

# Oral ATP™ — Prevention

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Oral disease is one of the most common, yet serious health problems in veterinary medicine—affecting approximately 80% of dogs and 70% of cats by age three.<sup>1</sup> The Oral Assessment, Treatment and Prevention, or Oral ATP™ protocol helps veterinarians minimize this risk, improve client compliance and develop sound oral healthcare practices.

*This is the third installment of three reports exploring each part of Oral ATP™ in more detail.*

Prevention at home is as important as oral assessment and treatment in the clinic. Unless the pet owner is able and willing, and the patient accepts home care, periodontal disease will continue to progress regardless of the care provided by the veterinarian. Twice-daily brushing with a bristled toothbrush is the most effective home care regimen. Unfortunately, it is rarely practiced. Fortunately, there are other methods of plaque control.

## Tooth Brushing

The gold standard of plaque control for canine and feline patients is twice-daily tooth brushing. Devices such as gauze pads, sponge swabs or cotton swabs remove plaque below the gingival line, but cannot adequately clean the space above the gingival line, where plaque and calculus accumulate, as well as tooth brushing.

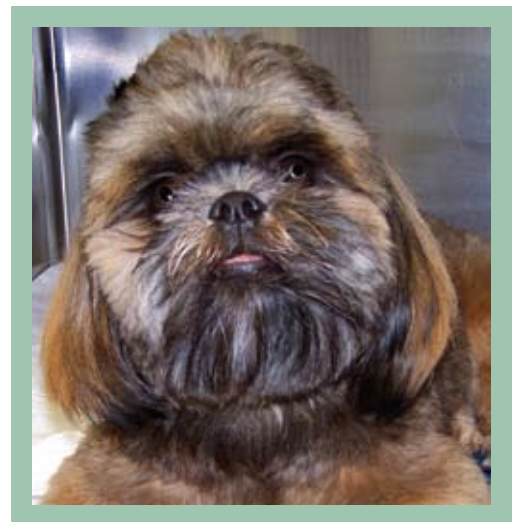
Convincing clients to brush pets' teeth regularly is not an easy task. Struggling, biting and/or scratching from an uncooperative pet can quickly cause owners to become reluctant.

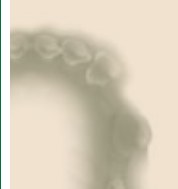
To help improve at-home plaque prevention habits, encourage pet owners to begin when the pet is young and to start with a healthy, comfortable mouth. Untreated, painful oral disease will create a non-compliant client.

Choose a proper toothbrush and toothpaste. Toothbrushes should have bristles that reach under the gingival line to clean the space surrounding each tooth. Explain to pet owners that the size of the toothbrush is important. Each dog or cat must have his or her own toothbrush. There are specially made brushes that fit the large mouths of long-muzzled dogs, as well as small brushes for cats.

Do not recommend human toothpastes which contain detergents because dogs and cats will swallow the paste. Pets seem to prefer poultry-flavored pastes.

The toothbrush and toothpaste should be gently introduced under the lip. Pet owners should concentrate on the outside surfaces of the upper teeth. A circular brush motion is the goal, but back and forth will also remove plaque. If an owner senses that a pet is anxious during the brushing procedure, he or she should reassure the pet by talking and trying again. Encourage owners to reward progress immediately with a treat or a play period after each cleaning session.





Toothbrush bristles should be placed at a 45-degree angle at the margin where the teeth and gingiva meet. Pet owners should use an oval pattern, gently forcing the bristle ends into the area around the base of the tooth as well as into the space between the teeth. Ten short back-and-forth motions—covering three to four teeth at a time—should be completed before moving the brush to a new location. The area requiring most attention is the outside of the upper teeth.

## Dental Wipes

Cloth pads impregnated with either chlorhexidine or sodium hexametaphosphate will help control plaque and calculus when rubbed daily against the tooth/gingival interface.

## In-Clinic Oral Disease Prevention

The hospital staff plays a crucial role in the prevention of companion animal oral disease through client education, demonstration of plaque control techniques starting with puppies and kittens, providing safe and effective plaque control products for clients to feed or treat their pets at home and setting follow-up visits to monitor progress.

## Dental Diets

A patient's diet is important not only from a nutritional standpoint, but also for oral health. Foods can contribute to or control plaque and calculus accumulation.

The myth persists that dry kibble diets are better for the teeth than "wet" diets. Pets that are fed commercial dry diets can still have heavy plaque and calculus accumulation and be at risk for periodontal disease. Most dry pet foods crumble without much resistance, offering little to no abrasive effect from chewing.

Dental diets either employ chemicals that specifically join with plaque contents to aid removal or are formulated to scrape plaque away from the tooth surface. Dental diets should be fed as the main calorie source, as recommended.



The Veterinary Oral Health Council (VOHC) recommends foods that have been proven to reduce the accumulation of plaque and/or calculus. A complete list is available at [www.vohc.org](http://www.vohc.org).

## Adjunctive Plaque Control Therapies

### *Chlorhexidine*

- Chlorhexidine is the gold standard for the inhibition of plaque development in human dentistry and is effective in veterinary dentistry as well, in eliminating oral pathogens. It is broad-spectrum and considered effective against most oral bacteria, most fungi and some enveloped viruses.
- To be effective, the chlorhexidine must be in contact with the oral surfaces for at least two minutes. The mechanism of action is non-specific, involving disruption of cellular membranes. It binds to oral tissues and teeth and is slowly released at antiseptic levels for up to 12 hours. The oral LD50 is high (1,800 mg/kg in mice) as chlorhexidine is very poorly absorbed in the gut. Its main route of excretion is fecal.

### *Fluoride*

- Fluoride as a home care product is used in veterinary dentistry to help control plaque, strengthen enamel and desensitize dentin.
- Only stannous fluoride products have an antibacterial effect derived from the action of the heavy metals on plaque bacteria. Chlorhexidine-based products are more efficacious at eliminating oral pathogens and are safer to use.

### *Plaque prevention gel*

- OraVet™ (Merial) is a plaque barrier gel applied at the time of teeth cleaning and then weekly thereafter to help control plaque by creating a barrier between the tooth and gingival interface.

## Dental Treats

Dental treats are products that encourage chewing, exercise the periodontal ligament fibers and cause flushing of oral fluids through the periodontal ligament space. The mechanical abrasion that occurs when canine or feline teeth sink into and scrape against dental treats helps to prevent plaque and calculus buildup. The addition of enzymes and other anti-plaque products complements this effect.

Treats such as Greenies® canine dental chews and Feline Greenies® dental treats, available through veterinary distributors and commercially, fall into this category.



Many treat products on the market claim efficacy against oral disease. The Veterinary Oral Health Council (VOHC) Seal of Acceptance and proper research can help distinguish products that are scientifically proven to reduce plaque and/or calculus.

VOHC recognizes only those products that meet exacting standards of plaque and/or calculus retardation in dogs and cats. Products are awarded the VOHC Seal of Acceptance following review of data from trials conducted according to VOHC protocols.

A Seal of Acceptance is displayed on products that have been approved. Regular use of products carrying the VOHC Seal of Acceptance has been proven to reduce the accumulation of plaque and/or calculus which can lead to gingivitis, periodontal disease and tooth loss. A complete list is available at [www.vohc.org](http://www.vohc.org).



## Follow-Up Dental Visits

Follow-up dental examinations are essential to monitoring at-home plaque control efforts. During this visit, examine the teeth for areas of calculus and plaque accumulation and assess the efficacy of recommended home-care techniques.

The frequency of follow-up examinations depends on the extent of disease and the willingness of the pet owner to provide—and the patient to accept—home care. More frequent visits should be scheduled for pets that do not receive adequate preventive care at home.

A number of excellent resources exist to assist the general practitioner in developing a sound oral healthcare practice by implementing Oral ATP™. On-demand CE credit webinars, technical reports, staff guides and client communication pieces are available at [vet.greenies.com](http://vet.greenies.com). In addition, a new online resource—[OralATP.com](http://OralATP.com)—is under development. [OralATP.com](http://OralATP.com) will provide the most convenient, comprehensive and in-depth source of information on Oral Assessment, Treatment and Prevention.



Dr. Jan Bellows is a Fellow of the Academy of Veterinary Dentistry, a Diplomate of the American Board of Veterinary Practitioners, a Diplomate of the American Veterinary Dental College and a Veterinary Information Network (VIN) consultant. He is a frequent speaker at conferences and has authored many articles on veterinary dentistry as well as two books, *The Practice of Veterinary Dentistry, A Team Effort* and *Small Animal Dental Equipment, Materials and Techniques*. He practices at All Pets Dental Clinic in Weston, FL.

## References

<sup>1</sup>American Veterinary Medical Association, 2006.

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