



Effects of Mulberry (**Morus alba**) Leaf Tea on Postprandial Blood Glucose and Satiety in
Healthy Subjects: A Preliminary Study

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Abstract

Introduction: Mulberry leaves are rich in 1-deoxynojirimycin (DNJ), an inhibitor of α -glucosidase to reduced risk of diabetes mellitus (DM). The present study, therefore, aimed to investigate effects of mulberry leaf tea (MLT) consumption on postprandial blood glucose and satiety in healthy subjects.

Methods: This study was conducted in 9 healthy subjects, with randomized crossover design. Mulberry leaf, Buriram 60 variety (ML-BR 60), was selected in this study because there was the highest DNJ content in Thai mulberry varieties. Subjects randomly consumed either 2 g of dried ML-BR 60 in 100 ml of hot water (MLT group) or warm water (control group) after oral glucose solution (75 g of glucose powder in 100 ml of water) for 15 minutes. Blood glucoses (BG) were collected before and after the consumption for 2 hours at 30 min (T30), 60 min (T60), 90 min (T90), and 120 min (T120). Satiety scales at each time point were also recorded.

Results: When compared to the control group, BG level at T30 was significantly lower in MLT group ($p < 0.05$), area under the glucose curve from 0-30 min (AUC0-30) was also lower. Interestingly, satiety level in the MLT group at T30 tended to higher ($p = 0.056$) and T60 was significantly higher than control group ($p < 0.05$).

Conclusions: The present study suggests that MLT (BR 60) consumption could lower postprandial blood glucose and enhance satiety in healthy subjects. MLT consumption contributed to attenuate postprandial hyperglycemia and DM prevention.

Keywords: Mulberry leaves, Blood glucose, Satiety, Diabetes mellitus