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Green tea, weight loss and physical activity

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Letter to the Editor

GREEN TEA, WEIGHT LOSS AND PHYSICAL ACTIVITY

A recent randomized, double blind study has demonstrated that 12 weeks treatment with high dose (857mg EGCG)green tea (GT) extract resulted in significant weight loss in women with central obesity (1). A previous study by the same authors employing a lower dose of GT extract (360mg of EGCG daily) didn't show any effect on body weight (2).

We would like to present a potential association between GT, weight loss and physcal activity (PA) intensity .

Healthy subjects were recruited from a Kibbutz community in Northern Israel. They were divided into active and less active PA groups according to Physical Activity Scale for the Elderly (PASE) Questionaire(3). All subjects signed an informed consent form. This was a single blinded 24-weeks prospective study, with 4:12:12 weeks of wash-out, plcebo (maltodextrin bags) and GT, (Wissotzky Tea Company, Israel), 4 cups/day, respectively. Blood tests for lipids and insulin were performed at base- line, 12 and 24 weeks. Insulin sensitivty was calculated according to QUICKI test. Compliance was assessed by left over bags count, every 4 weeks.

The daily intake of tea cathechins (4 cups) was analyzed by HPLC-UV method in the UCLA Center for Human Nutrition, Los Angeles, USA and was 325 mg: 43% EGCG and 32% EGC with 111mg Caffeine . Placebo bags were cathechins free .

Sixteen subjects from each PA group completed the study. Compliance was 95% to placebo and GT. PA and dietary intake were kept stable throughout the study. Table 1 describes subjects characteristics. A significant weight reduction occured in the reduced PA group ($0.21\pm0.08 kg/m^2$, $p=0.042$) after GT period, but not in the entire group. According to Pearson's correlation, BMI reduction occurred mainly in the less insulin-sensitive subjects ($r=0.385$, $p=0.048$). Blood lipids didn't change following GT drinking .

A significant improvement in waist circumference (WC), fasting glucose and insulin resistance were demonstrated in our previous study which compared an intervention arm of a training