P5412
Life-long nutritional habits with high antioxidants consumption combined with less energy intake reduce cardiovascular disease morbidity and mortality in elderly adults. IKARIA study

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Ikaria Island, in eastern Aegean Sea, in Greece, has been recognized as one of the places on earth that people live much longer than other places Following this observation, the Ikaria Study was conducted in 2009 to illustrate biological, environmental and lifestyle factors related to long-living, and during the summer 2013 the four year follow up was performed. The aim of this work was to examine dietary habits in relation to all cause and cardiovascular disease 4-years event rates.

Results: During 2009–2013, 53 deaths were occurred in the study's sample; i.e., the mortality rate was 790 deaths per 10,000 inhabitants. The gender-specific mortality rates were 580 per 10,000 women and 100 per 10,000 men inhabitants (p=0.04), with the probability of surviving after the age of 83 yrs increased, whereas the aforementioned probability showed a progressive reduction as far as the middle of the 8th decade of life. The 4-year non-fatal incidence of CVD was 420 cases per 10,000 inhabitants; particularly, the CVD incidence was 520 cases per 10,000 inhabitants and 320 cases per 10,000 women (p for gender difference = 0.20). Although overall quality of diet, i.e., MedDietScore, did not seem to be associated with all-cause mortality, energy intake was inversely associated with mortality (HR per 100 Kcal = 0.92, 95% CI 0.86, 1.00), after adjusting for the co-variates. Additionally, coffee consumption (HR=0.998, 95% CI 0.99–1, p=0.11), tea consumption (0.992, 95% CI 0.985, 0.998), fruit intake (0.995, 95% CI 0.991, 0.999) and olive oil (0.97, 95% CI 0.951, 0.989) were inversely associated with CVD mortality, after various adjustments.

Conclusion: Antioxidants intake through diet and small food portions show cardioprotective effects in elderly individuals.

P5413
Chocolate consumption and risk of heart failure: a meta-analysis of prospective cohort studies

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Introduction: Dark chocolate and cocoa intakes are associated with a reduced risk of cardiovascular disease and cardiovascular mortality. Since no prior research has been published on the relationship between chocolate intake and heart failure (HF). Existing observational studies that evaluated the risk of HF with chocolate consumption show conflicting results and are not directly applicable to the general population.

Purpose: The purpose of this study was to investigate the associations among chocolate consumption and the risk of HF.

Methods: We conducted a comprehensive search of MEDLINE, MEDLINE In-Process & Other Non-Indexed Citations, EMBASE, Scopus, and the Cochrane Central Register of Controlled Trials from database inception through April 2017. Observational studies that reported hazard ratios (HRs) or odd ratios (ORs) of the associations between chocolate consumption and HF were included. Data were extracted by one reviewer and then reviewed by two independent reviewers. Any conflicts were resolved through consensus. Using the DerSimonian and Laird random effects models, we calculated pooled HRs and pooled ORs with 95% confidence intervals (95% CIs). Subgroup analyses were performed to explore potential sources of heterogeneity. The quality of the included studies and the publication bias were assessed.

Results: From the 224 retrieved articles, we identified 5 prospective studies with 575,852 individuals and 24,649 HF events. Moderate chocolate consumption (1–3 servings/month) was associated with a 23% lower risk of HF (pooled risk ratio [RR], 0.87; 95% confidence interval [CI]: 0.77–0.98; p=0.36; I2 = 2.21%) than no regular chocolate intake. In contrast, high chocolate consumption (≥1 servings/day) was associated with a 17% higher risk of HF (pooled RR, 1.17; 95% CI: 1.12–1.60; p=0.82; I2 = 0%) than no regular chocolate intake.

Conclusions: The present study confirms the association of high chocolate consumption with the risk of HF. In contrast, moderate chocolate consumption may reduce the risk of HF. Limit daily chocolate consumption may be needed. However, further prospective studies are needed to identify residual confounders.

P5414
Dietary habits and sick leave

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Background: An association has been described between health conditions and sick leave (SL), but the role of dietary habits in SL remains unclear.

Purpose: To analyze the association between dietary habits and absenteeism due to SL.

Methods: Prospective cohort study analysing a sample of 97,076 healthy workers, who responded to a survey of their dietary habits between 2004–2005. One-year follow-up was carried out to evaluate the incidence of SL through the official records of a mutual insurance company in Spain. The Chi-square test and the Poisson regression with standard error corrected, were used.

Results: The sample consisted of 87% workers aged <49 years, 71.9% male and 60.8% blue-collar-workers. The percentage of workers at high-cardiovascular risk (SCORE) was 4.2%. The dietary habits of the working population are related to changes in SL during the following year. The diet with a protective character seems to be characterized by the frequent consumption of vegetables, salads, fish and fresh fruit, moderation in the meat intake, high consumption of vegetable fats, and low consumption of animal fats. On the contrary, the high frequency in the consumption of meat is associated with an increased risk of SL. We analysed the association between dietary habits in the baseline assessment and the incidence of SL, adjusted by sex, age, occupation, leisure time physical activity, body mass index and cardiovascular risk.

Conclusions: The results suggest the need to implement interventions to achieve healthy eating in the workplace, as part of a global strategy for health promotion and absenteeism management.

P5415
Gender-specific effect of Mediterranean diet on cardiovascular disease risk; the clustering of MedDietScore components in apparently healthy males and females: 10-year follow-up of the ATTICA study

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Background/Introduction: Hitherto evidence with respect to the magnitude of association between Mediterranean diet (MD) and cardiovascular disease (CVD) separately in males and females and the gender-driven different MD patterns, that plausibly exist, are scarce.

Purpose: To evaluate the gender-specific effect size of MD on 10-year CVD event in apparently healthy individuals and to highlight gender differences in the clustering of MD dietary components.

Methods: In 2001–02, 1,514 men and 1,528 women (>18 years) free of CVD living in greater Athens area, Greece, were enrolled. In 2011–12, 10-year follow up was performed in 2,020 participants. Dietary habits were assessed with a validated food frequency questionnaire and adherence to MD was evaluated through MedDietScore (range 0–55). The k-means algorithm of cluster analysis was applied to define cluster of participants with common dietary habits, in the sub-group of participants with moderate to high adherence to MD (MedDietScore≥27, n=797). Two-cluster solution was decided to be the optimal. The dominant factors per cluster were the dietary factors for which participants' mean or median consumption level received the highest score per question (i.e. "5").

Results: Fatal/non fatal CVD events were 15.5% (n=317) (19.7% in males and

Abstract P5414 – Table 1. Dietary habits and incidence of SL

	N	Daily	≥3 times/week	1–2 times/week	<1 time/week	Never
How often do you eat milk, cheese, yogurt?	80,496	0.93 (0.78–1.11)	0.95 (0.79–1.13)	1.00 (0.83–1.20)	1.01 (0.83–1.22)	1.00
How often do you eat vegetables, salads?	88,041	0.71 (0.63–0.81)	0.70 (0.62–0.79)	0.73 (0.65–0.83)	0.79 (0.69–0.90)	1.00
How often do you eat bread, rice and pasta?	80,244	0.75 (0.55–1.03)	0.79 (0.58–1.09)	0.81 (0.59–1.11)	0.84 (0.61–1.17)	1.00
How often do you eat legumes?	80,020	0.96 (0.83–1.11)	0.99 (0.79–1.02)	0.90 (0.80–1.02)	0.89 (0.79–1.02)	1.00
How often do you eat potatoes?	79,695	1.02 (0.83–1.26)	0.98 (0.80–1.19)	0.98 (0.80–1.26)	1.01 (0.82–1.24)	1.00
How often do you eat fish?	79,649	0.92 (0.80–1.07)	0.79 (0.72–0.88)	0.81 (0.74–0.90)	0.87 (0.79–0.96)	1.00
How often do you eat meat?	79,807	1.03 (0.85–1.26)	0.94 (0.77–1.14)	0.93 (0.77–1.12)	0.94 (0.77–1.15)	1.00
How often do you eat chicken?	79,705	1,02 (0.85–1.22)	1.01 (0.88–1.16)	0.96 (0.84–1.10)	0.91 (0.79–1.04)	1.00
How often do you eat eggs?	79,757	0.98 (0.82–1.17)	0.84 (0.73–0.97)	0.86 (0.74–0.99)	0.85 (0.73–0.98)	1.00
How often do you eat cold meat?	79,337	1.15 (1.05–1.27)	0.95 (0.87–1.04)	0.88 (0.82–0.98)	0.90 (0.82–0.98)	1.00
How often do you eat fresh fruit?	79,834	0.88 (0.80–0.98)	0.88 (0.80–0.96)	0.93 (0.84–1.03)	0.99 (0.89–1.10)	1.00

Association between dietary habits in baseline assessment and incidence of SL, adjusting for sex, age, occupation, body mass index and cardiovascular risk (SCORE).