

Dental disease in dogs

Includes recommended
oral care and notes from
your veterinarian



Boehringer
Ingelheim

How dental disease develops

Dental disease progresses in dogs and people in a similar way. It starts with plaque, a biofilm formed by colonizing bacteria, that develops naturally on teeth and attaches to their smooth surfaces.¹ Plaque can harden into tartar if not properly removed in a timely fashion.

Over time, plaque and tartar can build up, causing serious oral health problems²:

- **Gingivitis:** Gums become inflamed (reddened)
- **Periodontitis:** Unremoved plaque collects below the gum line where, over time, bacteria can damage the tissue structures that support the tooth
 - This can lead to dental pain, loose teeth, and eventual bone and tooth loss

Dental disease complications

Untreated dental disease can lead to severe complications, both locally in the mouth and head area and systemically throughout the entire body. These may include²⁻⁴:

Local effects

- Severe gum or soft tissue infection around the teeth that may lead to an abscess
- Bone infection
- Tooth loss or jaw fracture due to weakened bone structure
- Damage to structures around the eye



Whole-body (systemic) effects

- Heart disease
- Changes in the liver and kidneys
- Can make diabetes more difficult to manage



Bad breath: a warning sign of plaque and tartar buildup

If you think it's normal for dogs to have "doggie breath," you're not alone—many owners of dogs with bad breath (also known as halitosis) don't think they need to do anything about it.⁵ However, bad breath in dogs can be a sign of plaque and tartar buildup, which could mean dental disease down the path if ignored.



Bacteria attach and accumulate on tooth enamel



Plaque builds up, hardens into tartar



More bacteria attach, and halitosis develops

Dental disease in dogs is not usually discovered until it has progressed to more advanced stages, because other than bad breath, there are not many early signs that are easy to recognize. If you notice one or more of the following conditions in your dog, be sure to tell your vet⁶:

- Bad breath
- Discolored teeth
- Sensitivity to touching in the mouth area
- Drooling or dropping food from the mouth
- Bleeding in or around the mouth
- Loss of appetite or loss of weight
- Loose teeth

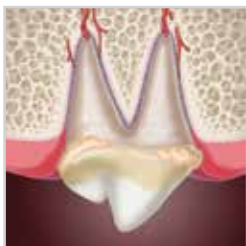


Stages of dental disease³

Most dogs have some degree of dental disease by the age of 3,³ which can be classified into different stages based on severity:

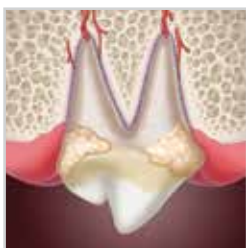
1) Gingivitis

Gums are red and swollen. Tartar buildup on teeth is often evident. Brushing may be painful. No evidence of bone loss.



2) Early periodontitis

Bone loss has begun and may be seen on X-rays. Gums may be inflamed and swollen.



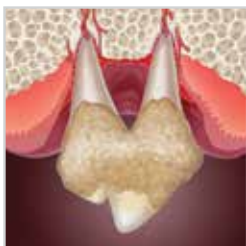
3) Moderate periodontitis

Moderate bone loss. Teeth may need to be extracted.



4) Advanced periodontitis

Extensive, irreversible bone loss. Teeth need to be extracted.



Because the level of dental disease can vary across different areas of the mouth, one dog may have several different stages of dental disease. Early stages can be reversed with proper dental care. But left untreated, dental disease worsens quickly and may result in tooth loss.

Promoting your dog's oral health

Your vet can help develop a plan of action to ensure good oral health for your dog. This plan includes 2 key components³:

- **Regular in-clinic dental cleanings** (also known as prophylaxis or “prophy”) to remove existing plaque and tartar
- **At-home dental care** to help control new buildup of plaque and tartar. Just like people, dogs need consistent dental care at home

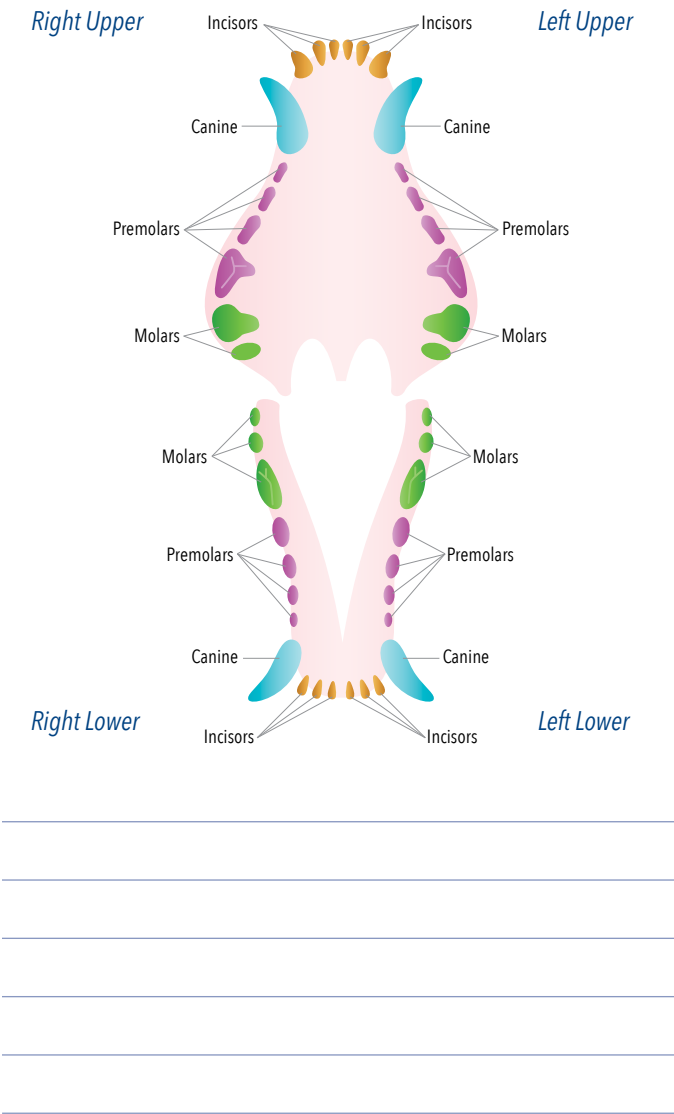
Your vet may recommend:

- Daily brushing, the single most effective way to maintain oral health between dental exams⁷
- Oral care supplements, including dental diets or dental chews. These options can provide an easy and effective way to help remove plaque and control bad breath

Ask your vet about recommended oral care products for your dog



Your dog's teeth



References: **1.** Niemiec BA. Proper diagnosis of periodontal disease. *Today's Veterinary Practice*. 2015;5(1):65-70. **2.** American Veterinary Dental College. Periodontal disease. <http://www.avdc.org/periodontaldisease.html>. Accessed November 28, 2017. **3.** American Veterinary Dental College. Stages of periodontal disease. <http://avdc.org/AFD/five-stages-of-pet-periodontal-disease>. Accessed November 28, 2017. **4.** Niemiec BA. Systemic manifestations of periodontal disease. In: Niemiec BA, ed. *Veterinary Periodontology*. 1st ed. Ames, IA: John Wiley & Sons; 2012:81-90. **5.** Banfield Pet Hospital. Banfield sinks its teeth into pet dental health. <https://www.banfield.com/about-us/news-room/press-releases-announcements/banfield-sinks-its-teeth-into-pet-dental-health>. Accessed November 28, 2017. **6.** American Veterinary Dental College. Information for owners. <http://www.avdc.org/ownersinfo.html>. Accessed November 28, 2017. **7.** Quest BW. Oral health benefits of a daily dental chew in dogs. *J Vent Dent*. 2013;30(2):84-87.