

The need was fulfilled by introduction of Probiotics and bacterial replacement therapy in the field of periodontics.

Probiotics and prebiotics

Probiotics are defined as living microorganisms, principally bacteria, that are safe for human consumption

and, when ingested in sufficient quantities, have beneficial effects on human health, beyond basic nutrition. This definition has been approved by the United Nations Food and Agriculture Organization (FAO) and the World Health Organization (WHO). [2]

Prebiotics (i.e. inulin-type fructans, maltodextrin, fructooligosaccharides and galactooligosaccharides) have been defined as non-digestible oligosaccharides that affect the proliferation of resident commensal bacteria that may then exert probiotic effects. [3] More recently, the definition has been refined to include selectively fermented ingredients that allow specific changes in the composition and/or activity of the resident microflora that confer benefits upon host well-being and health. [4]

Prebiotics and probiotics often work in synergy and, when combined in the same product, are known as synbiotics. It appears that synbiotics increase survival of probiotic bacteria, stimulating their growth in the intestinal tract and improving the balance of health-promoting bacteria. [5]

History

The dietary use of living microorganisms has a long history. Mention of cultured dairy products is found in the bible and the sacred books of Hinduism. Sacred milks and cultured dairy products such as *kefir*, *koumiss*, *liben*

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and *dahi*, were often used therapeutically before the existence of microorganisms was recognized. [6]

Probiotics have been used for decades in fermented products, but potential use of probiotics as a nutritional medical therapy has not been formally acknowledged. [7] Metchnikoff was the first to state that probiotics could provide a health benefit, and proposed that Bulgarian people had a longer longevity due to fermented milk containing viable bacteria. “Probiotic” term, as opposed to “antibiotic”, was initially proposed by Lilley and Stillwell in 1965. First probiotic species to be introduced in research was *Lactobacillus acidophilus* by Hull et al. in 1984; followed by