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# Probiotics as an adjunct to mechanical debridement on non-surgical management of gingivitis and periodontal diseases - A Systematic Review

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**ADMINISTRATIVE INFORMATION**

**Support -** Nil.

**Review Stage at time of this submission -** Preliminary searches.

**Conflicts of interest -** None declared.

**INPLASY registration number:** INPLASY2023110088

**Amendments -** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 22 November 2023 and was last updated on 22 November 2023.

## INTRODUCTION

**Review question / Objective** Is there a difference in the clinical efficacy of probiotics as an adjunct to nonsurgical periodontal treatment as compared to nonsurgical periodontal treatment alone Among adults diagnosed with gingivitis and periodontitis?

**Condition being studied** Probiotics are live microorganisms, primarily bacteria and some yeast when consumed in adequate amounts. These microorganisms are often referred to as "good" or "beneficial"s, that offer various health benefits bacteria because they can positively influence the health of the host, which is typically a human or animal. Probiotics are commonly associated with digestive health, but they can have a wide range of potential benefits for overall well-being. Recent research indicates that probiotics can help restore microbial balance in the oral cavity, reduce the growth of pathogenic bacteria, and modulate the host immune response. While further investigation is needed, these findings suggest that probiotics may offer a promising adjunctive therapy for periodontal health.

## METHODS

**Participant or population** Studies with Patients clinically diagnosed with gingivitis and periodontitis as clinical attachment loss, pocket depth and level of attachment or radiographic evidence of bone loss irrespective of age, gender, ethnicity, and nationality.

**Intervention** Administration of the probiotic as an adjunct to the nonsurgical periodontal treatment.

**Comparator** Compare results of administering probiotic adjuvant to nonsurgical periodontal

treatment compared to nonsurgical treatment alone.

**Study designs to be included** Clinical trials, in-vivo studies, randomized clinical trials, controlled clinical trial, non-randomized clinical trials, Quasi experimental studies, non-experimental studies, cohort studies, cross-sectional studies.

**Eligibility criteria** [A}Inclusion criteria 1. Studies published in any language where English translation is possible. 2. Studies published between 1-1-2000 to 31-10-2023. 3. Clinical trials, in-vivo studies, randomized clinical trials, controlled clinical trial, non-randomized clinical trials, Quasi experimental studies, non-experimental studies, cohort studies, cross-sectional studies 4. Studies with full-text articles were included.[B] Exclusion criteria:1. Studies not fully available in the database.2. Observational studies, Review reports, case series, in-vitro and animal studies were excluded.iii. Studies providing only abstract and not full text.iv. Studies involving valid comparison group only.

**Information sources** A systematic search following the principle of systematic review search will be carried out in the Cochrane.
Central Register of Controlled Trials (CENTRAL), MEDLINE, CINAHL, EMBASE, PsycINFO, Scopus, ERIC, ScienceDirect using MeSH words, text words and Boolean operators. The articles in the English language and where there is a possibility for translation in English will be considered. The period of publication considered will be years 1-1-2010 to 30-06-2023**.**

**Main outcome(s)** Possible reduction of clinical parameters (PD, BOP, CAL) when associated with the probiotic to nonsurgical periodontal treatment.

**Additional outcome(s)** Gingival Index (GI) and Plaque Index (PI).

**Quality assessment / Risk of bias analysis** Risk of Bias for the selected randomized controlled trials (RCTs) was executed by using the Cochrane Collaboration Tool16 (http://ohg.-cochrane.org ) which includes random sequence generation, allocation, concealment, blinding of participants, incomplete outcome data, selective reporting, and other bias.

**Strategy of data synthesis** Synthesis of results- if applicable adequate statistical analysis will be done.

**Subgroup analysis** Synthesis of results- if applicable adequate statistical analysis will be done.

**Sensitivity analysis** If required appropriate sensitivity analysis will be done.

**Country(ies) involved** India.

**Keywords** Probiotics, periodontal diseases.

**Contributions of each author**

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