

GS5-3 Effect of caffeine on glucose metabolism and inflammatory marker level for moderate obese people

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We studied effect of coffee on glucose metabolism and plasma inflammatory marker level for moderate obese people by a randomized controlled trial for four months.

(Methods) Five cups of coffee were given for sixteen weeks. Blood samples were collected at 0, 8, and 16th week, and saliva samples were also collected at 0, 4, 8, 12, and 16th week. Caffeine level was determined by HPLC, based on the modified method of Kochiyama et al.

(Results and Discussion) Medication compliance of subjects was evaluated by salivary caffeine level. The salivary caffeine level was detected between 1 and 50 micro M. So, when the concentration was between 1 and 50 micro M, we judged medication compliance was kept. Although salivary caffeine is used as a biological index of tissue concentration, the level is varied by some factors. However, plasma and saliva caffeine concentration are known to correlate. Measurement of saliva/plasma concentration ratio (S/P) was useful for prediction of body caffeine concentration. Three groups, “coffee”, “decaf”, and “water” are now still blind. However, I will be able to present correlation between caffeine level and glucose metabolism or inflammatory marker level in the meeting.