

Oral microbiota in health and disease

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Bad breath is not normal. Halitosis is a sign of oral disease in dogs, cats, horses, and humans. In a disease-free state, there is a relatively benign relationship between the oral microbiome and the host's response to it. The oral microbiome comprises commensal organisms, much like other tissues that are in contact with the environment. Disruption of the balance between bacteria and the host response leads to disease states. In Periodontal disease (PD), it results in inflammation and infection, leading to soft tissue destruction, bone loss and loss of the teeth. In addition to local effects, resultant bacteremia can be associated with cardiovascular, renal, hepatic and endocrine disease as well. Periodontal disease occurs across species, and shares some of the same clinical presentation from one species to another. We share some of the oral microbiota with animals, and it has been reasonably assumed that the etiology and pathophysiology of PD in domestic animals parallels that in humans. Recent work has shown that the roles of specific bacteria in PD are not exactly the same in our domestic animals as in humans. With new technologies, we can better identify microbial species, and understand their role in oral health and disease.

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