

**INTEGRATING AYURVEDIC CONCEPTS AND MODERN SCIENTIFIC EVIDENCE ON
HERBAL INTERVENTIONS FOR ORAL HYGIENE**

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In recent years, there has been growing interest in traditional and natural methods for maintaining oral health, particularly those rooted in Ayurveda. This comprehensive analysis investigates the use of Ayurvedic plants in oral hygiene, focusing on their historical importance, pharmacological properties and modern applications. The data were gathered using PubMed, ScienceDirect, and Cochrane Library, which published between 2000 and 2024 and authentic Ayurveda text books. For electronic search, "Ayurvedic herbs," "oral hygiene," "gingivitis," and "herbs" were used as keywords. Inclusion criteria encompassed pre-clinical and clinical studies assessing the Ayurvedic herbs impact of on oral health parameters. *Azadirachta indica* exhibited potent antibacterial and anti-inflammatory activities, compared to chlorhexidine, targeting *Streptococcus mutans* and *Lactobacillus* spp. *Triphala*, demonstrated plaque reducing effects in clinical trials. *Ocimum sanctum* and *Glycyrrhiza glabra* showed broad-spectrum antimicrobial action against oral pathogens such as *P. gingivalis* and *S. mutans*, along with anti-inflammatory and healing properties. Mechanistically, these herbs work via antimicrobial, anti-inflammatory, antioxidant, analgesic, and anti-biofilm pathways, supporting their integration into modern oral care. Ayurvedic practices such as *Dantadhavana*, *Gandusha* and *Kavala*, *Dantha dadhyakara*, *Mukha vaishadyakara*, *Vrta ropana*, *Krmighna*, *Mukha durgandha nashana* complement these herbs by promoting gum health, microbial balance, and detoxification, thereby aligning traditional wisdom with contemporary dental science. Traditional practices including herbal tooth powders, chewing sticks, oil pulling, and decoctions have stood the test of time and are increasingly being integrated into modern dental care products. These findings underscore the efficacy and potential of Ayurvedic plants as sustainable and holistic alternatives in oral healthcare.

Keywords: Oral Hygiene, Ayurvedic Plants, Oral care, *Mukha vaishadyakara*, antimicrobial