Is Stevia the optimal alternative to sugar?

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A large body of evidence shows that a diet with a high content of simple sugars plays a critical role in the prevalence of many lifestyle diseases. Stevia is a natural sweetener which was approved in EU in 2011. Before Stevia can be accepted as the optimal alternative to sucrose, knowledge about its sensory properties and possible taste interactions with other food constituents is crucial.

One important sensory feature of sucrose is its ability to lower the perceived bitterness. Consequently, it is important to elucidate how Stevia affects bitter taste. In this study, we focused on interaction effects between Rebaudioside A (RebA), a steviol glucoside which is extracted from Stevia, and three bitter tasting food compounds (caffeine, goitrin and theobromine). The effect of RebA on bitterness was compared to the effect of sucrose in concentrations of equi-sweetness. RebA and sucrose affected sweetness and bitterness similarly in aqueous caffeine solutions while they behaved differently in solutions with goitrin and theobromine. The results emphasize that replacement of sugar with RebA should be performed with precautions and the suitability of stevia must be evaluated for each food product.

The output of this study provides knowledge to be used in future food applications and development of innovative and tasty products with low calorie and high consumer satisfaction.