

£2.00

A Guide To **Feline  
Dentistry**

Bob Partridge - Pet Smile Month



[www.PetSmile.org](http://www.PetSmile.org)

# 1. Teeth

Our cat's teeth are amazing. With a little help from you the owner, and your vet, many should last a lifetime. A lot of dental disease is completely preventable. Toothbrushing is ideal, but diet can play a major role in prevention. This booklet is designed to give you more information to assist you in looking after your pet's teeth

## A. Structure

### i. Enamel

This is a very hard substance which provides the outer structure of the tooth. It is all laid down before the tooth erupts. After eruption the body cannot repair any damage

### ii. Dentine

Dentine is produced by the odontoblasts that line the pulp chamber. It is composed of tiny little tubules – like a huge stack of pipes laid next to each other. The little tubules carry tiny extensions of the odontoblasts into the dentine. The dentine is alive and develops as the tooth ages. Dentine exposure is painful and should be treated.

### iii. Pulp

The pulp chamber carries the blood vessels, nerves etc necessary to keep the tooth alive. As the tooth ages the pulp chamber gets narrower. Any tooth fracture which exposes the pulp chamber will be acutely painful.

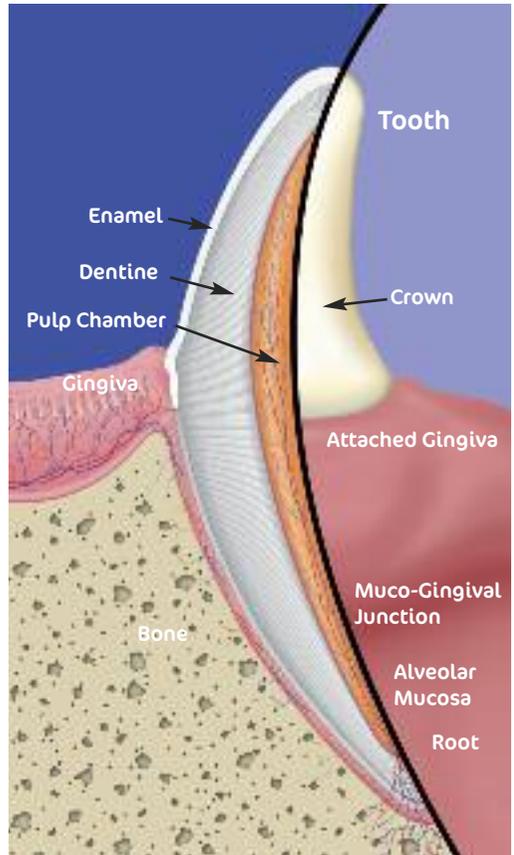
### iv. Alveolar Bone

The jaw bones provide the support and attachment for the teeth. The powerful jaw muscles attach to the jaw bone. The bone also provides the pathway for the blood and nerve supply to the teeth.

### v. Gingiva

The gums cover the jaw bone. They are specially adapted to withstand the rigour of repeated trauma from contact with food when chewing.

## 2. Anatomy & Development



## B. Dentition

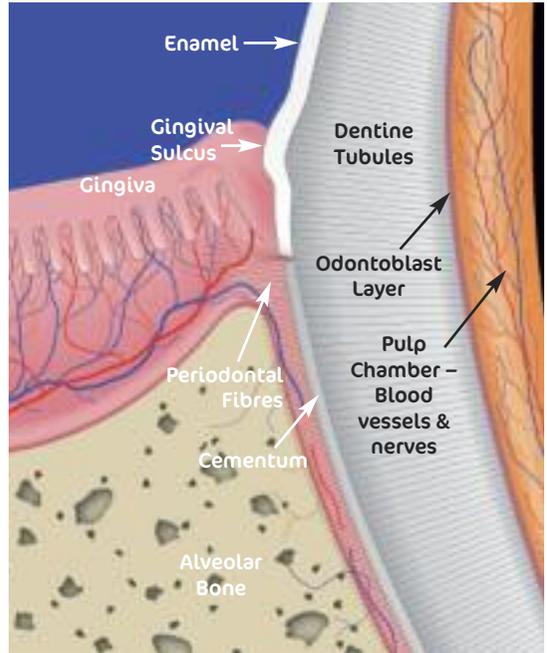
In short nosed cats the teeth may be rotated to allow them to fit in. Somecats have missing or extra teeth – these should be investigated radiographically to ensure that there are no problems.



## D. Tooth Attachment

The attachment of the tooth to the body is a complex apparatus. In a perfectly healthy tooth the gum presses up against the enamel - leaving a virtual or potential space - the gingival sulcus.

At the bottom of the sulcus is the actual attachment of the tooth to the gum - the junctional epithelium. Below this are the periodontal fibres. These attach into the bone and into the cementum surrounding the roots. The periodontal fibres not only hold the tooth in the jaw, but act as a shock absorber. The massive forces applied by the tooth are cushioned by the fibres preventing trauma to the alveolar bone.



## E. Temporary Teeth



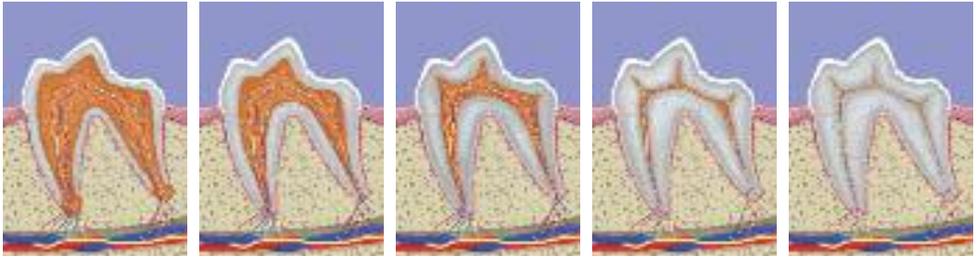
Developing Permanent teeth under Temporaries

Kittens have 26 temporary (milk) teeth. These are shed around 4-6 months of age as the 30 permanent (adult) teeth erupt. Normally the roots of the temporary teeth resorb as the permanent tooth develops underneath them.

Usually just a cap of the temporary crown is left to drop off and may be swallowed. Often we may not find the shed teeth, but may notice a trace of bleeding and possibly slight discomfort during teething. Sometimes temporary teeth are not shed. If these retained teeth are not removed they can cause problems with tooth alignment and certainly are often associated with dental disease developing due to the crowding of the teeth. Most kittens are neutered at around 6 months of age - it is wise to have the teeth checked at this time and any retained temporary teeth should be carefully extracted.



## F. Tooth Development



When a tooth first erupts it is very immature. Over a period of months and years more dentine is laid down by the odontoblasts, narrowing down the pulp chamber. The odontoblasts can also respond to wear of the tooth by laying down extra dentine. The enamel, however, is static. If damaged enamel cannot be repaired by the body.

## 3. What are the Signs of Dental Disease?

### A. Pain

Our pets are very poor at letting us know that they are suffering. They may simply be quieter than normal or more withdrawn. Many of us know the pain associated with mouth ulcers, some will have had the misfortune to have experienced a tooth root abscess. The nerve supply to cats' teeth is just as efficient as our own – there is no reason to suppose that they do not feel the same level of pain that we do with dental disease. Detecting pain in our pets can be very difficult – oral pain can be even harder to diagnose. Often it is only when we see an improvement or change in behaviour after effective dental treatment, that we realise that our pet may have been suffering.

### We can infer that our pets are in pain if we note:-

#### i. Reluctance to play

Sometimes your cat will gradually lose interest in chewing or playing with toys. However as this is often a gradual change we might think that they have simply lost interest in a particular toy.

#### ii. Reluctance to eat

It is only at the far extreme of dental disease that cats will stop eating – although you may notice earlier changes:-

- Favouring one side of the mouth
- Dropping food from the mouth when eating
- Appearing to have difficulties in picking up food
- Being reluctant to chew on dry food

#### iii. Pawing at the mouth

Sometimes oral pain can lead to a cat repeatedly scratching at their mouth – sometimes enough to make their face bleed. There is a peculiar syndrome (particularly seen in Burmese cats) called Feline orofacial pain syndrome. This is a distressing condition which can result in severe self harm. It can be difficult to investigate and diagnose. Referral to a veterinary dentist is often required.

#### iv. Pain on examination

A reluctance to allow full examination of the mouth may indicate pain. If a swelling on the side of the face appears to be painful when it is touched – it may be associated with an underlying tooth root abscess. If your cat's mouth is very painful your vet will need to use a sedative or an anaesthetic to properly assess the situation.

## B. Redness

Inflammation of the gums leads to an increase in blood supply and an influx of white blood and other cells involved in fighting infection. This produces the red colour of the tissues we associate with gingivitis (inflammation of the gums) and stomatitis (inflammation of the mouth).

## C. Bad Breath (Halitosis)

The bacteria associated with dental disease produce Volatile Sulphur Compounds (VSCs). These produce the rancid smell that can characterise dental problems. As well as smelling bad VSCs also play a role in the disease itself as they are toxic to tissues.

## D. Bleeding

As the inflammation progresses the walls of the blood vessels weaken and minimal trauma (even contact with food during a normal meal) can lead to bleeding.

## E. Loose Teeth

Teeth have a wonderfully strong attachment into the jaw bone. For a tooth to become loose it means that disease and infection has destroyed significant amounts of periodontal ligament and/or bone. As a rough guide if more than 1mm movement can be achieved – then the tooth probably needs extraction.

## F. Calculus / Tartar Buildup

Accumulations of lumps of calculus on the teeth do not actually cause disease – but the bacteria that live on the surface of the calculus do. This is why calculus is often associated with gingivitis in the areas close to it.

## G. Pus – purulent discharge

Close examination of the gum edges – especially alongside areas of calculus, can show a creamy discharge. If it is not immediately visible, then pressing gently on the gum can express the pus from around the edge of the tooth. The pus can also add a yellow colour to saliva. Presence of this pus emphasises the extent of the infection that is associated with dental disease. Often a far greater number of bacteria are present in dental disease than if the pus was collected as an abscess. Whilst an abscess would quickly prompt owners to seek treatment, dental disease often goes un-noticed for years.



The redness may be confined to only one or two teeth



## H. Swellings

Check all around the mouth inside and out for swellings. It is especially important in cats to check the tongue as it is a common site for growths. Swellings to the gums around the upper canines are very common in cats. They usually represent deep periodontal infection and bone destruction around the tooth – with an attempt to repair by laying down new bone in a bulge. The upper canines can also appear to “grow longer” this is actually them being forced out of their sockets by the infection. Trying to see the bottom side can be difficult – but can be achieved by pushing up from the outside between the lower jaws.



## I. Salivation

Drooling saliva can either be as a result of increased production – which can happen when mouth ulcers are present, or as a reluctance to swallow if the mouth is painful.

Sometimes the saliva can be more stringy than usual and can be yellow coloured (indicating pus being present) or may be red and blood tinged.

## J. Fur Staining

The drooling of coloured saliva can result in staining of the fur around the muzzle, or of the front legs.

## K. “Ageing”

Often cats can be thought of as “getting older” when in fact the reason why they are more lethargic is down to the effects of dental disease. The phrase “He’s like a kitten again” is frequently heard from clients returning a week after proper dental treatment has been carried out. This can be the clearest indication of just how much the dental disease has been affecting a pet’s health.

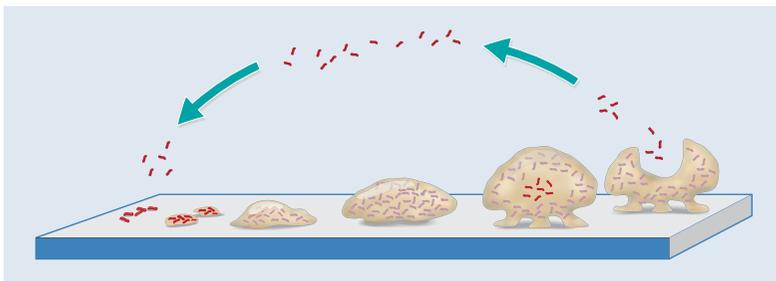
**It is important to remember that most dental problems can be treated and prevented**

# 4. How Periodontal Disease develops

## A. Plaque

The Pellicle (a thin layer of material formed from saliva and cell debris) becomes attached to the teeth. This can happen within hours of cleaning the teeth.

Plaque, a Biofilm, then quickly forms on the pellicle. Free floating (planktonic) bacteria attach by hundreds of tiny hairs called fimbriae. They then attract others to join them and link up by their fimbriae forming micro-colonies. Attachment also stimulates the bacteria to produce a slime layer to their outsides. This slime helps to bind the bacteria together and also provides protection.



The colonies further develop by multiplication and mature into mushroom shapes, becoming home to a wide variety of different species of bacteria, living in a different environments within the colony. The slime matrix links the millions of colonies. Fluids flow between the stalks of the mushroom shapes, transporting nutrients and bacteria. This allows the biofilm to grow and spread. Plaque can be grossly seen as creamy layer on the tooth surface which can be scraped off with a fingernail.



Disclosing solutions can be helpful to demonstrate it in less advanced cases.



## B. Gingivitis

The plaque biofilm spreads into the gingival sulcus, the little gap between the tooth and the gum. In this oxygen poor environment the predominant type of bacteria changes, toxin production increases and inflammation is stimulated.



Initially the edge of the gum develops a reddened fringe. The gum then starts to swell as inflammatory cells invade the tissues in response to the bacterial stimulants.



The inflammation also damages the attachment between the tooth and the gum. This increases the depth of the gingival pocket, creating more space for subgingival plaque to accumulate. As gingivitis becomes more advanced the gums can bleed easily.



## C. Calculus/Tartar

Saliva contains various minerals, these can crystallise within the plaque biofilm to form the hard, stone-like material called calculus. Saliva also normally contain phosphoproteins that inhibit the mineralisation, however plaque bacteria produce enzymes that destroy these protective proteins. Once plaque is established it is therefore almost inevitable that calculus development will follow. Different cats may have different levels of phosphoproteins and/or minerals in their saliva, this may be one reason why some cats get more calculus than others.



Calculus is built up in layers. Often live plaque bacteria can be trapped in pockets within the calculus. Bits of organic food debris can also become trapped as new layers of calculus are laid down. Calculus has a very rough surface, this roughness increases the surface area for the plaque biofilm to develop on. Whilst not directly contributing to periodontal disease calculus forms a rich reservoir of the plaque bacteria responsible for problems.



It is vitally important that all calculus is removed when dental treatment is performed. Calculus can form on the tongue side of the teeth as well as on the lip side, most importantly calculus forms within the gingival pocket and this can't be left behind. This is one of the reasons why an anaesthetic and thorough cleaning is needed. Simply "cracking off" the obvious large lumps of calculus will not provide any proper benefit.

## D. Periodontal Disease

As gingivitis progresses some of the damage becomes irreversible. This marks the change over to periodontal disease.



There is a progressive attack on the supporting structures to the tooth. The fibres of the periodontal ligament are damaged and eventually lost. The actual bone support to the tooth is also attacked. Cells called osteoclasts eat away at the bone socket, both widening it and also reducing its height. Teeth inevitably become loosened and in time will be lost.



Whilst many teeth are often affected, sometimes periodontal disease can be localised affecting only one or two teeth.

## 5. The systemic (whole body) effects of Dental Disease

In addition to the important local effects in the mouth of pain and inflammation – there are also tremendously important effects on the rest of the body. These are often the things responsible for the signs of “ageing” discussed previously. **The good news is that most of the problems are reversible and are preventable by good oral care.**

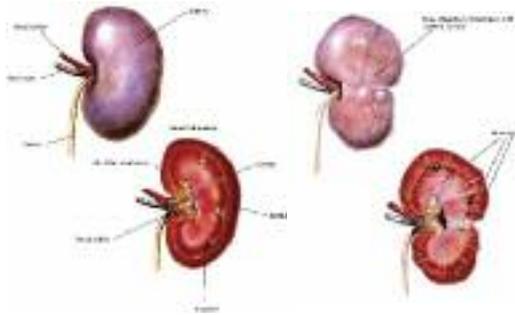
### A. Blood Spread Infection

Bacteria from the periodontal disease have very easy access into the blood stream. In an otherwise healthy pet, if the numbers of bacteria are not too high, the body's normal defence mechanisms can mop up the infection without too many ill effects. However, if a pet is immunocompromised, or debilitated with another illness, or if the numbers of bacteria are very high – then the infection can spread through the blood stream to affect other organs.

#### i. Kidney

The kidneys have a massive blood supply and act as a filter, excreting waste products from the blood into the urine. The filter can also act as a trap for circulating bacteria. Infection can then damage the function of the kidneys.

Blood tests can help to reveal low grade kidney problems. It is not uncommon to find an improvement in kidney tests after proper dental treatment has been carried out. If kidney damage is found then the vets may recommend the use of fluids, possibly an intra-venous drip, during the anaesthetic for the dental.



Images courtesy of Hill's™

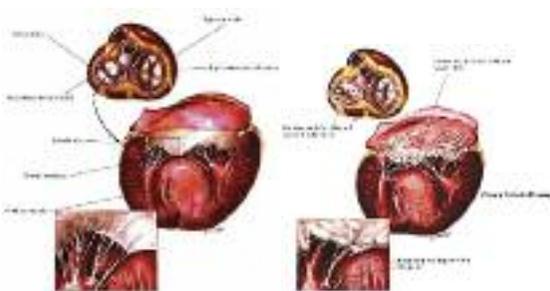
#### ii. Heart

If the heart valves are damaged, or are not working properly, then the blood flow around them is turbulent. This turbulence leads to the heart murmur sound that vets hear with the stethoscope.

The damaged heart valve is also a site that bacteria carried by the blood stream like to settle upon. This is a condition known as Bacterial Endocarditis. The bacteria can be shed from this area to seed off to any other organ in the body.

#### Healthy Heart Valves

#### Diseased Heart



Images courtesy of Hill's™

# The systemic effect

## iii. Lungs

Bacteria from the blood stream will be carried into the depths of the lungs by the fine meshwork of small blood vessels needed to exchange oxygen from the air.

## iv. Liver & Pancreas

In some cases of Pancreatitis (inflammation of the pancreas) and Hepatitis (inflammation of the liver) the source of the infection appears to have been dental disease.

## v. Other

Every other tissue that has a blood supply – brain, muscle etc, is potentially at risk from blood borne infections.

## b. Inhaled Infection

As a cat with dental disease breathes in, a shower of bacteria can be carried down the airways. The body's normal defence mechanisms will manage to cope with much of this – however if the numbers of bacteria are too high, or if the lungs are sick already (for example bronchitis or as a result of heart disease), then the infection may take hold. It is important to note the effects of “passive smoking” apply to our pets as well. Households with smokers are far more likely to have pets with respiratory problems.

## c. Ingestion of Toxins

There is little scientific evidence to back this – however anecdotally there are cases where “gastritis”, or “tummy problems” appeared to have benefitted from effective dental care.

It is the case that the bacteria associated with dental disease are not just sitting around the teeth. They are producing toxins. These can be washed off with the saliva and ingested. Some of these toxins will not be destroyed by gastric acid and may lead to problems.

**Remember:**  
Most dental problems  
are treatable or preventable

## 6. Other Diseases with Oral Symptoms

The mouth can show signs of many diseases. This is why veterinary surgeons will always try and check the mouth and gums as part of their routine examinations.

Cat flu and kidney disease can produce ulceration and bad breath. Liver disease can show as jaundice or yellowing of the gums. Blood clotting disorders can often first show themselves as bleeding of the gums. Severe diabetes can be detected as an acetone (nail varnish remover) smell to the breath. Various autoimmune disorders can show as lesions in the mouth or lips. Salivary gland disease can lead to swellings and sometimes pain.

There are many other conditions that can produce oral symptoms. Many veterinary surgeons regard the mouth as the “window to the core” – certainly oral examination is a vitally important part of any health check. It is obviously sensible to get your dog used to having their mouth examined from an early age.

## 7. Oral Tumours

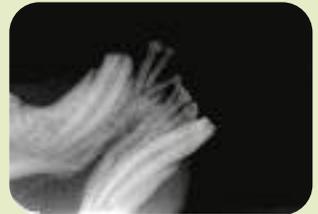
Tumours occur relatively commonly in the mouth. Many of these can respond very well to early treatment. It is important to regularly check your cat's mouth for any lumps or bumps.





## 8. Radiography

X-Rays are regarded as essential by veterinary dentists; many general practices are also investing in this equipment. It has been shown that important pathology can be missed in over 40% of feline cases unless radiographs are taken. Your veterinary practice may be able to offer your cat an X-Ray screen at the time of a scale and polish – ask for details.



# 9. Scale & Polishing

This is the commonest dental procedure carried out in general practice. Generally the benefits (short & long term) of cleaning the teeth FAR outweigh the risks.

## a. Pre-Operative Checks

As many dental patients are elderly and as we know dental disease can affect other body organs, a blood test may be suggested as part of the pre-operative checks. A physical exam, checking the heart, circulation and lungs should also be carried out. Depending upon the patient intra-venous fluids may be recommended during the anaesthetic. Antibiotics and pain relief may also be needed.



## b. General Anaesthesia

Your veterinary surgeon will advise on the safest anaesthetic regime for your dog. Various anaesthetic monitors may be used, together with trained staff to monitor the anaesthetic. Heated beds are often used to maintain body temperature as the water spray around the mouth can be quite cooling. Intubation – where a tube is passed into the airway is considered essential when scaling and polishing. This, together with suitable packing material in the back of the throat, will prevent inhalation of debris and fluid from the scalers.



## c. Rinse

Given the huge numbers of bacteria present in the mouth, an antiseptic rinse is often used.



## d. Assessment

The extent of the dental disease is assessed. Often it is only under anaesthetic that a proper oral examination can be carried out. This is why it is essential to leave a contact phone number so that the vet can discuss any changes to the plan – perhaps additional extractions.

X-Rays (especially digital systems) are increasingly becoming part of the normal assessment process for dental disease.



A probe is used to measure the pocket depth around the teeth (sometimes the surface calculus has to be removed first). A dental recording chart is often filled in – this allows a proper record to be kept of the procedure.



### e. Remove Calculus

The large surface lumps of calculus can be removed with special forceps – taking care not to damage the sensitive gums. The reason for the tube protecting the airway becomes clear when you look at the debris.



### f. Scale

Most veterinary practices will use a mechanical scaler to remove much of the dental calculus and the plaque biofilm. Ultrasonic scalers require a good flow of water at the tip to work (and to prevent the teeth overheating). This is another reason why the airway needs protection. Sophisticated units (like the iM3 42-12) allow the probe to be used to clean sub-gingivally – into the periodontal pocket. It is vital that the pocket is thoroughly cleaned – without this the problems will continue.



The periodontal pocket can also be curettaged by hand – all sides of every tooth should be cleaned.



## 9. Polish

Polishing the teeth will help to remove the micro-scratches on the surface of the enamel that any scaling will produce. Polishing also helps to delay the return of the plaque biofilm. As with the scaling – it is important that all sides of every tooth are polished.



## h. Preventive Treatments

There are some new products that can be applied to the teeth to help keep them healthy after cleaning. The most exciting of which is Dentagen Wax. This contains a plant extract called RF2 which has some highly interesting properties. It affects the fluidity of bacterial membranes and effectively prevents the plaque biofilm from forming. This is specifically targeting the starting point of most dental disease. Ask your vet for more details.



## 10. Extractions

No-one likes taking out teeth, if a tooth is extracted it means that the vet had very good reasons to do so in the interests of your pet's health.

The general principle of extracting teeth is to sever the periodontal ligament that attaches the root to the jaw. This can be done using a sharp luxator instrument inserted into the socket around the root. Alternatively pressure on one side of the root stretches the ligament fibres on the other side. Maintaining the pressure causes the stretched fibres to weaken and break. The process is repeated in different directions until the root can be extracted.



An important part of the process is to divide multi-rooted teeth into single rooted fragments. It is only by doing this that the minimally traumatic techniques described can be used. High speed air drills are the best way of sectioning teeth and many practices have invested in iM3 units or similar equipment.





### i. Home Care

The best time to start home care is immediately after a dental procedure. Toothbrushing may be best avoided for a couple of days but the Microfibre Oral Cleaning cloths can be used immediately to apply an antiseptic wash or Logic® Oral Hygiene Gel.



Hill's™ t/d™ diet can normally be reintroduced within a couple of days of a dental procedure. Your vet will be able to advise you on your pet's needs.



### a. Surgical Extractions

More and more commonly, as vets invest in high speed dental air units, a surgical approach is taken to extracting cat's teeth. Although it seems more invasive – the careful removal of tissues is a lot less traumatic than spending a long time struggling to free roots.

#### i. Gingival Flap

A very sharp scalpel is used to prepare the flap and to expose the jaw bone.



## ii. Bone Surgically Removed

The air unit is used to carefully remove some of the jaw bone which was covering the tooth to expose the roots in their sockets. If not already carried out – the roots are separated to allow them to be extracted individually.



## iii. Roots are Extracted

The roots can then be luxated and removed as described above.

A bone graft or bioglass may be used to fill the bone defect.



## c. Suturing the Gums

Having extracted the roots it is important not to simply leave the bone socket open. Food and debris could quickly pack into the bone and lead to infection and bleeding is likely to be more prolonged.

Ideally after cleaning, the sockets can be packed with a bioglass (or a bone graft). The gums are then gently elevated to allow them to be sutured over the sockets without any tension. If there is tension then the wounds will often break down. A fine absorbable suture is used so that stitches do not need to be taken out and can be left to dissolve.

This is obviously complex and time consuming surgery and care has to be taken to avoid damaging tissues. Surgical extraction of teeth can add to the costs of the procedure – but can sometimes be the only way forwards.



## d. Aftercare

Your vet will advise on any special needs after dental extractions, antiseptic mouthwashes are commonly used. Tinned diet such as Hill's i/d™ may be needed for a few days to assist in recovery.



## 11. Tooth Fractures

If a tooth is fractured and the pulp chamber is entered there are only two options – extraction, or endodontic treatment. This applies to all teeth – not just the big canines. There are a number of dental referral practices that are able to offer root canal treatments – ask your vet for details.

A sequence of radiographs during a root canal treatment



## 12. Discoloured Teeth

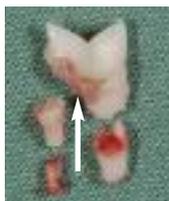
Sometimes when a tooth is subjected to blunt trauma there can be haemorrhage within the pulp chamber. The blood can leak into the dentinal tubules causing discolouration of the tooth. In most cases a discoloured tooth will have been killed by the trauma. Treatment is generally either extraction or a root canal filling.

## 13. Jaw Fractures

Plates, pins and screws to the jaw bones can cause a great deal of damage to tooth roots. This is why cases are often referred to a veterinary dentist. Most of the time orthodontic materials and expertise can be used to create splints in the repair of jaw fractures.

## 14. FORL's

Feline Odontoclastic Resorptive lesions are very common in cats. Initially signs can be very subtle like the small red area on the back tooth in the picture. However radiographs shows the destruction of the tooth substance that has occurred, confirmed on the extracted tooth.



FORL's are always painful. Unfortunately, at the moment, the only treatment is extraction. Extraction can be difficult as the teeth are fragile due to the resorption. Radiographs are really useful to ensure removal.

Tooth destruction becomes more advanced and in many cases the whole crown is lost – leaving roots in place, which may continue to be inflamed.



## 15. Gingivitis / Stomatitis complex

This is a very painful condition and appears to be related to an excessive response to plaque in the mouth. The colours in the picture below have not been changed – it really is that red and sore.

Good results can be achieved in a high % of cases by extracting all of the teeth. Whilst this sounds dramatic, cats can cope very well afterwards. Some can even hunt and they can all eat dry food. The biggest change is in the removal of constant pain – cats are so much happier after treatment. It is essential that all remaining dental roots are removed. Radiographs are essential and referral to a specialist is often needed. In the cases that do not respond to surgery – lasers and medical management can help.



## 16. Eosinophilic Granuloma Complex

Occasionally some cats can develop ulcers around the mouth. After biopsies are taken to confirm the diagnosis, most cats respond well to flea control and other measures. The condition is also known as Rodent Ulcer – but is very different from the human condition of the same name.



## 17. Home Care & Prevention

### a. Toothbrushing

This is the gold standard for home care. It is important to use toothpaste specially designed for cats – the Logic® Oral Hygiene gel is very well accepted by most cats who love its flavour. The Petosan® toothbrush has been specifically designed for cat's teeth. Its double sided head means that the tongue side of the teeth is cleaned as well as the lip side.

Toothbrushing should be done at least once daily – it only takes a minute or two once your cat has become adjusted to it.

Have a look at the website ([www.PetSmile.org](http://www.PetSmile.org)) for hints and tips on getting started with toothbrushing for your cat.





## b. Dental Diets

There are a number of diets that claim to be helpful in reducing the amount of dental disease. Statistically, feeding a dry food is associated with less dental disease than when pets are fed on a wet food. So it is important to make sure that any claimed benefit is not simply based on a comparison with wet food.

It is important to ask for your vet's advice in choosing one that they trust and that will have the correct nutrient balance for your cat.

Hill's™ have spent many years producing a diet which is designed to actively clean the teeth by allowing them to penetrate into the fibrous pellet. This helps remove the plaque biofilm – the root cause of most dental disease. t/d™ diet has been tested to the vigorous VOHC standards – so it can justifiably claim to assist in preventing dental disease.



## c. Oral Hygiene Chews

Chewing is certainly beneficial in helping to reduce dental disease. The physical action helps to remove the plaque biofilm from the teeth. The increased saliva production also plays a role in helping to rinse the mouth.

It is important to use a chew that your cat will enjoy – especially as chews should be given daily.



## 18. Conclusion

I hope that you have found this little guide useful and that it has given you an insight into the importance of home care and the use of a proper dental diet.

I also hope that you are encouraged to “Lift the Lip” and to examine your pet's mouth regularly. The practice team at your vets are always there to help and advise you.

Consider insurance to help cover the costs of dental treatment. Be careful to read the policy in detail – some companies do exclude dental treatment.

For more complex problems your vet can find referral veterinary dental practices at the PetSmile website ([www.petsmile.org](http://www.petsmile.org)). Veterinary dentists undertake a wide range of problems

from jaw fractures, damaged teeth needing root canal treatment, post & crowns, orthodontics and dealing with tumours.

If in doubt contact us at [info@petsmile.org](mailto:info@petsmile.org).

**Best wishes,  
Bob Partridge**

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[www.PetSmile.org](http://www.PetSmile.org)

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