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OR19-05-23 Longitudinal Associations Between the Mediterranean Diet and Dietary Approaches To Stop Hypertension Adherence With Cardiovascular Biomarkers

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Objectives: Examine the associations between the Mediterranean Diet (MedDiet) and Dietary Approaches to Stop Hypertension (DASH) diet with coronary artery calcification (CAC) progression and pericardial adiposity volume (PAT) in adults with and without type 1 diabetes (T1D) over 6 years of follow-up.

Methods: We conducted a longitudinal analysis of data from Coronary Artery Calcification in Type 1 Diabetes study [n = 1255; T1D: n = 563; non-diabetic [non-DM]: n = 692]. Participants completed a validated food frequency questionnaire, a physical exam, and fasting (12 h overnight fast) biochemical analyses at each visit. CAC and PAT were measured using electron beam computed tomography. CAC progression was defined by the square root-transformed volume >2.5 mm. Mixed effect models were applied to examine the associations between the dietary pattern (DP) scores with PAT and CAC progression (logit function). All models included a random intercept to account for patient heterogeneity.

Results: Models were adjusted for age, sex, calories, visit, diabetes status (combined models only), body mass index, triglycerides, low-density lipoprotein, systolic blood pressure, and physical activity. A one-point increase in the MedDiet was associated with a significant -0.09 cm^3 (95% CI $-0.14, -0.03$; p-value = 0.0027) inverse association in PAT. A one-point increase in the DASH score was associated with a significant -0.26 cm^3 (95% CI: $-0.38, -0.14$; p-value = <0.0001) inverse association in PAT. When stratified by diabetes status, the DASH diet was only significant in the non-DM group for lower PAT (-0.34 cm^3 ; 95% CI: $-0.51, -0.17$; p-value = 0.0001). There was no difference by diabetes status for the MedDiet. In combined models, the DPs were not significantly associated with lower odds of CAC progression; however, both DPs had significant interactions by diabetes status for CAC. Only the DASH diet was associated with a lower odds of CAC progression in the non-DM group (OR: 0.96; 95% CI: 0.93, 0.99; p-value = 0.0224).

Conclusions: The MedDiet was associated with lower PAT volume irrespective of diabetes status but was not associated with CAC progression in combined or stratified models. The DASH diet was only significant for lower PAT volume and lower odds of CAC progression in the non-DM group.

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OR19-06-23 Modelled Replacement of Meats by Dairy in Relation to Incident Cardiovascular Disease: European Investigation Into Cancer and Nutrition (EPIC)-Norfolk Study

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Objectives: To examine the associations between modelled isoenergetic replacement of saturated fatty acids (SFA) from total or types of meat by SFA from total or types of dairy and the incidence of cardiovascular diseases (CVD) in UK adults.

Methods: A total of 21,846 participants (56.4% female; age: 40–79 years) from the European Prospective Investigation into Cancer and Nutrition (EPIC)-Norfolk study, without prevalent CVD, were prospectively followed to 31 March 2018. Dietary intake was assessed using a food frequency questionnaire at baseline (1993–1998). Fatal and non-fatal CVD endpoints were ascertained by hospital and death records. Multivariable-adjusted Cox regression models were used to estimate the hazard ratio (HR) and 95% confidence interval (CI) for incident CVD associated with an isoenergetic replacement of SFA (5% of total energy) from total (red, white, processed), red (unprocessed and processed) or processed meat by SFA from total dairy (milk, yogurt, cheese), milk, cheese or yogurt.

Results: During a median follow-up of 21 years, a total of 5904 incident cases of CVD were identified. In multivariable-adjusted analyses, including demographic, lifestyle, energy, dietary and other risk factors, an isoenergetic replacement of SFA (5% of total energy) from total meat by total dairy was associated with lower incidence of CVD (HR, 0.80; 0.68–0.94). According to the analyses of individual food groups, replacing SFA from red meat by milk (0.80; 0.65–0.98) or cheese (0.68; 0.54–0.86), but not yogurt (0.88; 0.55–1.41), was associated with lower incident CVD. Similar effects of replacing processed meat by dairy products were estimated, with HR of 0.76 (0.57–0.99) for milk; 0.63 (0.47–0.85) for cheese and 0.82 (0.50–1.36) for yogurt.

Conclusions: Among adults in Mid-East England, modelled replacement of SFA from meat by dairy products, in particular milk and cheese, but not yogurt, was associated with lower incidence of CVD. This finding supports the notion that SFA from different food sources have differential effects on cardiovascular risk.

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P14-001-23 Nutritional Effects of Removing a Serving of Meat/Poultry From Healthy Dietary Patterns – A Dietary Modeling Study

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Objectives: To assess the nutritional impact of removing a serving of meat/poultry from Healthy Dietary Patterns (HDP)