Additional benefit of higher dose green tea in lowering postprandial blood glucose

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Abstrak

Green tea contains catechins that have inhibitory effects on amylase, sucrase, and sodium-dependent glucose transporter (SGLT) which result in lowering of postprandial blood glucose (PBG). This beneficial effect has been widely demonstrated using the usual dose (UD) of green tea preparation. Our study was aimed to explore futher lowering of PBG using high dose (HD) of green in healthy adolescents. 24 subjects received 100 mL infusion of either 0.67 or 3.33 grams of green tea with test meal. Fasting, PBG at 30, 60, 120 minutes were measured. Subjects were cross-overed after wash out. PBG and its incremental area under the curve (IAUC) difference between groups were analyzed with paired T-test. Cathecin contents of tea were measured using high-performance liquid chromatography (HPLC).The PBG of HD group was lower compared to UD (at 60 minutes =113.70+-13.20 vs 124.16 +-8.17 mg/dL, p=0.005; at 120 minutes =88.95 +-6.13 vs 105.25 +-13.85 mg/dL, p < 0.001). The IAUC of HD was also found to be lower compared to UD (2022.0 vs 3411.9 min.mg/dL, p <0.001). Additional benefit of lowering PBG can be achieved by using higher dose of green tea. This study recommends preparing higher dose of green tea drinks for better control of PBG.