

Thesis Title	The Effect of Mulberry Leaf Tea on Postprandial Glycemic Control and Insulin Sensitivity in Pre-Diabetic and Non-Diabetic Subjects
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ABSTRACT

Leaves of mulberry (*Morus alba*, L.) have been one of the prominent herbs widely used by traditional medicine for the treatment of diabetes mellitus. The purpose of this study is to evaluate the influence of mulberry leaf tea on postprandial plasma glucose level and insulin sensitivity. This study was conducted on 14 subjects, with a crossover design. Subjects were initially screened for non-diabetic status (FBS: < 126 mg/dL). Subjects were randomized to drink either 100ml of mulberry leaf tea or water 30 minutes prior to 75 grams sucrose solution. Venous blood samples were collected before sucrose ingestion (time point 0) and at 30, 60, 90, 120, and 150 minutes after. After OGTT, participants kept a diary of severity of abdominal and other symptoms score scales. The author found that the mulberry sample group tends to have a lower level of plasma glucose, serum insulin concentrations and AUC₀₋₁₅₀ compared to the controlled group, but without significant difference. The mean difference of the incremental glucose level at each time point also tends to be lower for the mulberry group, with significant difference at 30-min time point ($P = 0.04$). To conclude, in non-diabetic subjects, consumption of mulberry leaf tea may aid in postprandial glycemic control during the first 30 minutes after meal. However, it does not show blood glucose lowering effect in general. Mulberry leaf tea does not influence the physiological insulin sensitivity and does not cause significant adverse events.

Keywords: Antihyperglycemic/Insulin sensitivity/Mulberry leaf tea/OGTT/Pre-diabetes/Non-diabetes