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Title: Effect of chewing gums containing the probiotic bacterium Lactobacillus reuteri on oral malodour

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Abstract: Objective. To evaluate the effect of chewing gums containing probiotic bacteria on oral malodour. The null hypothesis was that no difference would be displayed compared with placebo gums. M&M. Twenty-five healthy young adults with self-reported malodorous morning breath completed this randomized double-blind placebo-controlled cross-over trial. The design included run-in and wash-out periods interspersed by two intervention periods of 14 days each. The subjects were instructed to chew one gum in the morning and one in the evening containing either two strains of probiotic lactobacilli (L. reuteri DSM 17938 and L. reuteri ATCC PTA 5289) or placebo. The outcome measures were (i) organoleptic scores (0–5) by a certified test panel, (ii) concentration of volatile sulphur compounds (VSC) measured with a Halimeter and (iii) concentration of VSC after a cysteine rinse. Registrations were made at baseline and after each intervention period. Differences between the groups were assessed by non-parametric paired statistics and chi-square test. Results. The median organoleptic score was similar (score 2) in both groups at baseline. After 14 days of treatment, the organoleptic scores were significantly lower in the probiotic group compared with the placebo group (p < 0.05). Assessments of the VSC levels displayed no significant differences between the groups, either before or after rinsing with L-cysteine. No adverse effects were registered. Conclusion. The results demonstrated that probiotic chewing gums may have some beneficial effect on oral malodour assessed by organoleptic scores. Results indicate that the probiotic gum may affect bacteria that produce malodourous compounds other than VSCs.

probiotic bacteria, oral malodour

Presentation: Poster