
PO1482**A HIGH FAT, HIGH GI, LOW FIBRE DIETARY PATTERN IS ASSOCIATED WITH INCREASED TYPE 2 DIABETES RISK IN BRITISH ADULTS**

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Background and objectives: Evidence suggests a protective role against Type 2 Diabetes (T2D) for some dietary factors, in particular, low glycaemic index (GI) foods, dietary fibre and a diet low in fat. However, few studies have considered these three dietary factors simultaneously, in relation to T2D risk. The objective of this analysis was to examine the relationship between a dietary pattern (DP) characterised by GI, fibre density and fat density and incident T2D risk in a British adult population.

Methods: Subjects were 1257 adults from the 1946 British Birth Cohort. Dietary intake was measured at age 53 using a 5-day diet diary. Reduced rank regression was applied to identify a DP characterised by high GI, low fibre-density and high fat-density. Each subject received a DP z-score measuring how much their intake reflected this DP. T2D incidence was identified using validated self-report, fasting blood glucose and haemoglobin A1c levels. Logistic regression models, adjusted for socio-economic class, education, smoking, body mass index (BMI), waist circumference (WC) and physical activity, were used to examine prospective associations between DP z-scores at 53 y of age and risk of T2D at 64 y of age.

Results: The DP was characterised by low intakes of fruit, vegetables, yogurt and high-fibre cereals and high intakes of white bread, chips, fried foods and butter. After 10 years of follow-up 119 people developed T2D. People in the highest tertile of DP z-scores had more than double the risk for T2D (OR=2.11, 95%CI: 1.08-3.09) compared to those in the lowest tertile. This association remained significant after adjustment for BMI and WC (OR=1.81, 95% CI: 1.01, 3.23).

Conclusions: A high-fat, high-GI, low-fibre dietary pattern may increase the risk of T2D in older adults predominantly via pathways that are independent of BMI and WC.

Key words: Type 2 diabetes; dietary patterns; diet.

PO1484**GLYCEMIC INDEX AND GLYCEMIC LOAD AND RISK OF MORTALITY: THE PREDIMED STUDY.**

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Background and objectives: Dietary fiber has been related with a lower risk of all cause mortality. However, there are different types of carbohydrates that have diverse glycemic response. Dietary glycemic index (GI) and glycemic load (GL) are indicators frequently used to assess this variation. The effect of GI and GL in all-cause mortality has not been sufficiently studied. To estimate the association between dietary GI/GL and risk of all-cause mortality in the PREDIMED study.

Methods: The PREDIMED study is a nutritional intervention trial for primary cardiovascular prevention in individuals at high cardiovascular risk. From 7, 447 participants from the PREDIMED trial we followed 3, 707 non-diabetic men and women (55-80 years) with complete and plausible dietary data. Dietary information was collected using a validated 137-item food frequency questionnaire (FFQ). We assessed baseline GI and GL values of each item by a 5-step methodology, using the International Tables of Glycemic Index and Glycemic Load Values. Deaths were ascertained through medical records and consultation of the National Death Index. Cox regression models were used to estimate multivariable-adjusted hazard ratios (HR) and 95% Confidence Intervals (CI) for mortality, according to quartiles of GI/GL adjusting for potential confounders.

Results: After a median of 4.65 year of follow-up, 123 deaths were observed. Participants in the highest quartile of baseline GI showed an increment in the risk of mortality [HR=2.04 (95% CI: 1.08-3.84)] as compared to those in the lowest quartile. Moreover, a significant dose-response relationship was observed [P for trend = 0.033]. Baseline dietary GL was not associated to mortality risk.

Conclusions: A direct association between baseline dietary GI and mortality was found within non-diabetic participants from the PREDIMED trial.

Key words: Glycemic index, Mortality, Elderly. Acknowledgements: CIBEROBN and RTIC 06/0045 are an initiative of the Instituto de Salud Carlos III, Science and Innovation Ministry, Spain.

PO1485

LOW PHYSICAL FITNESS SCORE ASSOCIATED TO CARDIOVASCULAR HEALTH FACTORS IN CHILLEAN SCHOOL CHILDREN FROM SIX TO 14 YEARS OLD

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Background and objectives: Chile faces increased obesity prevalence and low physical activity in children. Adequate physical fitness (PF) protects cardiovascular health (CVH). The objectives were: a) associate physical fitness to simple markers of CVH, b) detect children at risk, by generating a Z-Score composed of waist circumference (WC) blood pressure (BP), excess fat and associate it to tertiles of physical fitness in children.

Methods: In Santiago urban sector, a sample of 1686 children was selected from 17 state funded, semi-funded and private schools. Subjects were selected at random, by level and sex at schools. Standardized anthropometry, maturation, blood pressure, six minutes walk test (6MWT), standing long jump (SLJ) and grip strength (GRS) were measured.

Results: Obesity prevalence was 19, 7 % of obesity (22, 1% in girls and 17% in boys). CV risk expressed as WC>P90 occurred in 16, 5%, 3, 5% had PA >P90 and had 51, 3 23, 9 mm subcutaneous fat. Two z-scores were built and compared to PF test. Thus, children in the PF lowest tertiles, increased 2, 7 their CV risk. Children from state schools and girls had the worst PF and CV risks.

Conclusions: Excess fat, WC> P90 and BP> P90 were found in children with worst PF. Thus, with routine and easy measurements at schools, children at CHV risk could detect, without collecting blood samples. Low PF is a potent marker of CHV health risk in school children.

Key words: physical fitness, zscore, cardiovascular health.

PO1486

REDUCING ADDED SALT IN VEGETABLE SOUP: HEDONIC IMPACT IN ELDERLY AND PRE-SCHOOL CHILDREN

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Background and objectives: Reducing salt intake and implementing a strategy of small reductions is often advised. The objective of this study was evaluate the impact of a 30% reduction of the vegetable soup salt content on elderly and children's hedonic preferences.

Methods: This study took place in a natural setting (institutional canteens). Elderly subjects were 29 older adults (79.7±8.9 years, 20 females), who were recruited in two public nurseries (NH1 and NH2). The 49 children (4.5±1.29 years, 26 girls) were recruited from a public pre-school (PS). Through randomization and cross-over, the subjects tasted and evaluated a vegetable soup prepared as usual and a variant soup with a 30% salt reduction, in consecutive days. The order of presentation of the two soups was different across nurseries and schools. Salt content was determined using flame photometry method. A hedonic description of the food variants was performed; elderly evaluated hedonic perception using a visual analogue scale with 10 cm line scale (from "very good" to "very bad"), and children evaluated hedonic perception through perceived liking ranking using a five point facial scale.

Results: The mean baseline salt levels/100 g soup were 300.7 mg, 206.7 mg, and 147.0 mg, respectively in NH1, NH2, and PS; reductions of 30% were prepared on these values. Statistical significant differences on hedonic evaluation between reduced salt content soups and soups with usual salt levels were not observed. The results of hedonic evaluation, before and after reduced salt content were 0.7 and 0.8 in the elderly, and 4 and 4 in children.

Conclusions: No impact of a 30% decrease in salt content of vegetable soup was found either in children and elders. The reduction of 30% of added salt could be considered without suppressing the hedonic value of vegetable soups.

Key words: Elderly, Pre-school Children, Salt, Hedonic, Soup.