Evaluation of the cariogenic potential of the intense natural sweeteners stevioside and rebaudioside A.

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Source

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Abstract

Stevioside and rebaudioside A, two intense natural sweeteners, that are constituents of the South American plant Stevia rebaudiana, were tested for cariogenicity in albino Sprague-Dawley rats. Sixty rat pups colonized with Streptococcus sobrinus were divided into four groups and fed stevioside, rebaudioside A or sucrose added to basal diet 2000 as follows: group 1, 30% sucrose; group 2, 0.5% stevioside; group 3, 0.5% rebaudioside A, and group 4, no addition. All four groups were sacrificed after 5 weeks. S. sobrinus counts were made and caries was evaluated according to Keyes' technique. There were no differences in food and water intake and weight gains between the four groups. There were significant differences in sulcal caries scores (p < 0.02) and S. sobrinus counts (p < 0.05) between group 1 and the other three groups. There were no significant differences between the stevioside, rebaudioside A and no-addition groups. It was concluded that neither stevioside nor rebaudioside A is cariogenic under the conditions of this study.

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