

HOME DENTAL CARE

As in your own mouth, there are two main components of oral health care for dogs and cats. There is what we, as veterinarians and technicians do once a year or so (professional dental care) and there is what the client does at home every day between professional treatments (dental home care). While it is the owner who administers the home care, it is the veterinary practice that must train and equip the owner for this job. Therefore, the veterinary dental team must understand home care inside and out in order to guide and assist the owner in setting up a practical and effective program for their pet.

The purpose of home care is to maintain good oral hygiene to prevent the development or progression of periodontal disease and to maintain good gingival health. Another priority is to ensure that products and strategies employed in the attempt to maintain good oral health do no harm.

WHY IS HOME CARE ESSENTIAL?

The first thing to understand is that gingivitis and periodontal disease are caused by dental plaque (an invisible bacterial slime or biofilm) in contact with and below the gingiva. While calculus (tartar) on the crowns of the teeth will harbour plaque, it is not the coronal calculus that is the enemy or the target of home care – it is subgingival plaque and calculus that causes disease. To prevent subgingival plaque and calculus it is essential to prevent the accumulation of coronal plaque.

Think of it this way; the bacteria in the plaque film are the soldiers against which we are fighting. Calculus is the fortress that the soldiers build to live and hide in. The plaque is what causes disease; the calculus protects the plaque and makes it much harder to remove. If your home-care strategy just prevents calculus formation without also targeting plaque, it will do little to prevent gum/periodontal disease. I consider calculus prevention to be largely cosmetic rather than preventative.

Following a professional dental cleaning the tooth surface is considered clean. Within minutes, a film of salivary glycoproteins, known as the acquired pellicle, starts to form on the exposed dental surfaces. In a few hours, oral bacteria colonize this pellicle. This is the beginning of the development of dental plaque, which is a mixture of salivary glycoproteins, sloughed epithelial cells, white blood cells, food particles and bacteria. Immature plaque is a rather disorganized slime on the tooth surface. It is poorly attached, thin and aerobic and relatively easy to disrupt mechanically.

If the immature plaque is left undisturbed, it becomes thicker, more organized and more firmly attached to the tooth surface. It starts to evolve into a highly complex society of co-operative and synergistic bacteria and protozoa. Aerobic bacteria live on the outer surface of this biofilm with anaerobes living in the deeper layers closer to the tooth surface. The mixed population of bacteria produces and secretes substances that act as a matrix, enhance adhesion and protect the residents of the biofilm from chemical and cellular antimicrobial agents. Bacteria in a biofilm are considered to be as much as 1500 times more resistant to antiseptics and antibiotics than the same bacteria would be in a monoculture.

Mature plaque is 25% bacteria and 75% matrix. Using DNA probe techniques, it has been estimated that there may be as many as 1400 different species of micro-organism living within the plaque film in a periodontal pocket. More than half of these organisms have never been cultured as they have such specific environmental requirements, they will only grow in the unique habitat of a periodontal pocket, not on a culture plate. Also, it has been found that organisms act

physiologically very differently when part of a biofilm than they do when in culture media in the lab. These factors make culture and sensitivity testing of oral infections quite useless.

Within as little as two days, undisturbed plaque can start to precipitate salivary minerals to form calculus. Now the plaque film is building its fortress and is going to be much harder to remove.

The bacteria in plaque produce toxins, which cause inflammation of the gingiva. If left untreated, this gingivitis may progress to periodontitis (inflammation and destruction of the gingiva, periodontal ligament, alveolar bone and root cementum). To prevent gingivitis and periodontitis from developing and to maintain gingival health, plaque must be removed before it becomes organized and mineralized.

In the wild, plaque is controlled by chewing through the hides of prey, and by eating raw, fibrous tissues such as heart and diaphragm. Feral dogs live for about six years and feral cats last for two to three years. Their mouths are designed to last this 'lifetime'. As our pet cats and dogs are living well into their teens and their diets offer little challenge to plaque, we must lend aid in the fight. Another factor in the high incidence of periodontal disease in pet dogs and cats is that many breeds (all short-faced dogs and cats for instance as well as highly miniaturized dogs) have significant anatomic deformities that dramatically increase the risk of developing periodontal disease (deformities that would not survive in the wild)..

From the above, you can see that if the owners are not doing anything about plaque control at home on a daily basis, noticeable calculus and gingivitis may be present in as little as two-weeks after a professional oral hygiene procedure.

Home care refers to anything the owners are doing at home on a regular basis to control plaque and maintain periodontal health. It is widely believed that daily brushing of the teeth with a soft-bristled nylon toothbrush is the most effective means of plaque control. It is the mechanical action of the bristles against the tooth surface that removes the plaque. Brushing also massages the gingiva, stimulating the gingival fibroblasts to produce more collagen thus firming and toning the gingiva. However, toothbrushing certainly has its limitations as will be discussed later. There are also many products on the market that claim to be of benefit to oral health. Sadly, many of these products are worse than useless so product selection is very important.

The rewards of having owners involved with home care are great. First and foremost, your patient benefits from better oral health. Secondly, your clients will become more aware of dental concerns and will notice small problems early, when they are more easily treated, rather than leaving to progress to a more advanced (and harder to manage) state.

THE DANGERS OF HOME CARE

As with any treatment or intervention, home care can be harmful to the pet and the owner and can be counterproductive if not approached in the proper manner. To start, you should never recommend/institute a home care program for a pet that has not had a recent, very thorough oral examination (under general anesthetic). This notion is explored more in a 20-minute video found here - [Why tooth brushing can be worse than useless](#). Briefly:

Home care can cause pain to the animal. If an owner tries to brush the teeth of a cat that has [tooth resorption](#), it will cause pain. If an owner tries to brush a tooth that has a crown fracture and exposed pulp, it will cause pain. If an owner tries to brush the teeth of an animal that has serious gingival inflammation, oral ulcerations, mobile teeth..., it will cause pain. If an owner brushes too vigorously or roughly, it will cause pain. If the animal's early experience with home care involves pain, it will be difficult to ever get this animal (or owner) to accept and enjoy daily home care, even after the painful conditions have been resolved.

For some animals, particularly brachycephalic dogs with obstructive respiratory issues (narrow nostrils, elongated soft palate, collapsing trachea...), trying to handle them and their mouths could cause significant respiratory distress and anxiety. Such struggles could even cause the pet to lose consciousness. Other animals are so tiny that it simply is not possible to get a toothbrush into the mouth in an effective manner.

Home care can lead to a false sense of security. If an owner is brushing the crowns of the teeth daily, the crowns will remain clean and shiny. Therefore, at annual examination, you will see clean crowns and will be inclined to say that no further dental examination or treatment is required. However, there may well be problems brewing in an area that is not only hard for the owners to brush, but also hard for you to examine with the animal awake. Remember, [periodontal disease is largely a hidden disease](#).

Also, home plaque control does nothing to prevent several other types of dental disease. The problem could be a foreign-body induced periodontal pocket between the mandibular first and second molars (common in stick-chewers), a [caries lesion](#) in the occlusal pit of the maxillary first molar, a previously formed periodontal pocket, a crown fracture or any number of problems. If you are not regularly anesthetizing your patients to do a thorough oral examination, including intra-oral dental radiographs, you are going to miss these hidden problems until they become very advanced and obvious.

One suggestion is to always do a thorough oral examination (examine each tooth above and below the gum line and take whole-mouth dental radiographs) anytime you have an animal anesthetized for any reason whatever. Never squander an opportunity to look for problems and you will be amazed at what you find.

So, home dental care is for pets with clean, healthy mouths and should never be used as a substitute for proper, professional care.

WHAT HOME CARE IS NOT

Home care is NOT a treatment for established disease.

Home care is daily plaque control designed to maintain oral hygiene and prevent the development of gingivitis and periodontal disease and nothing more. It does not remove calculus and it cannot reach into periodontal pockets and it has no effect in preventing other oral diseases. Therefore, home care should only be instituted AFTER appropriate professional treatment has established a clean and healthy mouth. Home care is then used in an attempt to maintain this healthy situation or to prevent the situation from progressing. Used in the face of dental pathology, any mechanical plaque control plan (brushing, diet, chews) will do no good and could certainly cause harm.

Home care is NOT a substitute for regular professional examinations and treatment.

Since home care only cleans the crowns of the teeth and maybe 1 millimeter subgingivally, it will have little or no effect on established periodontal pockets. Home care is also only effective for those teeth (or tooth surfaces) the owner is able to reach. Therefore, even with home care, the animal should have regular professional examinations and treatments. I brush my own teeth 2 times a day and floss daily and I still see my hygienist and dentist every six months. Never once have they told me that if I promise to brush every day that they don't need to see me for a few years. At the end of each appointment they hand me a new brush, some floss and an appointment card for my next visit – no 'ifs', 'ands' or 'buts'.

Home care is NOT an Over-the-Counter concept.

There is a dizzying array of home care products and aids available for your client to choose from. It can be confusing enough for us to figure out which products to use and when. Do not leave it up to your clients to decide for themselves which products to use or how to use them.

For those animals that need home care, take the time to discuss the situation with the owner and explain what they need to be doing. Listen to their thoughts and concerns, consider the animal involved and then customize a program based on the situation. And always keep each product's limitations in mind – do not expect too much as there is no miracle product on the market and likely never will be.

DOES EVERY PET REQUIRE HOME DENTAL CARE?

Here is some heresy. I have found that not all dogs and cats require home dental care. I have seen mature, even geriatric dogs and cats that have never had any home dental care, never had any professional dental treatment and yet still have no significant gingivitis or periodontitis. They may have broken or worn teeth from inappropriate chewing or other dental/oral disease, but nothing that would have been prevented by home dental care.

In dogs and cats, as in humans, it seems that the single most important factor in determining the development of periodontal disease is genetics. Some pets have a great natural resistance to periodontal disease, and some seem to have very little resistance. Certainly, factors such as diet, chewing habits, general health status, the physical architecture of the mouth and teeth all play a role as well. But they are secondary to the inborn ability of the animal to cope with oral bacteria.

For those animals blessed with excellent natural resistance, there may be little or no need to spend any time talking the owners into establishing a safe, effective daily home plaque control program. Pick your battles and spend your time and energy where it will do the most good.

YOU CANNOT TREAT DISEASE WITH PREVENTIVE MEASURES (I KNOW THIS SECTION IS A BIT REDUNDANT, BUT IT BEARS REPEATING)

Home dental care refers to everything the owners do at home on a daily basis to *prevent* gingivitis and periodontal disease and to maintain good oral hygiene. Note the italics. Homecare is PREVENTION. It is not treatment. In order to prevent a problem, you have to take action before the problem occurs.

It is common for owner to report to us that they started trying to brush their pet's teeth or started feeding a 'dental diet' or chew treat when instructed to do so because their primary care veterinarian had noted some gingivitis starting. They have started this program without their pet having a thorough oral examination first and in an attempt to treat established disease and this is all wrong. It can actually be far worse than doing nothing.

Take the example of a cat presented to me for evaluation and treatment of a resorptive lesion. When I examined the cat, I found four resorptive lesions (not just the one previously detected). As we have all seen, these lesions can be intensely sensitive (jaws chatter when you probe the lesion in an anesthetized patient – ouch). This owner had been instructed to start brushing this cat's teeth because it had some gingivitis as well as the resorptive lesion detected by the primary care veterinarian. In effect, the veterinarian had instructed the owner to inflict significant pain on their pet by poking at the painful resorptive lesions. What are the chances the animal is going to enjoy this experience? What are the chances the owner is going to enjoy this experience? If the animal's early experience with a home dental care program is one of pain, they will not be willing and enthusiastic participants in the program. If the animal does not want to have its teeth brushed, it does not matter how much the owner wants to do it, it won't happen!

As my home dental care instruction sheet (final pages of this document) indicates, it is essential that the animal truly enjoy the home care experience. It is an unnatural behaviour to sit still while someone pokes a plastic stick into their mouth and so training the animal to accept and enjoy the experience must be a gradual process of behaviour shaping. Every step must be pleasant and accompanied by positive reinforcement (affection, treats...). If the early experience is painful (due to trauma to teeth with resorptive lesions, fractured teeth, areas of significant inflammation...) the animal will be experiencing negative reinforcement and the program will fail! Once they get the idea established that the toothbrush is an instrument of torture, all future attempts at home care, even after the mouth has been made healthy, are likely to fail. The animal will be saying "We tried this before, it hurt like heck, so you can just forget it!"

The same would go for feeding plaque-retardant diets or chews such as those listed at www.vohc.org. These diets work mechanically to remove plaque from the teeth doing the chewing. Asking a dog or cat with established dental disease to eat a large, dry kibble that requires chewing is just mean. These diets are to be fed to animals with clean, healthy mouths and the necessary chewing hardware to do the job. They should not be recommended for animals with disease. They will do no good and chewing them may be very uncomfortable for the pet. So, the options for the pet are go hungry or eat through the pain.

If you have a young animal (6-months-old) that is in for spay/neuter, do a thorough oral examination to ensure everything is normal and healthy. If it is, now is the time to get the owners started on the slow and gradual process of training (tricking) their animal to enjoy having its teeth brushed.

If you are seeing a mature animal, do not recommend that the owners start a home dental care program (brushing and/or diet/chews) until you have performed a [COHAT](#) and can be absolutely certain there are no sensitive areas in the mouth that would preclude brushing or chewing.

As with anything, home dental care only benefits the pet if it is done properly. Done improperly it will do no good but can do harm.

REASONABLE EXPECTATIONS

In general, I see veterinarians and owners having unreasonable expectations of home dental care products and strategies. The claims from some companies lead consumers to believe that if they use the product, their pet's oral health is assured. In an attempt to motivate the pet-owning public to brush, the veterinary community has even been guilty of building similar unreasonable expectations (brush your pet's teeth and all will be well). If only that were so. But it is not.

The most we can expect from any home dental care product or program is, if started in a clean, healthy mouth and employed on a daily basis, it will slow the accumulation of plaque and calculus and help maintain good oral hygiene, gingival and periodontal health between regular professional assessments and treatments. To expect more is unreasonable and will lead to frustration and disappointment.

HOW TO INSTITUTE A TOOTH BRUSHING PROGRAM

Some client-oriented information is available at <http://www.toothvet.ca/dentalcare.html> but some further detail is indicated.

Tooth brushing is not something we do TO animals; it must be something we do FOR them. It does not matter how motivated the owners are, if the animal is not a willing and enthusiastic participant, the program will fail. Therefore, we must train the animal to truly enjoy having its teeth brushed. If this is accomplished, the animal will request this attention and will give the owners grief if they try to skip a day.

Teaching a dog to fetch a stick or shake a paw is like teaching a fish to swim. They are basically natural behaviors that we encourage with positive feedback. Having someone poke a toothbrush in their mouths is a very unnatural behaviour and so we must start with something the animal is already doing, reward that and then gradually shape the behavior until it is the behaviour we want.

When doing behaviour shaping or training of any sort, consistency is essential. The first step is to decide who in the family is going to be responsible for the daily tooth brushing. Training should be done by one person. Once the program is up and running well, the job can be shared, but the training phase should be a one-person job. In a perfect world, it would be the person who is the most motivated or has the best relationship with the pet. However, sometimes the job defaults to the person who is consistently home every day.

The next decision is when the brushing will happen. Dogs and cats are creatures of habit and like things to happen the same time each day. For many, late evening or just before bedtime works well as the pets are in a quiet mood and often looking for attention anyway.

The third decision is where brushing will happen. The owner should do this in the same place every day, not only for consistency but also to ensure that all materials, including the rewards, are all close at hand.

What follows are guidelines, not hard rules. Each program must be tailored to the home situation.

In many homes, the pet will seek the owner's company and attention by climbing on their lap or nudging their hand looking to be petted. In this situation, the animal is coming to the owner looking for something. It is the animal's idea; the animal is initiating the interaction, and this is ideal. At this time, the owner should get down at eye level with the animal and give it the attention it is seeking.

The first step is to have the animal sit quietly while the owner strokes under the chin and mandibles, using lots of gentle praise. After ten seconds or so, the animal is given a reward (usually a food treat). It is important that the reward follows the behaviour within seconds for the animal to draw a connection between the two.

Each day, the owner tries to increase the amount of time the animal sits quietly having its lower jaw massaged before getting the reward.

When the animal is happy to sit for thirty seconds or so, the owner can start working on stroking and massaging the maxilla (upper jaw/snout) as well. They should go slowly, as animals are naturally very protective of their eyes.

Next step is to gently and casually start manipulating the lips, pushing the upper lip up, retracting the commissures of the lips caudally and the lower lip ventrally. This should be done without pulling on the whiskers or pinching the lips. After a few days of this, it should be possible to slip a finger (one without long nails) inside the mouth to start gently rubbing the teeth. Start with the anterior teeth (canines and incisors) and gradually work farther back in the mouth to massage the premolars and molars. It is not necessary to open the mouth or even lift the lips for this – it can all be done by feel.

When the pet is comfortable accepting a naked finger rubbing along the buccal (cheek) surface of the upper teeth, the finger can be wrapped in a gauze square, a bit of pantyhose or some other mildly abrasive material. The covered finger is again used to massage the teeth and gums, starting with the anteriors and day-by-day moving to the back teeth.

If toothpaste is going to be used, now is the time to introduce it. Despite label claims, I view most veterinary tooth pastes as nothing more than flavouring. A study of human patients found that brushing without toothpaste was 98% as effective as brushing with paste. In other words, the

mechanical action of the brush does 98% of the work. The one exception to this rule is that there are credible, published studies showing that brushing with [healthymouth™ brushing gel](#) is considerably more effective than brushing with a placebo gel.

For all other pastes/gels, unless there is valid, credible research to show the product provides measurable benefit, I view it this way: If the pet likes the flavour of the paste, it becomes part of the positive reinforcement and it can be a useful motivator. However, many clients report that their pet is so busy trying to lick the paste off the brush, they will not sit still for brushing and so the paste makes it harder to brush, not easier. Dogs with furry faces are inclined to get paste stuck in their facial fur and then this needs to be cleaned/combed out and this often makes the paste more trouble than it is worth. Certainly, if the pet does not like the paste, it will have a negative impact on the program and should be left out.

The next step is to introduce the toothbrush. It should be a small, soft-bristled child's or toddler's brush. With the forefinger guarding the end of the brush, it is slipped into the buccal pouch under the upper lip and gently rubbed back and forth along the tooth at the gum line. Start with the anterior teeth and gradually work to the back of the mouth.

The bristles of the brush are held at 45 degrees to the long axis of the tooth at the gum line and the brush used to sweep the crown and marginal gingiva (gum line) to remove plaque and stimulate gingival fibroblasts. Owners should be cautioned about brushing too hard. They can practice on a ripe tomato. They should brush hard enough to dent the skin but not hard enough to tear it.

Some owners will complain that they cannot brush the back teeth because the pet keeps chewing on the brush. That is not altogether a bad thing. While the owner goes back and forth, the chewing action is brushing up and down and getting the bristles in between the teeth, almost like flossing.

Once the animal is accepting of having the buccal surface of the upper teeth brushed, the owners can start to work on getting at the lower teeth and to the lingual and palatal aspects. This will involve opening the mouth. Approached gently, this is usually no particular challenge. If prior dental treatments have identified trouble areas, the owners should concentrate on these.

After each training or brushing session, the pet is given a reward of some sort. This might be food, play, cuddles... whatever the animal will be motivated by.

This is not a race or a competition. The animal sets the pace and determines how long is spent on each phase before moving to the next. If the owners try to progress too fast and evoke a negative response from the pet, that is what the pet remembers the next night and the game is lost. It is far better to go too slow than to go too fast.

If the owners have made earlier attempts at tooth brushing without going through a gradual process of behaviour shaping, chances are it did not go well, and the owners gave up because the animal was non-compliant. These owners will have to be particularly patient and give the animal time to forget past negative experiences and learn new positive ones.

Similarly, if the animal has been living with dental pain for some time, the owners will have to proceed slowly to gain the animal's trust and help them to learn that it no longer hurts to have their mouth handled.

If owners approach tooth brushing with enthusiasm, follow the steps and take it slowly with lots of praise, affection and rewards, many animals will come to truly enjoy it. Many owners claim their pets will not let them skip a day as they do not want to miss the attention and treats.

HOME DENTAL CARE PRODUCTS

In past versions of this document, I have discussed various specific products, mentioning them by name. Part of the problem with doing that is that there are now far too many products on the market to touch on even a small percentage. In this version, I am going to talk in generalities and of the principles to employ when evaluating the potential merits (and risks) of a product.

This is a very confusing market space as there is virtually no regulation with regard to claims and labels and many “snake-oil purveyors” are quite skilled at putting together convincing websites and brochures. It is easy to fall for these false and unsubstantiated claims. The first thing I would like readers to know is that, while there are many products available that claim to be of benefit to oral health in dogs and cats, most of these products have no credible or independently reviewed research to show that they do anything of benefit. While it is true that absence of evidence is not evidence of absence (just because there is no research showing benefit does not prove that there is no benefit), if an owner is going to bother spending energy and money on a product, I want them to be spending on a proven entity.

How does an owner (or a veterinarian for that matter) know if a product has credible and independently reviewed research to substantiate its claims? Very simply, all you need to do is visit www.vohc.org and have a look at the list of products that have been awarded a Seal of Acceptance by the Veterinary Oral Health Council. Almost without exception, if a product is not to be found on the VOHC website, I would not even consider using or recommending it. Taking that approach quickly eliminates from consideration almost all of the products found in pet stores and in the internet as well as many currently available through veterinarians. We have just simplified the search dramatically. Here is another short document on the value of the VOHC and its work - [VOHC SEAL](#). Among the positive attributes of the VOHC trial protocols is that they are species-specific (a product meant for dogs is tested on dogs, if meant for cats, it is tested in cats), *in vivo* (in actual live patients with all of their complexities, not in a tube in the lab) trials of the full recipe (not just one or two of the active ingredients on their own). Now, moving on from there...

As the list of products with a VOHC Seal of Acceptance grows, we find that there are many options from which to choose, so we have to apply further selection criteria to this list of products.

As I mentioned earlier, as plaque is the proximate cause of gingivitis and periodontal disease, I am always going to favour a product with a plaque claim over one with a tartar (calculus) claim.

Diets

Many of the dental diets work mechanically by being composed of large kibbles that require actual chewing to break them down. Their mechanism of action is that they mechanically rub plaque from the crown surface of the chewing teeth while the pet chews on the kibble. These diets are only going to be of benefit for the teeth actually engaged in the chewing process (the back teeth) and only if the animal has enough chewing hardware left to use for chewing and if the animal is willing to eat slowly enough to spend time chewing. Some pets will as such enthusiastic eaters that they will try to swallow these large kibbles whole, in which case, they do no good and could pose a choking hazard. Some animals have already lost their main chewing teeth and so would not be able to manage these diets and certainly would not derive benefit from them.

Some of the other dental diets have a chemical added that absorbs calcium from the saliva so it is not available to precipitate on the crowns of the teeth to form tartar. This action may have effect even on the non-chewing teeth but they are tartar control diets with less effect on plaque accumulation.

Chews

There are several edible chew treats with the VOHC Seal of Acceptance. As with the diets, they work primarily through mechanical action to remove plaque from the surfaces of the chewing teeth and so have the same limitations as the diets (limit to which teeth they benefit, the pet has to have chewing teeth to benefit from them, potential choking hazard). As well, many of these treats might be considered empty calories and as pet obesity is another big problem in veterinary medicine, adding more, low-value calories to a pet's daily intake may be contra-indicated.

Toys

There are many items sold as “chew toys” either just for their value as a recreational toy or with the suggestion that they might be beneficial to oral health. Are they a good idea? Here is the short answer – virtually all of them are worse than useless. Bones, antlers, dried bull penises, hard nylon toys, dried cow hooves... all of these items (and many more) are far too hard for a dog to be allowed to chew on as they pose an extreme risk for causing tooth fracture and/or abrasive wear. Here is a bulletin from the FDA warning dog owners about giving bones to their dogs, with dental damage just one of the many potential negative outcomes listed - [Bones](#) and here is a short handout in which I outline [The Knee Cap Rule](#).

There are (at the time of writing) no toys with the VOHC Seal of Acceptance. If you want to give your dog a toy to play with, fine but do not expect it to have significant beneficial effect on oral health and select toys that will NOT cause dental damage.

I have mentioned avoiding hard things that fracture and abrade teeth, but surely a pliable toy like a tennis ball would be fine. Wrong. Sadly, tennis balls can be very damaging. The nylon fuzz on the ball is very abrasive in its own right. Also, the fuzz will trap and hold dirt so playing with a tennis ball is like chewing on sandpaper and this can cause serious abrasive wear to the teeth. It is far better to go with a smooth rubber ball or toy such as the Chuck-It™ brand or Kong™ toys.

Toothpastes and Gels

As always, start at the VOHC site looking for products with a Seal of Acceptance for helping to control plaque. If the product you are considering is not listed there, I would recommend you remove that product from consideration. Next question is, of these options listed on the VOHC site, which one had the best results in their clinical trials? The VOHC seal assures you that the product scored a minimum of 20% reduction in plaque/tartar (depending on which seal is has) compared to placebo, but we will never learn from the VOHC what the actual scores were. You will have to ask the manufacturer if they are willing to share the results of the clinical trials that were used for their VOHC application. For many years I acted as consultant to HealthyMouth, LLC and so was given access to and permission (encouragement actually) to share the results of their trials and for their brushing gel, the results of the studies in dogs were published in the Journal of Veterinary Dentistry. Here is a bulletin about the results of the brushing trails - [Information on the brushing gel kits](#). If considering another paste or gel, find out if its results compare favourably or not.

Water and Food Additives and Topicals

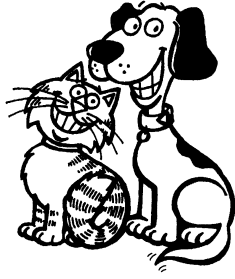
Same story as above. Does the product have a VOHC Seal of Acceptance and if so, is it for plaque or tartar (or both)? From the list of products that can answer “yes” and “plaque” or “both”, compare the results of their clinical trials. Again, I can provide you with the results of most of the trials of the healthymouth™ product line. Here is a bulletin on that – [Synopsis of the nine clinical trials in dogs and cats](#) and if you want the actual raw data to wade through, visit - [Raw Data](#)

Conclusion

- Look for the Veterinary Oral Health Councils seal of acceptance, especially for plaque control. More and more companies will be submitting their research for evaluation and so the list of accepted products can be expected to continue to grow.
- Look carefully at the claims and demand to see the research, not just a list of references or some glossy diagrams of what is supposed to be happening when you use the product.
- Does the research show:
 - Safety
 - High compliance
 - Efficacy
- Have reasonable expectations for whatever program/products you employ and use them as part of a comprehensive, veterinary-directed oral care program that includes regular detailed examination and treatments under general anesthesia.
- For a lot more information on the healthymouth™ line of products, visit www.toothvet.ca/hm2.html. For people new to the products, the three most important links there would be:
 - [Product Brochure](#)
 - [Tips on helping pets accept the water additive and what to do if they will not](#)
 - [Reasonable Expectation](#)

By putting a little effort into the critical evaluation of product claims, you can increase the chances of developing a home dental care program that works, to everyone's benefit.

The next two (final two) pages of this document are intended as a stand-alone client-education hand out.



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BOARD-CERTIFIED
VETERINARY DENTIST™

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B R U S H I N G Y O U R P E T ' S T E E T H

With your own teeth, what your dentist and hygienist do is only a small, though essential, part of your oral hygiene program. **You** are responsible for the daily brushing, rinsing and flossing that are required to slow the constant progression of periodontal disease. The same is true for your pet. You are responsible for every aspect of your pet's daily care and care of the teeth becomes more important as we expect our pets to live longer and longer.

Brushing your pet's teeth can be an important component of home-care. The purpose is to mechanically disrupt and remove plaque before it becomes tartar. Plaque is a slime composed of bacteria, saliva and food particles which adheres to the teeth and fills the pocket between the tooth and gum. Left undisturbed, plaque rapidly collects minerals from the saliva to form the rock-like brown deposits known as tartar or calculus. By brushing daily, you remove plaque and so tartar builds up slower. As with all things, the results will depend on the effort you give it.

The first step is to have your veterinarian perform a thorough oral

examination to determine if there is any dental disease which needs to be treated before you start your brushing program. It would be inadvisable to start brushing your pet's teeth if there is any established dental disease as it will do no good but will cause pain to your pet.

Once the examination has been completed, your veterinarian will outline the treatment plan. If there is dental disease the plan will include a thorough cleaning of all teeth, both above and below the gum line. Any teeth that have extensive disease beyond the point of being salvageable will have to be extracted. There may well be some seriously diseased teeth which might be saved through more extensive procedures and you will need to discuss with your veterinarian what your expectations and desires are regarding the various treatment options.

**MANY PETS REALLY
ENJOY HAVING
THEIR TEETH
BRUSHED**

The only way to properly carry out dental procedures on pets is with them anesthetized.

Fortunately, the drugs available today make the anesthetic risk lower than the risk of dental neglect.

Now that we have the mouth clean and healthy, it is up to you to keep it that way. As mentioned before, this can be aided by brushing your pet's teeth daily. A program is outlined below which will help you get started with this highly rewarding habit.

Bear in mind that these are guidelines, not hard rules. Each animal is different and so the program may need to be modified to your pet's needs. Some owners can start brushing their pet's teeth

on the first day whereas with others, it may take weeks of gradual effort to build up to brushing. Be patient because if you try to progress too rapidly, you might make your pet mouth-shy, making it very difficult to proceed.

If handled properly, many animals come to truly enjoy their home-care and the extra time you spend each day with your pet will increase the bond between you.

Guidelines For Tooth Brushing

1. When to start? **As soon as possible.** Eight to 12 weeks old is best. Pets do not need maintenance this young, but by starting when your pet is young and impressionable, they will become familiar with the routine when the permanent teeth erupt. However, you must halt the program while your pet is losing its baby teeth as the mouth will be a bit sore and you poking around with the brush will cause more pain. Once all the permanent teeth are in, you can pick up where you left off.
2. The first step is to work with your pet's mouth. With a little patience your pet will soon accept your attention. **Make it fun** for both of you. Use a lot of love and especially praise to gain their confidence. Try to have your practice sessions at the same time each day so your pet gets into a routine. Late in the evening often works well, as everyone involved is generally in a quiet mood then. If your pet is highly motivated by food, try just before dinner with the meal acting as a reward for co-operating.
3. Start by handling the muzzle and tickling the lips and soon you will be able to rub the teeth and gums with your finger.
4. Next, use a washcloth or piece of pantyhose, wrapped around the end of your finger to gently rub the teeth.
5. Finally, use a soft toothbrush to brush the teeth. I recommend a child's soft-bristled tooth brush. Hold the brush at a 45 degree angle to the tooth and brush back and forth or from gum to tip. Brushing the tongue side of the teeth is less critical. **Make it a game.**
6. There is an ever-growing selection of veterinary tooth washes, pastes and gels. Your veterinarian can help you select the one best suited to your situation. These products may (or may not) increase the effectiveness of your brushing program but remember, in most cases **it's the brush which does most of the cleaning.** Brushing should be done daily for best results. Less than 4 times a week will have little if any effect. Use products that have the Seal of Acceptance from the [Veterinary Oral Health Council](#). Avoid the use of products meant for humans as they can cause harm if swallowed (we rinse and spit but dogs and cats swallow).
7. It can help to give mildly abrasive foods and treats. Again, visit www.vohc.org for products with valid research to back their claims. Focus on products that are accepted to control plaque over those that just have a tartar claim. **Avoid natural bones, antlers, dried cow hooves, dried bull penises, hard nylon toys and large rawhide toys as these are hard enough to fracture teeth. If you would not want me to hit you in the knee-cap with it, don't let your dog chew on it!**
8. By following a consistent program of home-care, you will greatly improve your pet's chances of enjoying good oral health. However, please remember that there is no substitute for professional veterinary care. We must work as a team to ensure a long and happy life for your pet.
9. For more information, please have a look at this paper on our website - [Home Care Concepts and Products](#)

Thank you for letting us help maintain your pet's dental health.