



Technical Information Services

# Update

on evidence-based clinical nutrition™



## Key Points

- Periodontal disease is caused by plaque and the pet's inflammatory response
- Bacteria from periodontal disease may affect other organs
- Hill's® dental health pet foods reduce plaque

## Keeping bacteria out of circulation

When plaque creates inflammation, and inflammation turns into periodontal disease, there's more to worry about than just teeth and gums. Oral bacteria can get into the circulatory system and spread to other parts of the body.

### Periodontal disease and organ damage

Periodontal disease is caused by plaque and the pet's inflammatory response. But the bacteria and inflammation caused by plaque is not limited to the mouth. One study showed that 60-90% of the strains of plaque bacteria found in the mouths of dogs with dental disease were also found in the bloodstream of those dogs when undergoing dental procedures.<sup>1</sup> Additional studies show that microscopic damage to the heart, kidneys and liver also occurs in dogs with periodontal disease, and the degree of organ damage increases with the severity of the disease.<sup>2-4</sup>

### Less plaque, less bacteria

Daily dental care is the best way to control plaque. But most pet owners don't have the time, training or inclination to properly brush every day. Hill's® dental health pet foods with patented fiber matrix technology have repeatedly been shown to reduce plaque and calculus in both dogs and cats when fed as the daily food. And less plaque means less bacteria.

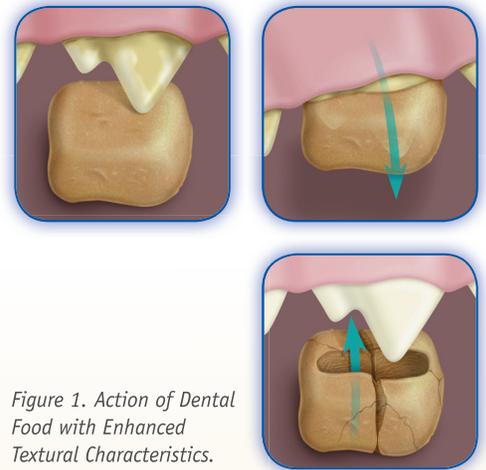


Figure 1. Action of Dental Food with Enhanced Textural Characteristics.

Typical dry pet foods immediately crumble when chewed, providing little or no dental benefit. Fiber matrix technology allows the kibble to maintain contact with the tooth surface and provide mechanical cleansing without mineral abrasives or active chemicals.



<sup>1</sup> Nieves MA, Hartwig P, Kinyon JM Z, et al. Bacterial isolates from plaque and from blood during and after routine dental procedures in dogs. *Vet Surg.* 1997;26:26-32.

<sup>2</sup> Veterinary Oral Health Council website. [www.vohc.org/perio.htm](http://www.vohc.org/perio.htm). Accessed October 28, 2010.

<sup>3</sup> DeBowes LJ, Mosier D, Logan E, et al. Association of periodontal disease and histologic lesions in multiple organs from 45 dogs. *J Vet Dent.* 1996;13(2):57-60.

<sup>4</sup> Pavlica Z, Petelin M, Juntas P, et al. Periodontal disease burden and pathological changes in organs of dogs. *J Vet Dent.* 2008;25(2):97-105.

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