



## Evaluation of the Effect of Probiotic *Bacillus coagulans* Unique IS-2 on Mutans Streptococci and Lactobacilli Levels on Saliva and Plaque: A Double-Blind, Randomized, Placebo-Controlled Study in Children

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### Summary:

Probiotic organisms are known to reduce caries causing microorganisms *mutans streptococci* and *lactobacilli*. **Aim of the Study.** To evaluate the effect of probiotic *Bacillus coagulans* Unique IS2 on mutans streptococci and lactobacilli levels in saliva and plaque in children. **Introduction.** Dental caries or tooth decay is because of the demineralization of the tooth enamel leading to the breakdown of the enamel causing cavities to be formed. Demineralization of the tooth happens because of the acid secreted by bacteria like *mutans streptococci* and *lactobacilli*. It is now suggested that probiotic usage prevents the overgrowth of these pathogenic microbes, thereby reducing caries activity. **Methodology.** In this double-blind, randomized, placebo-controlled study, 48 children with ages ranging from 5 to 15 years were divided into two groups, the probiotic and placebo groups. Chewable tablets with and without probiotic *Bacillus coagulans* Unique IS2 were administered for two weeks. Stimulated saliva samples and plaque were collected at baseline and at the end of 14 days to measure the pH, *mutans streptococci*, and *lactobacilli* count of saliva and plaque using chairside kits. **Results.** A statistically significant reduction in *mutans streptococci* and *lactobacilli* counts of both saliva and plaque samples was observed in the *B. coagulans* Unique IS2 treated group after 14 days of administration compared to the baseline and placebo group (using paired *t*-test). **Conclusion.** Probiotic *Bacillus coagulans* Unique IS2 (2 billion cfu) chewable tablet is effective in reduction and inhibition of caries causing *mutans streptococci* and *lactobacilli* levels in saliva and plaque in children.

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