

# 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 progress to destruction of the tooth-supporting bone.



- Note the severe plaque, calculus (tartar), red gums, food trapped around the upper premolars, and pus.
- The teeth are not “rotten,” as they don’t have decay or cavities. They are loose due to infection and loss of their supporting bone, and the calculus makes them brown.

## 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 calculus can cause inflammation and infection of the gums and underlying bone, causing pain, bone loss, sinus infection, tooth loss, and in some cases, jaw fracture.
- Inflammation and infection in the mouth due to periodontal disease may cause or worsen systemic diseases such as diabetes, heart disease, pneumonia, kidney disease, and liver disease.



## 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 **professional periodontal therapy** under general anesthesia. This may include placement of locally delivered antibiotics, root planing, and even bone grafting.
- Maintaining a healthy mouth at home requires consistent home care including:
  - Brushing teeth & gums, wiping them with gauze, and/or using an antibacterial rinse or gel at least 3 times weekly (ideally daily).
  - Dental diets (such as Hill’s® t/d, Royal Canin® Dental, or Purina ProPlan DH).
  - Dental chews (such as Greenies™, OraVet® Chews, Veggident® and others).
  - Water and food additives (such as Healthy Mouth™ and PlaqueOff®).
- Additional aids to oral home care can be found at [www.VOHC.org](http://www.VOHC.org)



# What does periodontal disease look like?

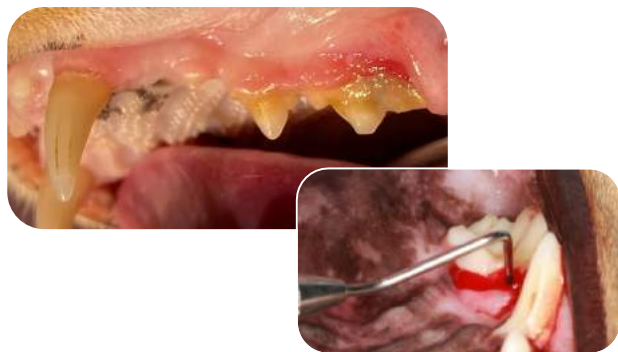
## Stage 1 periodontal disease: Gingivitis

- **Reversible with plaque removal!**
- Redness at the gumline, possibly mild bleeding.



## Stage 2 periodontal disease: Early bone loss

- Inflammation now affects not only the gingiva, but also bone that supports the teeth. Bone loss leads to pockets around the teeth.
- Can only be diagnosed with imaging (dental x-rays or cone-beam CT scan) and probing, all 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!**



## Stage 3 periodontal disease: Moderate bone loss

- The inflammation has caused destruction of 25-40% of the bone surrounding the tooth.
- **Teeth with stage 3 disease may or may not be salvageable with intervention.**
- Frequent 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.



## Stage 4 periodontal disease: Severe bone loss

- This is end-stage periodontal disease.
- More than 40% of the bone supporting the tooth is lost.
- There are no treatment options to save a stage 4 tooth: **extraction is the only option to restore oral health.**
- If not extracted these teeth will cause continued pain, infection, inflammation, and disease at other teeth.
- Bone loss can also lead to jaw fracture, especially in small dogs.



## What are advanced periodontal therapies?

- **Subgingival root planing (SRP)** – using a curette, we can clean the surface of the root below the gumline to remove plaque and calculus.
- **Arestin®** – locally applied, long-acting antibiotic (minocycline) that prevents bacterial re-population of a periodontal pocket for 14-21 days to improve pocket depths.
- **Guided tissue regeneration (GTR)** – by placing bone graft material in a periodontal pocket and securing its placement with a barrier membrane, we can stimulate the formation of new bone (and ideally, periodontal ligament) at the site.

