was measured by an INFLA-score including C-reactive protein, leukocyte and platelet counts, and the ratio of granulocyte to lymphocyte number.
Results: Multivariable risk estimates associated with a 2-point increase MDS were 0.84 (95%CI 0.70–1.00), 0.77 (0.61–0.97) and 0.70 (0.52–0.93) for overall, CVD and coronary artery disease (CAD)/cerebrovascular deaths, respectively. Statins were not associated with death risk (0.79; 0.60–1.05). Subjects combining statins and good adherence to MD had much lower than expected risk of CVD and CAD/cerebrovascular mortality (p for interaction = 0.045 and 0.0015, respectively) as compared to those neither using statins nor having average-high MD. The combination of average-high MD and statins was associated in a likely synergistic way with reduced low-grade inflammation, measured by the INFLA-score, but not with blood cholesterol.
Conclusions: MD was associated with lower risk of all-cause, CVD and CAD/cerebrovascular mortality in CVD patients, net of statins. In the same population, statins reduced CVD death risk only in combination with MD. Low-grade inflammation, rather than lipids, is likely to be on the pathway of the interaction between MD and statins towards mortality risk.

A36
IMPACT OF THE KETOGENIC DIET ON HUMAN GUT

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Background: The classic ketogenic diet (KD) is an normocaloric dietary protocol with a high intake of fats (85–90% of energy), which is used as a therapy for drug-resistant epilepsies and type 1 glucose transporter deficiency syndromes (GLUT1-DS). It is known that specific dietetic patterns can influence the composition of the intestinal microbiota; in particular, it was shown that KD is associated with various pro-inflammatory changes in the microbiota. Aim of the study is to verify the impact of KD on the intestinal microbiota, through the evaluation of: intestinal bacterial composition, markers of bacterial metabolism (short chain fatty acids, SCFA), toxicity of faecal water.
Methods: Faecal samples were collected in 12 patients with GLUT1-DS or drug-resistant epilepsy (KD) and in matched healthy subjects (CTR); additionally, in 7 patients samples were collected also before the dietary treatment. The bacterial composition was evaluated by analysis of Next Generation Sequencing and Real-Time PCR. SCFAs were measured by gas-chromatography. Toxicity of faecal water was assessed by Trypan Blue (cytotoxicity) and Comet Assay (genotoxicity).
Results: The microbiota composition of KD patients was significantly different than CTR, especially for a different Firmicutes /Bacteroidetes ratio. SCFA decreased significantly during a KD, as well as the level of genotoxicity of faecal water.
Conclusions: This study confirmed the impact of KD on the intestinal microbiota, highlighting the need for further research to avoid long-term adverse effects and optimize therapy.

A37
DIETARY INTERVENTION WITH VEGETARIAN AND MEDITERRANEAN DIETS FOR CARDIOVASCULAR PREVENTION: EFFECTS ON HORMONES INVOLVED IN THE ENERGY BALANCE

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Background: First line treatment for obesity consists of improvement of dietary habits. Vegetarian (VD) and Mediterranean (MD) diets are reported as two of the healthiest diets. Our aim was to compare the effects of VD and MD on hormones involved in the energy balance, using data from the CARDIVEG study, a randomized dietary intervention trial.
Methods: One-hundred clinically healthy subjects (76 F; 24 M; mean age: 51.2 ± 12.4) were randomly assigned to VD or MD, lasting 3 months each, and then crossed over. Anthropometric measurements, body composition and blood sampling were obtained from each participant at the beginning and at the end of each intervention period.
Results: Both MD and VD determined a significant ($p < 0.05$) reduction of weight, fat mass and body mass index (BMI), without significant differences between the diets. With regard to hormones, VD determined a significant decrease of ghrelin [-3.6 pg/mL (−8.7%)], glucagon-like peptide 1 (GLP-1) [−5.02 pg/ml (−9.4%)], and visfatin [−0.30 ng/mL (−13.5%)] levels. MD, on the other hand, did not determine significant changes. A significant correlation was found between delta changes of leptin, and resistin and body weight modifications during the MD, whereas a significant correlation was found for C-peptide, ghrelin and glucagon levels and fat mass' modification during the VD.
Conclusions: VD was more effective than MD in reducing circulating levels of hormones linked to the energy balance such as ghrelin, GLP-1 and visfatin.

A38
ADHERENCE TO MEDITERRANEAN DIET AND QUALITY OF LIFE IN WOMEN TREATED FOR BREAST CANCER (DEDiCa Study)

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Introduction: Several lines of evidence confirm the role of the Mediterranean Diet (MedD) on primary and secondary prevention of chronic disease, such as diabetes, cardiovascular disease and cancer. Health-Related Quality of Life (HRQOL) includes physical, mental, emotional and social factors. A few studies evaluated the impact of the MedD on HRQOL. Therefore, we investigated the possible effect of adherence to the MedD on HRQOL in the DEDiCa Study (NCT02786875) participants, a study that evaluates the combined effect of diet, physical activity and vitamin D on the risk of recurrence in women diagnosed with breast cancer.
Method: Adherence to MedD was evaluated in a subgroup of 210 participants of DEDiCa Study using the 14-item PREDIMED questionnaire. Health status related to quality of life perceived by the