



# STUDY HIGHLIGHTS

## Chronic Periodontitis

### Clinical and biochemical evaluation of *Lactobacillus reuteri* containing lozenges as an adjunct to non-surgical periodontal therapy in chronic periodontitis

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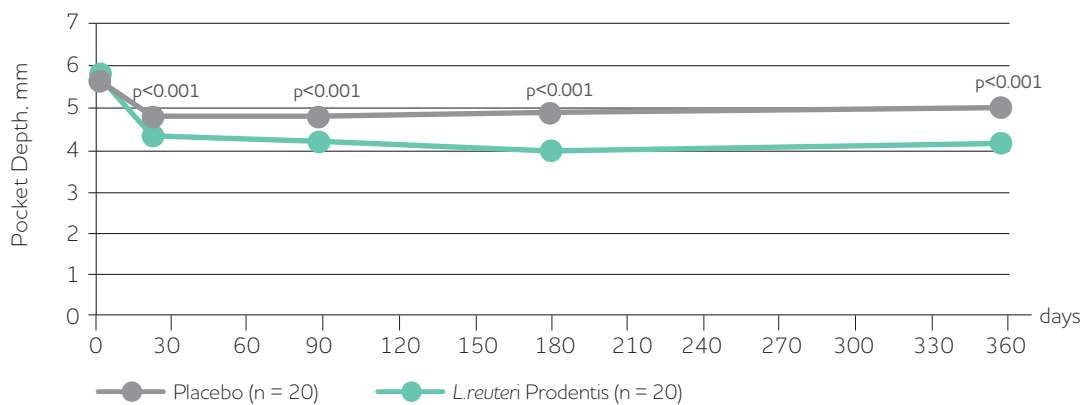
J Periodontol. 2015;86:746-754.

#### Demonstrates that lozenges with *L. reuteri* Prodentis had both short- and long-term effects on periodontal disease

(additional results of the Tekce et al. 2015 trial)

#### Results

- Pocket depth, plaque and gingival indices, and bleeding on probing were all significantly improved ( $p < 0.05$ ) compared to placebo, at all time points
- Significant changes up to day 180 of cytokines in gingival crevicular fluid: reduced MMP-8 and increased TIMP-1 levels ( $p < 0.05$ )
- Attachment gain was significantly greater in the *L. reuteri* Prodentis group compared with controls, on days 90, 180, and 360 ( $p < 0.001$ )



#### Conclusion

- Lozenges with *L. reuteri* Prodentis may be a useful supplement in moderately deep pockets of patients with chronic periodontitis

#### Facts

- Study design: Prospective, randomized, double blind and placebo-controlled
- Subjects: Thirty (30) adults with chronic periodontitis, mean age 42 years
- Dosage: 2 lozenges daily ( $4 \times 10^8$ CFU/day)
- Duration: Probiotic supplementation for 21 days, initiated after periodontal therapy. Clinical and biochemical evaluation at baseline and days 21, 90, 180 and 360.
- Primary endpoint: Pocket depth reduction
- Secondary endpoints: Changes in plaque index, gingival index, bleeding on probing, gingival crevicular fluid volume, attachment gain, and changes in MMP-8 (matrix metalloproteinase-8) and TIMP-1 (tissue inhibitors of matrix metalloproteinase-1). The balance between these two cytokines are essential for the degradation and remodeling of the extracellular matrix proteins.

#### Further reading

- Tekçe M et al. Clinical and microbiological effects of probiotic lozenges in the treatment of chronic periodontitis: a 1-year follow-up study. J Clin Periodontol. 2015;42:363-372.
- Teughels W et al. Clinical and microbiological effects of *Lactobacillus reuteri* probiotics in the treatment of chronic periodontitis: a randomized placebo-controlled study. J Clin Periodontol. 2013;40:1025-1035.
- Martin-Cabezas R et al. Clinical efficacy of probiotic as an adjunctive therapy to non-surgical periodontal treatment of chronic periodontitis: A systematic review and meta-analysis. J Clin Periodontol. 2016;43:520-530.

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