

PERIODONTAL DISEASE

PERIODONTAL DISEASE, OR GUM DISEASE, REFERS TO INFLAMMATION OF THE TISSUES THAT SUPPORT AND HOLD THE TOOTH IN THE JAW. STATISTICALLY, GUM DISEASE IS THE MOST COMMON INFECTIOUS CONDITION AFFECTING DOMESTIC CATS AND DOGS.

The effects of periodontal disease are both local and systemic. The systemic effects can impact on the pet's general feeling of wellness and often contribute to a non-specific malaise or tiredness in older pets.

Periodontal disease is divided into two phases: gingivitis and periodontitis.

Gingivitis

1. Gingivitis is a local inflammation of the gum that surrounds the tooth and is attached to the underlying bone and tooth. The space between the tooth and gum margin is called the gingival sulcus and this area has a critical role in the development of periodontal disease. Gingivitis develops most commonly in direct response to the presence of plaque that forms on the tooth's surface and in the sulcus. The good news is, gingivitis is completely reversible if the inciting cause, plaque, is removed and prevented from returning.



Plaque, yellow sticky material, has been removed from the tooth surface with an explorer.



Gingivitis (marked by arrows) and yellow brown tartar on the crown of the teeth adjacent to the gum. This is before professional cleaning.

What is plaque?

Plaque is a biofilm. Biofilms form by the adhesion of bacteria to the tooth surface which then combine with proteins and sugars in the saliva (spit) to create a soft sticky material.

Biofilms are extremely stable and the bacteria in them are protected against the action of antibiotics. When the animal's immune system has infected the hollow pulp chamber, these bacteria will leak out from the tip of the root and will result in the development of inflammation and eventually abscess formation in the bone of the jaw.



The teeth from the photo above after professional cleaning.

The importance of regular brushing

Removal of biofilm requires mechanical action and this is why regular tooth brushing is needed to maintain gum health. When plaque matures, and the deeper layer of it dies, it becomes calcified and forms into tartar. Tartar does not cause disease directly, but it does result in a rougher surface to the tooth, allowing more plaque to form.

Gingivitis can result in bleeding from the gums and may cause pain. Inflammation of the gum may result in a deepening of the sulcus around the tooth, creating an environment suitable for more pathogenic bacteria to become established, which cause further damage to the tissues attaching to the teeth.



Severe periodontitis in a dog with gum recession of multiple teeth (arrowed), heavy tartar and marked gum inflammation.



Periodontitis in a cat. The yellow arrow marks gum recession and root exposure of the lower molar tooth. The green arrow marks severe gingivitis, and heavy tartar deposits, of the upper 4th premolar tooth.

Periodontitis

2. Periodontitis is irreversible damage to the gum's attachment to the tooth causing damage to the bone of the jaw, the periodontal ligament (which supports the tooth in its body socket) and the tooth root's surface. Damage to the tooth's supporting structures associated with periodontitis also results in tooth mobility. This mobility will result in pain and can damage the blood supply to the tooth, eventually causing tooth loss in some cases. The bacteria that are involved with the development of gum disease cause bad breath (halitosis). Look out for recent changes in your pet's breath odour... it could be a strong marker of development of more severe disease.

Next steps

Early identification and intervention is critical for successful management of gum disease. However, when your pet is awake and alert, the mouth is not easy to examine, for either owners or vets.

You have been given this information sheet because your vet is concerned about your pet's gum health. Detailed assessment of your pet's gums and teeth under anaesthesia will allow the appropriate treatment to be given and development of a short and long term management strategy with you to give your pet the best quality of life.



End stage gum disease with infection and subsequent death of bone surrounding tooth (red circle).