

Glycemic and Blood Pressure Responses to Acute Doses of Rebaudioside A, a Steviol Glycoside, in Subjects with Normal Glucose Tolerance or Type 2 Diabetes Mellitus

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Steviol glycosides, predominantly stevioside and rebaudioside A, extracted from the plant *Stevia rebaudiana* Bertoni, are used in several countries as food sweetening agents. This randomized, double-blind, placebo-controlled crossover trial examined the glycemic and blood pressure responses during meal tolerance tests to rebaudioside A consumed at three doses (500 mg, 750 mg, and 1000 mg) by men and women with normal glucose tolerance (n=45) or type 2 diabetes mellitus (n=48). Incremental areas under the concentration curves (pre-meal to 240 min) for glucose, insulin, C-peptide, and glucagon did not differ significantly for any dose of rebaudioside A tested vs. placebo or for all rebaudioside A doses combined vs. placebo. There were no significant differences between placebo and rebaudioside A in the effects on postprandial systolic or diastolic blood pressures. Rebaudioside A was well tolerated at all doses. These results suggest that acute consumption of up to 1000 mg of rebaudioside A has no clinically important acute effects on glucose homeostasis or blood pressure among individuals with normal glucose tolerance or type 2 diabetes mellitus.