

Mouthwash for dogs: Water additive with pomegranate helps to keep canine teeth healthy

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Periodontal disease is one of the most common canine diseases, affecting at least 80% of dogs aged three and over. Periodontal disease begins as gingivitis, where gums become red and inflamed, and may bleed. Untreated, the disease can progress to periodontitis, where the alveolar bone is progressively damaged so that teeth may loosen or fall out. In turn, periodontitis is a risk factor for other diseases like cardiovascular and lung disease.

A major cause of [periodontal disease](#) is poor oral hygiene, which can lead to the build-up of plaque and tartar. For this reason, veterinarians counsel owners to brush their dogs' teeth regularly. Unfortunately, compliance with this advice is low, because it's onerous or because some dogs won't cooperate.

"Here we show that an additive to drinking water, based on pomegranate extract, can reduce the accumulation of plaque and tartar in dogs," said Dr. Jerzy Gawor, a veterinary dentistry practitioner and researcher at the Arka Veterinary Clinic in Krakow, Poland, and lead author of a new study in [Frontiers in Veterinary Science](#). "This additive thus helps dogs to maintain healthy gums, and may ultimately help to limit the occurrence of periodontal disease."

The study is a researcher-blinded randomized veterinarian trial on an over-the-counter oral hygiene product, Vet Aquadent FR3SH, which can be easily added to drinking water. It is produced by the French veterinarian company Virbac, which employs the final author, Dr. Celine Nicolas.

"We did this study after obtaining evidence that the main ingredient, pomegranate extract, limits the growth of oral bacteria in dogs in vitro, including species involved in periodontal [disease](#). There was also evidence that the other components, inulin and erythritol, likewise play a role in the maintenance of a healthy oral microbiome in dogs," said Dr.

Nicholas.

Dogs at the dentist

Gawor and his colleagues studied the progress of plaque and tartar buildup in 40 dogs with mild to moderate gingivitis, but who were otherwise healthy, over a period of 30 days after a single professional dental cleaning session. The dogs belonged to 14 breeds, ranging in size from Yorkshire terriers to Alaskan huskies.

Under [general anesthesia](#), the dogs received an overall assessment of oral health, including a periodontal probing, dental charting, and mouth radiography. They underwent a general dental cleaning and polishing to remove all plaque and tartar.

The dogs were then randomly allocated to two equally sized arms: one receiving the additive dissolved as a 1% solution in ad libitum drinking water every day for 30 days, and another receiving water only. None of the dogs had their teeth brushed or received any other oral hygiene treatment during the study.

After the 30 days, gum health, and plaque and tartar accumulation were assessed.

Inhibits reformation of plaque and tartar

The results showed that 30 days after the dental cleaning and polishing, dogs who had received the additive daily scored 47% lower for the amount of plaque, and had a 24% lower score for the amount of tartar, compared to dogs in the control group. The gum was also completely healthy in the active treatment group.

The authors concluded that Vet Aquadent FR3SH can help limit the reformation of [plaque](#) and tartar after a professional dental cleaning has been performed.

Dr. Gawor and colleagues hypothesized that the mechanism of action is by limiting the proliferation of detrimental bacteria, in particular by preventing the formation of bacterial biofilms.

"Daily [oral hygiene](#) and prophylaxis are essential to prevent periodontal diseases in [dogs](#). This includes active methods like brushing, passive methods like dental chews or water additives, or a combination, as well as regular clinical dental checks. The frequency of the latter should depend on the dog's age, breed, size, and predisposition, as determined by veterinary clinicians," said Dr. Gawor.

More information: Jerzy P. Gawor et al, A water additive with pomegranate can reduce dental plaque and calculus accumulation in dogs, *Frontiers in Veterinary Science* (2023). [DOI: 10.3389/fvets.2023.1241197](#)

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