

Effects of black and green tea consumption on blood glucose levels

BACKGROUND: Obesity and diabetes are metabolic disorders that affect a large amount of the elderly population and are related to increased cardiovascular risk. Tea intake has been associated with lower risk of mortality and morbidity in some, but not all studies. We evaluated the association between tea intake, blood glucose levels, in a sample of elderly adults.

METHODS: During 2005-2006, 300 men and women from Cyprus, 142 from Mitilini and 100 from Samothraki islands (aged 65-100 years) were enrolled. Dietary habits (including tea consumption) were assessed through a food frequency questionnaire. Among various factors, fasting blood glucose and body mass index (BMI) were measured.

RESULTS: Fifty-four percent of the participants reported that they consume tea at least once a week (mean intake 1.6 +/- 1.1 cup/day). A significant interaction was observed between tea intake, obesity status on glucose levels ($P < 0.001$). After adjusting for various confounders, tea intake was associated with lower blood glucose levels in non-obese (P for trend < 0.001), but not in obese people ($P = 0.24$). Multiple logistic regression analysis revealed that moderate tea consumption (1-2 cups/day) was associated with 88% (95% CI 76-98%) lower odds of having diabetes among non-obese participants, irrespective of age, sex, smoking, physical activity status, dietary habits and other clinical characteristics.

CONCLUSION: Tea consumption is associated with reduced levels of fasting blood glucose only among non-obese elderly people.

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