Comparison of the Glycemic Response of White Sugar and Monk Fruit Sweetener among Normoglycemic Subjects

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Abstract

Being overweight and a diet involving high calories that adds to the gaining of weight are some of the factors of diabetes mellitus type 2. There is a particular correlation on the glycemic index to some chronic diseases related to central obesity and insulin resistance. Diabetics are often advised to lessen sugar intake thus there is a growing number of artificial sweeteners that have come up to the market. The purpose of this research was to compare the blood glucose response of the participants after the consumption of similar concentrations of white sugar and monk fruit sweetener. The glucose loads were prepared by dissolving 50 grams of the sweetener to 250 mL of water. The blood of twelve non-diabetic participants ages 18 to 25 were obtained using capillary punctures and the glucose levels for fasting and at 15, 30, 45, 60, 90 and 120 minutes after the consumption of the glucose load were determined. The data were treated with Paired T-test to know if there is a significant difference between the fasting blood sugar and the blood sugar from the different time interval, and it showed that white sugar has significant increase from the baseline, while monk fruit has no significant difference. This result proved monk fruit will not affect blood glucose significantly and is safe for consumption by those who want to maintain a normal blood sugar. Comparing the monk fruit to other sweeteners used by diabetic patients is an area needed to be explored.

Keywords: DM Type 2, Monk fruit, White sugar, Blood glucose