actually the root which lies below the gum line. The part of the tooth beneath the gum line cannot be evaluated without dental x-rays.

The extent of periodontal disease also cannot be completely assessed without dental probing. This involves the use of a dental instrument called a probe which is inserted between the gums and the teeth on all sides of a tooth to determine if any pocketing or loss of the tooth's ligaments or other anchoring structures have been compromised. Because pets will not sit still in a chair, open their mouths and "say ahhh" for extended periods of time, evaluation like dental x-rays, needs to be performed under anesthesia.

Evaluation under anesthesia is not always indicated however. Oral assessments start with a physical oral examination and if there is cause to perform additional testing either based on examination or a pet's clinical signs, then the additional testing usually combined with a dental cleaning, would be advised.

Treatment

The treatment for existing dental disease is a dental procedure under anesthesia. During the dental procedure, your veterinarian would perform full thorough oral examination with dental radiographs and probing as outlined above. Based on the full assessment, a treatment plan would be finalized. Treatment plans typically start with what is referred to as a "dental cleaning". A dental cleaning involves manual removal of tartar, a full mouth dental scaling/cleaning with an ultrasonic scaler to remove plaque and bacteria, and polishing (to decrease rate of subsequent plaque build-up in the future). If needed, this plan may also include removal/extraction of any significantly diseased teeth, and in some cases recommendation for root canal and/or crown placement. Treatments also generally include antibiotic and anti-inflammatory therapies and pain control medications.



For more complicated cases of dental disease such as in cases of some oral tumors, bone loss that has led to jaw fracture or other bone complications, oral-nasal fistulas (a connection between the oral cavity and the nasal cavity that can occur from dental disease), or recommendation for root canal or crown placement, your pet may be referred to a veterinary dental specialist for specialized surgical care.

Prevention

Routine dental cleaning under general anesthesia is the most important prevention for dental disease. This is because ridding the mouth of all plaque and disease-causing bacteria on the teeth is needed to prevent resulting disease.

Though there are measures that you can take at home to improve oral health and attempt to prevent disease, it is not possible to get under the gum line to completely remove plaque and bacteria at home. This can only be done under general anesthesia with the techniques and equipment outlined above in the treatment section. Some groomers claim to offer dental cleanings with their services and some veterinarians offer non-anesthetic cleanings. Neither of these methods involve cleaning below the gum line or use of the specialized instruments needed for thorough scaling and cleaning. And as stated earlier, since pets do not sit still with their mouths open, without anesthesia it is not possible to get to all the nooks, crannies, and crevices that need utmost attention.

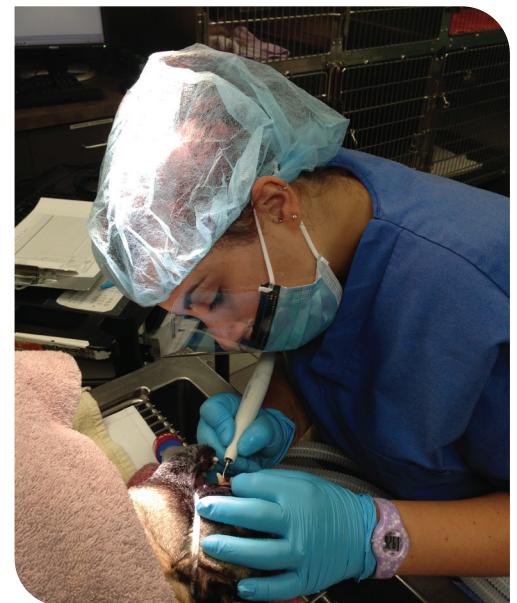
Anesthesia is a concern for a lot of pet owners and we understand this. Our hospital is AAHA (American Animal Hospital Association) accredited which means we uphold the highest standard of veterinary care and are evaluated by the association regularly to ensure that we are adhering to these rigorous standards. Only 13% of veterinary hospitals are AAHA accredited. An important aspect of this care includes anesthetic administration and monitoring. Before any anesthetic procedure is performed, we ensure that your pet is healthy enough to undergo anesthesia. This starts with the physical examination to best ensure heart and lung health and overall general health. Next, we perform bloodwork to screen for internal organ disease that may not be detectable with physical examination. The bloodwork includes parameters that evaluate kidney and liver health as well as evaluating red and white blood cells, among other factors. If any abnormalities are found that could indicate increased risk during anesthesia in your pet, then additional testing may be needed before any anesthetic procedure is performed. If it is determined that your pet is of too high of risk for anesthesia then an anesthetic procedure may not be advised and our preventative or treatment plan would change.

A pet's age alone is not a factor that determines safety for anesthesia. There are older pets who are overall healthy and still need the benefit of preventative dental cleanings and other preventative care to keep them healthy for as long as possible. If physical examination and bloodwork findings are overall normal on an older pet, then anesthetic dental cleanings are still important. Only when the benefits outweigh the risk will anesthesia be advised for an individual pet.

Even with an apparently perfectly healthy animal there is still always some risk with use of anesthesia and we acknowledge and address this with every anesthetic procedure. It is estimated that 1 in 100,000 animals will have some sort of reaction to an anesthetic agent. Even though these statistics are low, it is crucial that we do everything possible to prevent or quickly address even that single one. We do this through use of vigilant and advanced monitoring techniques as well as pre-surgical and surgical preventative and support measures.

It is much faster to perform a preventative dental cleaning than it is to perform oral surgery to address existing disease. Time for extraction of teeth or other dental procedures can significantly increase anesthetic time. Therefore, it is important to realize that waiting until your pet has significant dental disease to address the issue will result in longer time under anesthesia and potentially higher anesthetic risk than if shorter, preventative cleanings are performed.

Please see the handout on anesthesia for more in-depth information on anesthetic monitoring and patient care that will occur during the process of a dental cleaning or dental procedure.



Dental care at home is very important as well for prevention of dental disease. Proper oral care can prolong time between needed prophylactic cleanings and maintain your pet's overall oral and dental health and comfort. Below are the recommended methods of oral care at home:

1. Tooth Brushing

Yes, pets need their teeth brushed every day too! Unlike humans, their oral hygiene is not important from an aesthetic standpoint. However, as discussed above, all the potential health problems that develop from an unhygienic mouth are important and significant to prevent. Cats and dogs generally benefit from dental cleanings every 6 to 12 months. Some more often than this, depending on the individual pet, their breed, genetics, and nutritional history. Brushing the teeth daily can significantly prolong time needed between professional cleanings. Imagine if we couldn't brush our teeth, what kind of shape our mouth and teeth could be in after a 6 to 12 month span.



Toothbrushing should be performed with a dog or cat formulated enzymatic toothpaste. Enzymatic toothpastes help to break down plaque on the tooth's surface. Some human toothpastes can contain potentially toxic sugars such as xylitol.

It is highly recognized that the majority of pets will not tolerate toothbrushing and it is especially difficult to get to all of the teeth while brushing. Although brushing is the most effective method of home dental care, there are additional options available. A combination of these things are best.

2. Healthy Mouth Drinking water additive

Although there are various drinking water additives on the market, this product has studies to support that it reduces the bacterial load and plaque levels within the mouth. It can be mixed in advance, stored in the refrigerator, and poured into water dishes each day. It can be purchased by visiting the website www.healthymouth.com

3. Dental Chews

Dental chews can be a good supplement to an oral health plan. Not all chews are created equal, however.

It is important to select a chew that is not too hard. Even though it seems that dogs and cats would have stronger teeth than we do, they do not. In general, if we were to bite down on something and it could crack or chip a tooth, then it will in our pets as well.

Dental chews can be high in calories so adding them to an oral health plan could be sabotaging a weight management plan.

It is also important to choose chews that are easily digestible to prevent gastrointestinal upset or even the possibility of obstructions.

The following dental chews are recommended by our hospitals: *Hills Oral Care chews, Oravet Chews, CET Hextra dental chews, Veggiedent chews.*



4. Oral Care Food

The Hills and Royal Canin companies have both developed food formulated to help with oral health in pets. These diets are Hills Oral Care Plus and Royal Canin Oral Care. They are designed as kibble that is matrixed in a specific pattern so that the kibble scrubs the teeth like a toothbrush as they chew, removing plaque and tartar.

Hills also makes a prescription strength dental food called T/D. This food has antioxidants that are added to defend cells from free radical oxidation. It also has reduced protein which serves as a component of plaque and reduced calcium to limit the mineralization of plaque to tartar.

Please contact your veterinarian should you have any additional questions or are seeking additional information regarding oral and dental care. It has been a pleasure caring for your pet and we hope to continue in helping you to provide the care that they need to live a happy, healthy, and long life!