

Periodontal Disease

What is periodontal disease?

- "Periodontal disease", "gum disease" and "dental disease" all refer to the same condition.
- Periodontal disease is a progressive, **chronic** condition that starts as **inflammation of the gingiva** (also called the gums) that surrounds each tooth, and can end with destruction of the tooth-supporting bone.



Severe periodontal disease in a small dog. Note the severe plaque and tartar accumulation, red gums, food trapped around the upper premolars with gum recession, and pus formation. These aren't "rotten teeth", as they don't have decay or cavities. They are teeth that are loose due to infection and loss of their supporting bone.

What causes periodontal disease?

- Inflammation of the gums (**gingivitis**) is caused by the body's immune system responding to **bacteria** in the plaque and dental calculus (tartar) on the teeth.
- If not removed regularly, plaque and tartar are associated with inflammation and infection, which can affect not only the gums but the bone surrounding the teeth, causing pain, bone loss, sinus infections, tooth loss, and even jaw fractures.
- Inflammation and infection in the mouth due to periodontal disease may cause or worsen systemic disease, such as diabetes, heart disease, kidney disease and liver disease.

What does periodontal disease look like?

- **Stage 1 periodontal disease: Gingivitis**
 - Reversible with plaque removal!
 - A red line around the gum line, possibly mild bleeding
- **Stage 2 periodontal disease: Early bone loss**
 - Inflammation has spread to the bone that supports the tooth (the tooth socket). Bone loss leads to pockets around the teeth.
 - Can only be diagnosed using dental x-rays and probing, both of which require anesthesia!
 - Bone loss will progress without proper therapy; with intervention, some bone may regrow.
 - Deep pockets need special cleaning and possibly surgery to prevent tooth loss!



This upper canine tooth had a deep pocket of bone loss (arrow) that was only identified when we could probe around the inside of the tooth and take dental x-rays with the pet under general anesthesia.

- **Stage 3 periodontal disease: Moderate bone loss**

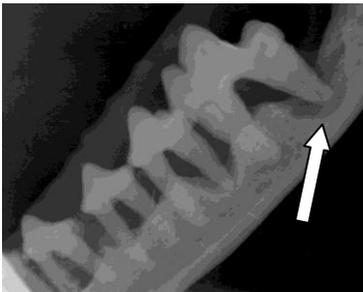
- Inflammation has caused recession of 25-50% of the bone surrounding a tooth.
- Teeth with stage 3 disease may or may not be able to be saved.
- Regular professional cleanings under general anesthesia, advanced periodontal therapy, and possibly surgery will be necessary to save teeth with stage 3 bone loss.
- Without dedicated daily home care and periodontal treatment every 6-12 months, the infection will return, inflammation will continue, teeth will continue to lose bony support, and the teeth will need to be extracted in the future.



This probe is extending into a 9mm (almost half an inch) pocket on the inside of the upper 1st molar tooth. This extensive pocket is localized to one side of this tooth, and may be treated with advanced periodontal therapy. Alternatively, it may be best to extract this tooth in order to keep the important in front of it healthy and functional.

- **Stage 4 periodontal disease: Severe bone loss**

- This is end-stage periodontal disease
- More than 50% of the bone supporting the tooth is lost.
- There is no treatment to save a stage 4 tooth: Extraction is the only treatment
- If not extracted, these teeth will cause continued pain, inflammation, and disease at other teeth



This dental x-ray shows the lower jaw of a small dog with stage 4 periodontal disease. There is severe bone loss, leading to exposure of 50% or more of the roots of all teeth, as well as root infection and a tooth-root abscess at the 1st molar tooth (halo around the root, see arrow). These teeth are not salvageable and must be extracted. The bone loss at the last root of the 1st molar tooth (arrow) puts this dog at high risk for a jaw fracture, even with a minor activity like jumping off the couch or playing with another dog.

How can we control periodontal disease?

- *It is important to note that periodontal disease is a chronic condition which will require life-long treatment.* The constant infection and immune stimulation from periodontal disease negatively affects your pet's quality of life, and can worsen other diseases. Managing periodontal disease is possible!
- The first step to controlling disease is with proper cleaning and **advanced periodontal therapy** under general anesthesia. This may include placement of Arestin, open root planing, or even bone grafting.
- Maintaining a healthy mouth at home is necessary, and requires consistent home care using:
 - Brushing, wiping with gauze, and/or using an antibacterial rinse at least three times weekly
 - Dental Diets (such as Hill's T/D or Royal Canin dental diet)
 - Dental Chews (such as Greenies, OraVet Chews, CET Hextra chews and others)
 - Water additives and food additives (such as Healthy Mouth and PlaqueOff)
- Additional aids to oral home care can be found at www.VOHC.org

