

## Probiotics and periodontal health

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### Abstract

Periodontitis is one of the most common chronic inflammatory diseases. The etiology is clearly bacterial and a number of putative bacterial pathogens have been associated with the disease, including *Aggregatibacter actinomycetemcomitans*, *Tannerella forsythus* and *Porphyromonas gingivalis*. Comparatively, little attention has been paid to the identification of health-associated and potentially beneficial bacterial species that may reside in the gingival sulcus. Probiotic technology represents a breakthrough approach to maintaining oral health by using natural beneficial bacteria, commonly found in healthy mouths, to provide a natural defense against those bacteria which are thought to be harmful to teeth and gums. This article endeavors to introduce the concepts of probiotics in periodontics.

**Key Words:** Probiotics; Synbiotics; Periodontitis; Bacterial replacement therapy; Halitosis

### Introduction

Periodontitis is a multifactorial disease that encompasses the hard and soft tissue, microbial colonization (with or without invasion), inflammatory responses and adaptive immune responses. The complexity of the local tissue components, including bacteria and/or their products and virtually all aspects of host response mechanisms, has complicated our ability to elucidate the critical protective functions in the tissues and has continually provided evidence for the potential of host destructive factors as the ultimate causative parameters in the disease. [1] Conventional treatment modalities of periodontal disease include non-surgical and surgical management, which emphasizes mainly on mechanical debridement, often accompanied by antibiotics. These treatment modalities are aimed at eliminating the entire microflora irrespective of their pathogenicity. Due to the emergence of antibiotic resistance and frequent recolonization of treated sites with pathogenic bacteria, there was need for a new treatment paradigm to be introduced to periodontal disease.