

Toronto, Ontario, Canada.

Objective: The relationship between non-alcoholic fatty liver disease (NAFL) and insulin resistance, suggests that dietary interventions to reduce postprandial glycemia and insulin demand, i.e. low glycemic index (GI) and low glycemic load (GL) diets, may be relevant to NAFL.

Methods: Liver enzymes (ALT and AST) were measured in two 3-month clinical trials of low GI or GL versus control (high cereal fiber) diets in participants with type 2 diabetes (n=212). Baseline liver enzymes were also measured in three additional studies of type 2 diabetes (n=299).

Results: In study 1, the low GI diet resulted in significant reductions in both liver enzymes with a greater reduction for AST when compared to the control diet ($P<0.05$). In study 2, the low GL diet demonstrated significant reductions in both liver enzymes, while the control diet significantly reduced AST. However, the reductions in AST were significantly greater on the low GL diet compared to control ($P<0.05$).

Using baseline data from studies 1 and 2 as well as 3 additional studies, baseline correlations between liver enzymes and markers of metabolic syndrome revealed significant positive correlations for both AST and ALT with diastolic blood pressure and with triglycerides, and for ALT with fasting glucose, HbA1c and systolic blood pressure ($P<0.05$). Of the dietary factors correlated with liver enzymes, only dietary cholesterol was positively associated with AST and ALT ($P<0.05$).

Conclusion: Lower GI and GL diets improved liver enzymes and thus may play a role in reducing the risk of NAFL.

Short Oral Abstract 6 - Regular Participation in the phases of an Intervention Program and the Beneficial Effects on the Daily Dietary Habits of Participants- The PERSEAS study (Charilaos Dimosthenopoulos, Greece)

Kyriazis I¹, Dimosthenopoulos C¹, Hatziagelaki E¹, Bamia C², Markozannes G², Sgouros K¹, Ioannidis I¹.

¹*Hellenic Medical Society for the Study of Risk Factors in Vascular Diseases - PERSEAS PROJECT MEDICAL TEAM*, ²*Department of Hygiene, Epidemiology and Medical Statistics, University of Athens Medical School, Athens, Greece.*

E-mail: harisdimos@gmail.com

Objectives: PERSEAS study [Prospective Evaluation of vascular Risk Surrogates: the Elafonissos Area Study] is a 5-years intervention program of the general “closed” population of Elafonissos island, Greece. The intervention program involves the recording changes of cardiovascular risk factors: obesity, hypertension, hyperlipidemia and diabetes, according to the life habits.

Methods: Throughout first 3 phases, 612 individuals (12-89 years) participated. A diet score was created, based on 11 food items of a questionnaire (whole grains, fruits and juices, vegetables and salads, legumes, fish, red meat, poultry, milk full-fat, olive oil, cheese normal fat and alcohol consumption). A *healthy habits index* was composed of Diet score categories (bad (0-3), moderate (4-7), good (8-11) eating habits), physical activity and smoking. Investigation of changes between initial and final measurements were based on paired t-test or on Wilcoxon signed rank sum test. Statistical significance level was defined on $\alpha = 5\%$.

Results: 291 people was composed [141 men (48.45%), 150 women (51.55%) , average age 54 years (SD19,07)]. A statistically significant difference in the change of diet score between the number of entries in the study ($p= 0.0059$) was found. The dietary score on average (standard deviation) was increased by 0.54 (1.72) points for people who participated in all 3 phases. The *healthy habits index* increased on average by 0.08 (0.9) units for people with full participation in the study, while decreased by 0.17 (0.64) units for people with partial participation.