Parallel Session RTD Line 1 / Diet and weight (re)gain prevention

Lecture 4: Effects of 5 different diets varying in protein and GI on different cardiovascular risk factors within the Diet, Obesity and Genes study (DiOGenes)

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Abstract
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Background/Objectives:
We aimed to examine the effects of 5 different diets varying in pro-tein content and GI on different cardiovascular risk factors (CRP, lipid profile, coagulation factors and insulin) in adults for the 6 instruction centres within the Diet, Obesity and Genes study (DiOGenes).

Subjects/Methods:
DiOGenes is a Pan-European randomised controlled dietary intervention study in adults and children with at least one obese/overweight parent. 891 families under-went screening. Adults followed an initial 8-week weight-loss and were randomised to one of five ad libitum diets (6 months for instruction centres) if they had achieved a weight loss of ≥ 8%. The five diets were differing in protein content and GI: (1) Low Protein/Low GI, (2) Low Protein/High GI, (3) High Protein/Low GI, (4) High Protein/High GI or (5) Control ac-cording to official dietary guidelines. Families received dietary and behavioural instruction throughout the study. Measurements of blood parameters and anthropometric measures were taken on 3 Clinical Investigation Days (before weight loss, the end of weight loss, the end of the 6-month dietary intervention period).

Results:
A total of 360 adults completed the intervention period in the instruction centres. CRP blood levels were significantly decreased in the Low GI diets (Low Protein/Low GI, High Protein/Low GI) compared to the high GI diets (Low Protein/High GI, High Pro-tein/High GI), (-0.704 mg/L vs. -0.177mg/L, p= 0.038). Furthermore CRP was positively correlated with fasting insulin in the Low GI diets (p= 0.01). Lipid profile and coagulation factors seemed to be unaffected by the different diets.

Conclusion:
In conclusion, this study suggests that the quality of carbohydrates consumed may influence low-grade inflammation and related co-morbidities in obese/overweight adults. Diets characterized by lower GI were associated with decreased CRP levels. This may contribute to meaningful differences in cardiovascular risk.