



The Importance of Good Dental Care in Animals and How to Deliver It!

The consequences of poor dental health go way beyond bad breath. Periodontal infection can lead to serious health concerns ranging from tooth loss to organ failure. It's also no secret that dental problems are common in animals-- studies have shown dental problems to be the most common problem in both dogs and cats, with periodontal disease at or near the top of the list. When our pets receive good dental care, they undoubtedly live longer and better lives.

The specific dental problem that we strive to prevent is periodontal disease, and the "cause" of periodontal disease is related to the presence of plaque bacteria and bacterial calculus on the tooth surface. Plaque bacteria can colonize a clean tooth in a period of 24-36 hours. This means that within just a few days following professional dental cleaning, the pet's teeth are already starting to accumulate the bacteria that will again cause periodontal inflammation and disease. The good news is that home care can prevent this.

Getting Started

Professional veterinary dental care starts at the veterinarian's office. Patients must be evaluated for the presence of dental disease, and treated, if necessary, prior to beginning a home care program. The fact is that 80% of dogs over the age of three and at least 50% of cats have significant periodontal disease that requires immediate professional treatment. Professional dental treatment, performed when needed and under general (inhalant) anesthesia, is the cornerstone of preventative dental health for our patients. On average, dogs and cats benefit from an annual (once a year) prophylaxis (cleaning) starting at the age of three, but each patient needs to have its dental program individualized.

Many dental problems in dogs and cats are painful. For patients with painful dental problems, home care is contraindicated. In fact, the discomfort caused by trying to brush a painful tooth may adversely condition the pet to future attempts at home care. This is why home care should be instituted only after appropriate professional treatment has established a clean and healthy mouth (except in the youngest and healthiest of patients). Ideally, dental home care programs should be instituted with the puppy or kitten before any dental pathology has started.

The use of systemic antibiotics (injections, pills) should be discouraged for routine dental procedures. The patient's immune system is more than adequate to deal with the transient bacteremia that can result from a dental scaling. A safe and effective alternative to reduce bacterial load in the patient's mouth prior to dental prophylaxis or oral surgery is to administer a topical antiseptic. Veterinary professionals have always put 0.12% chlorhexadine on the top of the list as the first line oral antiseptic.

Periodontal Prophylaxis

Periodontal prophylaxis is the cornerstone of veterinary dentistry. The term "prophylaxis" implies prevention, and the goal of the periodontal prophylaxis procedure is to prevent (or at least halt) the progression of periodontal disease.



Step 1.

Disinfect the oral cavity with a 0.12% chlorhexidine product

Petfection is an oral gel that contains chlorhexidine gluconate. As opposed to liquid flushes and rinses that were designed for human patients, Petfection has been specially formulated for dogs and cats, is easy to work with, and “stays where you put it.” Additionally, Petfection is packaged in easy to use single dose units for optimizing sterility for every patient.

An alternative method is to apply a 0.12% chlorhexidine product directly onto the buccal surfaces of the teeth, and then spread the gel around the tooth surface with a gloved finger.

In addition to the buccal surfaces, a 0.12% chlorhexidine gel can also be applied to the lingual surfaces. Most oral bacteria will be killed within the first 30 seconds, but some bacteria will require a longer time period. This is why we recommend allowing the gel to remain on contact with the oral cavity for a full 3 minutes.



Step 2.

Gross Tartar Removal

Use extraction forceps to pinch and chip at the larger tartar deposits on the teeth. The technique is to anchor one claw of the extraction forceps on the tip of the crown (cusp), and use the other to scrape and chip away. It is amazing how much of the “big stuff” you can very quickly remove with the extraction forceps.

Step 3.

Crown Scaling

Once the gross tartar has been removed from the crowns, the remainder of the crown scaling is accomplished with an ultrasonic scaler. Crown scaling by hand is also possible, but it is time-consuming.

The ultrasonic scaler should first be tuned. Tuning the scaler is accomplished by pressing the pedal and adjusting the water and power controls. Tuning is proper when the tip of the scaler is vibrating at its point of maximum intensity, and a fine mist of water is produced.

Step 3. cont'd

Ultrasonic scaling is performed by holding the scaler handpiece in a pen grasp. The side of the scaling tip is lightly applied to the tooth and immediately moved back and forth in a sweeping motion. No tooth should be scaled for more than 15 seconds at a time because excessive vibrations can result in a painful pulp inflammation. The ultrasonic scaler should be used very carefully. Excessive force or prolonged time spent on one spot can damage tooth structure. The water spray is also necessary to cool the tip of the ultrasonic scaler, which becomes very hot while in use.

All sides of every tooth need to be scaled. Learn to develop a pattern to make sure you don't miss any teeth.

My preferred method is to scale the buccal (outside or toward the gums) surface of the right side of the mouth, and then the lingual/palatal (inside or towards the tongue/palate) surface of the left side. Then, the patient is flipped over and the procedure is repeated.

Step 4.

Subgingival curettage

Once the crowns of the teeth have been scaled, it is time to clean below the gumline. Regardless of which power instrument is used to scale the crowns of the teeth, you will still need to use a hand instrument. This step, called subgingival curettage, is the most important part of the prophylaxis. The subgingival plaque and tartar are most responsible for causing periodontitis.

There are a variety of different curettes available. Different curettes cut at different angles and it is advantageous to have several on hand to perform subgingival curettage on all the teeth. A "Gracy 12/13" and a "Columbia 13/14" are good ones to always have in your collection.

The curette is held with a modified pen grasp. Grasp the curette like a pen, and then raise your second finger. This feels awkward at first, but it is the preferred method for using this instrument. Your fourth and fifth fingers should rest on the patient and act like a fulcrum. The cutting side of the curette is held toward the tooth, and the curette is inserted into the gingival sulcus. The curette is then held at the appropriate cutting angle to engage the blade, and the instrument is drawn out of the sulcus in a pulling motion. Most of the action should come from your elbow, keeping your wrist relatively straight. The operator will get the sensation of scraping bits of tartar and plaque until the subgingival tooth is clean. At that point, it will feel like you are curretting glass.



Step 5.

Polishing

At this point in the procedure, the teeth look clean. What we don't see, however, is the microscopic roughness on the tooth surface that has been caused by all this scaling and curetting. Polishing the teeth is very important to smooth out the roughness we have caused. Teeth that have not been polished rapidly accumulate plaque following the dental procedure.

Step 5. cont'd

Polishing is accomplished with a prophy angle operated on a low-speed handpiece, a polishing cup, and prophy paste. The prophy paste is loaded into the prophy cup, and is then applied to the tooth while the cup is spinning. Each tooth should be thoroughly polished on all sides. Follow your pattern. To polish the subgingival sulcus, place the polishing cup at the gingival margin and apply pressure. This pressure will cause the cup to flare out, and enter into the sulcus to polish it.

Never polish a tooth without prophy paste, or polish for more than 15 seconds at one time. Both of these could lead to the development of painful pulpitis.

The Keystone Vet Disposable Prophy Angles operate in a back and forth oscillation rather than simply spinning around in a circle. This is especially important for our furry faced-patients where we want to avoid having the facial fur become entwined in the prophy angle.

Step 6:

Sulcus/Pocket Irrigation

Following the prophylaxis the oral cavity should be thoroughly rinsed to remove debris, loose tartar, prophy paste, etc. This is especially true for the gingival sulcus area, where trapped debris could have a very detrimental effect.

Especially in cats, make sure there is no saliva or bloody fluid in the oral pharynx area. Cats can have respiratory distress upon extubation if viscous saliva is caught in their throats.

Step 7.

Charting

Dental charting is a means to record normal and abnormal findings in the mouth. Each patient should have a dental chart completely filled out every time dental procedures are performed. It is important to have a dental chart that you are familiar with, and a system of recording findings. A good dental chart will have a picture of all of the teeth, and well as space to record patient information, anesthetic protocol, and any advanced procedures performed.

Start by recording any missing teeth. Circle any teeth on the chart that are not present. Next, take your periodontal probe and explore the periodontal pockets on all sides of every tooth. Record any pockets 3 mm or greater by writing "P-" (for "pocket") and the number corresponding to the depth of the pocket.

If there is gingival recession, write "GR-" and the number indicating the extent of gingival recession in millimeters. Loose teeth are indicated by an "L", and so forth. You can certainly develop your own code; just be consistent and record your code on the dental chart so others can read it.

All dental treatments performed should be recorded on the dental chart as well. Extracted teeth are "X'ed" out. Amalgam fillings are indicated by an "AF", and so on. Again, keep a list of your codes handy, and record everything.



Step 8.

Radiology, periodontal surgery, extractions, endodontics (etc.) as needed

After the dental prophylaxis has been completed and the dental chart has been filled out, all the abnormal findings should be addressed. In every case, dental radiographs are beneficial and aid in our diagnosis and treatment planning. Hemostasis during minor gingival surgery can be maintained using the Keystone Hemostatic Solution. Dip a sterile cotton tip applicator into the stock bottle of hemostatic solution to soak the cotton tip in the solution.



Gently press the soaked cotton tip onto the bleeding gingival and hold for 30 seconds. If reapplication is needed, use a new sterile Q-tip

Step 9.

Fluoride Foam

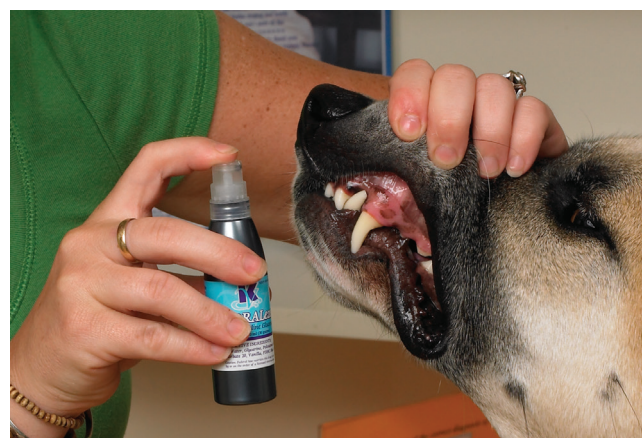
The final step in the dental prophylaxis is the application of a Fluoride Foam. Fluoride can strengthen enamel, is antibacterial, and can reduce dental hypersensitivity on exposed root surfaces. Fluoride can be toxic in large doses, so only professional application is advised.

Dry the tooth surfaces with an air syringe. One or two pumps of the Keystone Fluoride Foam is applied to the dry tooth surfaces, and allowed to remain in contact for 60 seconds. Wipe off excess, but do not rinse off.



Post-operative oral care:

Following oral surgery, such as dental extractions, patients should be sent home on a soft diet, be given appropriate analgesia, and a way to maintain good oral hygiene. A 0.12% chlorhexidine gluconate spray solution that contains no alcohol is a good choice for post-op oral hygiene.

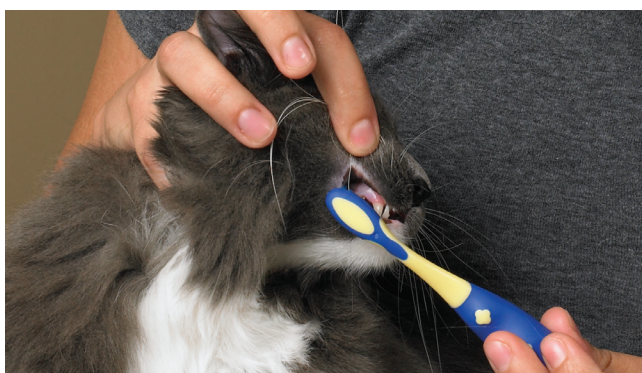


Simply dispense one or two pumps of the spray bottle into each side of the oral cavity twice a day for the desired period of time (usually 5 – 7 days).

Brush those teeth every day

Daily tooth brushing is the best thing you can recommend for pet owners to do at home to promote good oral hygiene. Brushing the teeth once a week, or every three days is not enough. A daily tooth brushing is necessary because plaque bacteria can re-colonize the tooth surface in a period of 24-36 hours.

The basic tools of tooth brushing include a toothbrush and toothpaste. The toothbrush should be soft bristled like a children's toothbrush



The toothpaste should be thought of as a flavoring to enhance acceptance of the toothbrush. Studies in humans show the use of dentifrice does not contribute to the instant mechanical plaque removal during manual tooth brushing. The mechanical action provided by the use of a toothbrush is the main factor in the plaque-removing process. There have been various claims of benefit from enzyme systems in some veterinary toothpaste, but no research has yet to validate these claims.

Keystone Maintenance Gel

Keystone maintenance gel is an oral healthcare product that was designed by a veterinary dental specialist to keep pets teeth clean and healthy. When properly used with a tooth brush, Keystone maintenance gel is the best thing possible to prevent periodontal disease! In both dogs and cats, periodontal disease can cause bad breath, oral infections, pain, and spread bacteria to distant body organs. Keystone

Maintenance Gel has an optimal consistency, a pleasant flavor, is non-foaming, and is meant to be swallowed.

Keystone maintenance gel has been designed to be hypoallergenic, and contains Zinc Gluconate to promote clean breath and healthy gums. Keystone maintenance gel is formulated for all stages of life in dogs, cats, puppies, and kittens. The keys to success are 1.) start at a young age, 2.) brush every day, and 3.) see your veterinarian regularly.

There is another pet tooth paste – Keystone Vet Bright Bark – that has been developed and is recommended. Bright Bark tooth paste combines an appropriately flavored gel formula with 0.12% chlorhexadine.



How to Brush

To start, place a small amount of toothpaste on the finger and let the pet sniff and lick it. If there is positive interest in the flavor of the toothpaste, use it. If the pet is not interested in the toothpaste, brush the teeth without it. Do not use human toothpaste because it contains fluoride that should not be swallowed. Concentrate on the buccal (outside) surfaces of the teeth. Go slowly, and be patient. If things are not going well, wait a few hours before trying again. The toothbrush should be held at a 45° angle to the tooth surface, with the bristles pointing toward the gingival (gum) margin. This allows the cleaning of the gingival sulcus (under the gums) during the tooth brushing process. Work the toothbrush in a circular motion concentrating around the canine tooth and upper fourth premolar tooth. Try for 30 seconds on each side of the mouth.



What if I can't brush?

For some dogs tooth brushing is not an option, but there are still products that can be used to help reduce plaque and calculus. Certain dog foods, chew treats, and additives have been proven to provide benefit, and a complete list of these products can be found at www.VOHC.org.

Keystone has recently developed a product called Pet-Dent Plus Oral Maintenance Tablets with Hexa-Clean. Simply adding one effervescent Pet-Dental Plus Oral Maintenance Tablet with Hexa-Clean to the drinking water allows the tablets to work every time the dog drinks water. The active ingredient in Pet Dent Plus, Sodium Hexametaphosphate (SHMP), is a commonly found food additive used as a food emulsifier, sequesterant and texturizer and has been granted GRAS (Generally Recognized as Safe) status by FDA. Keystone Vet Pet Dent Tablets, when diluted in water dish according to directions, yield an SHMP concentration of 0.1% -0.2% in the animal's drinking water, well under the maximum concentration allowed in foods. SHMP was shown in numerous studies to be efficacious in reducing plaque as well as prevention of calculus formation with no clinically relevant changes in body weight or blood chemistry.



Keystone Vet is a division of Keystone Research & Pharmaceutical.

Keystone Industries, based in Gibbstown, New Jersey, is a privately held company certified to ISO 9001:2008 and ISO 13485:2003 that has been manufacturing and distributing dental and medical products for over eighty-five years. In the last thirty years Keystone has grown significantly and has expanded into the pharmaceutical and cosmetic product markets.

Most recently, our chemical division, Keystone Research and Pharmaceutical, has begun developing dental products for veterinary use. These products will be distributed through dealers. We are currently developing a new line of oral care products specifically designed to meet companion animal needs.

Our innovative product line is available for distribution.

Keystone Vet

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