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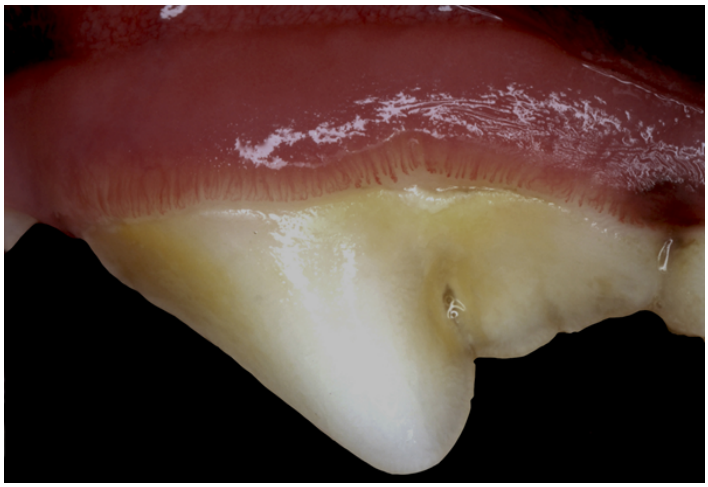
Dental Disease in Dogs

How common is dental disease in dogs?

Dental disease is one of the most common medical conditions seen by veterinarians. Over 80% of dogs over the age of three have active dental disease.

Few dogs show obvious signs of dental disease, so it is up to the dog's family and veterinarian to uncover this hidden and often painful condition. If your dog shows signs, they may include pawing at the mouth, head shaking, or jaw chattering. They may chew with obvious discomfort, drop food from their mouth, swallow with difficulty, or drool excessively. The saliva may contain blood. Halitosis (bad breath) is also common.



A dog's tooth showing periodontal disease.

Are dental problems the same in pets and people?

Dogs can get many of the same or similar oral diseases as are seen in people. However, the most common dental disease in people is tooth decay or cavities, whereas in dogs it is periodontal disease. Whether someone develops cavities depends on multiple factors, including environment, bacterial plaque, and diet, but ultimately, there is tooth decay. In dogs, tooth decay is rare, representing less than 10% of all dental problems. The most common dental problems in dogs are periodontal disease and fractured teeth.

What is periodontal disease?

Periodontal disease describes infection and associated inflammation of the periodontium (the tissues surrounding the tooth). Four tissues comprise the periodontium: the gingiva (gums), the cementum (covering of the root surface), the periodontal ligament (attaching the tooth root to the bone), and the bone surrounding the tooth.

Periodontal disease starts with gingivitis (inflammation of the gums). Left untreated, the infection often spreads deeper into the tooth socket, destroying the bone. Ultimately, the tooth becomes loose and may fall out over time.

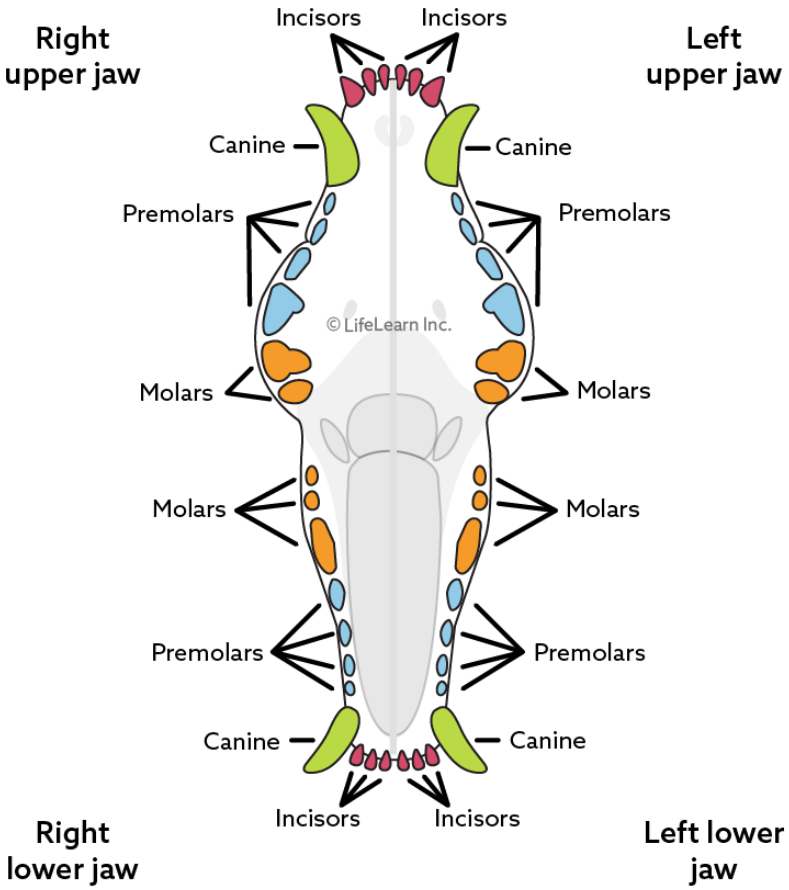
There may be other consequences of periodontal disease due to the loss of bone, including oronasal fistula (a hole from the mouth into the nose), jaw fracture, and abscessation with draining tracts that develop in the mouth, on the face, or under the chin. Some studies indicate that the bacteria from severe oral disease, which gets into the bloodstream, may also be associated with pathological changes in major organs, such as the heart, liver, and kidney.

Is periodontal disease very common?

It is estimated that more than two-thirds of dogs over three years old suffer from some degree of periodontal disease, making it the most common disease affecting pet dogs. Small breeds and brachycephalics (short-nosed dogs) are more prone to periodontal disease due to the small size of their jaw and crowding of the teeth.

How does tartar form and why is it a problem?

The mouth is home to thousands of bacteria. As these bacteria multiply on the tooth's surface, they form an invisible layer called plaque and organize into a biofilm (bacterial slime). In very simple terms, a biofilm is a collection of bacteria structured in such a way as to be very resistant to removal and difficult for antibiotics to access. Some of this plaque is removed naturally by the dog's tongue and chewing habits.



If allowed to remain on the tooth's surface, plaque thickens and mineralizes, resulting in tartar. Tartar is a rough material that attracts more plaque to "stick" to the tooth surface. Plaque bacteria that come into contact with the gingiva can result in inflammation (gingivitis). Gingivitis is always the first stage of periodontal disease, and it is the only truly reversible stage.

Can plaque and tartar be prevented?

Plaque becomes mineralized in some dogs much quicker than others.

The best way to prevent tartar build-up is through daily tooth brushing using a toothpaste that is specifically formulated for dogs and is designed to be swallowed. Unfortunately, even though it is the best form of plaque control, most dog owners do not brush their dog's teeth daily.

Special dog chew toys and treats may also help reduce or delay plaque and tartar build-up. Some pet foods have been specifically formulated as dental diets that mechanically and/or chemically assist in plaque removal. Water additives are also available.

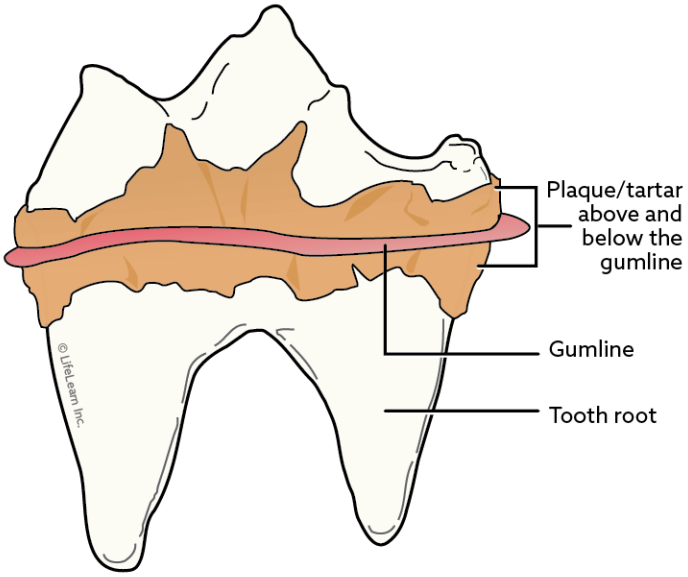
The Veterinary Oral Health Council evaluates dental products for effectiveness, and their seal of acceptance will only be found on products that have been shown to reduce the accumulation of plaque and/or tartar. You can visit their website (vohc.org) for a list of plaque-control products. Your veterinarian can help you decide which options are right for your dog.

Will feeding dry food remove tartar?

Pet food manufacturers have developed dental diets that can help reduce the formation of plaque and tartar on your dog's teeth. Once tartar has formed, however, professional scaling and polishing under general anesthesia will be needed as it cannot easily be removed by diets and/or brushing.

What is involved with a routine dental cleaning?

A routine dental cleaning involves a thorough dental examination, followed by a dental scaling and polishing to remove plaque and tartar from all tooth surfaces. Your veterinarian will perform pre-anesthetic blood tests to ensure that kidney and liver function are satisfactory for anesthesia.



Sometimes, antibiotic treatment is started before the periodontal therapy is performed, especially if your dog has concurrent conditions affecting the immune system and healing. Your veterinarian will discuss the specific recommendations for your pet.

Once your dog is anesthetized, your veterinarian will thoroughly examine their mouth, noting the alignment of the teeth and the extent of tartar accumulation both above and below the gumline. Intraoral X-rays (radiographs) should also be performed to assess the viability of the tooth root and surrounding bone. If periodontal disease is severe, it may not be possible to save the affected teeth. Depending on the affected tooth, extraction may be the only option.

Next, tooth scaling will be performed, using both traditional hand scalers and ultrasonic cleaning equipment to remove all traces of tartar above and below the gum line.

After scaling, the teeth are polished to remove microscopic scratches that occur during scaling. A smooth surface on the tooth is essential to prevent plaque from easily sticking to the tooth's enamel. Special applications, such as fluoride, antibiotic preparations, and cleaning compounds, may be indicated to decrease tooth sensitivity, strengthen enamel, treat bacterial infection, and reduce future plaque accumulation.

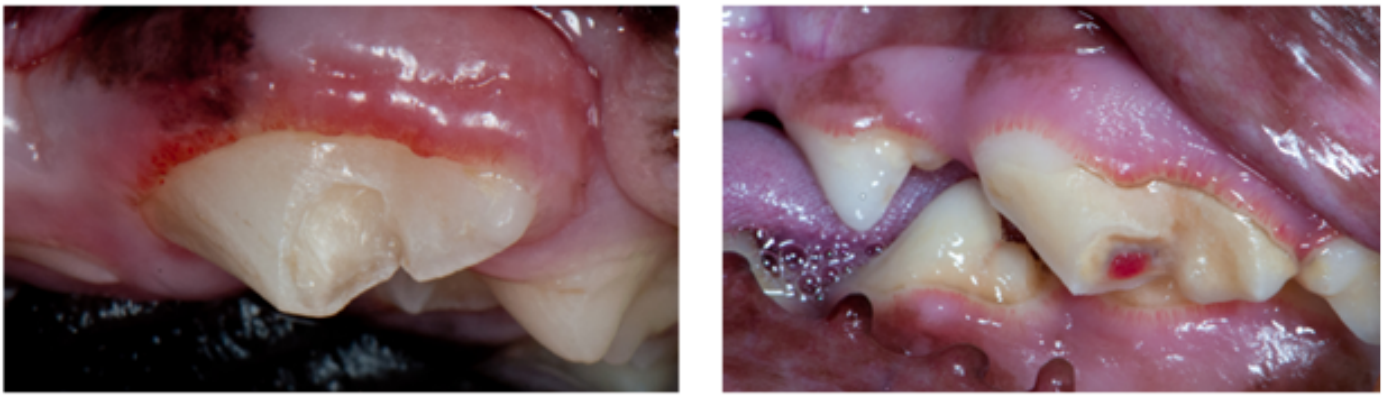
"A full general anesthetic is required for dentistry."

Depending on the importance of the tooth in question and the type of periodontal disease present, guided tissue regeneration and/or guided bone regeneration (GTR/ GBR) may be possible as an alternative to extraction. These are more advanced periodontal procedures performed by a board-certified veterinary dentist.

A full general anesthetic is required for dentistry. While some tartar may be removed with scaling on a cooperative, awake animal, it is cosmetic only and does not diagnose or treat any dental disease present.

What do broken, chipped, or fractured teeth look like in dogs?

The center of the tooth, called pulp, is covered by hard dentin and even harder enamel. Two types of tooth fractures involve the crown of the tooth: uncomplicated fractures expose sensitive dentin, while complicated crown fractures involve not only the dentin but extend deeper to expose the pulp, which contains nerves and blood vessels.



Chipped and fractured teeth in a dog.

What causes fractured teeth in dogs?

Most tooth fractures occur when dogs chew on objects that are too hard, like ice cubes, bones, hard nylon chews, antlers, and horse and pig hooves. Any chew toy or dental treat fed to a dog should bend and “give” upon compression.

How are fractured dog teeth treated?

If the pulp is exposed, the only treatment options are extraction of the tooth or referral to a veterinary dentist for a root canal. Leaving the tooth without treatment is not a good idea, as infection will have direct entry through the fracture site and a more serious infection is likely to occur (see the handout “Does My Dog Need a Root Canal?” for more information).

With gentleness, patience, and perseverance, you can provide the oral care your dog needs to prevent dental disease. Ask your veterinary healthcare team for advice and guidance on brushing your dog’s teeth.