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O60 RELATIONSHIP AMONG PLASMA EXPRESSION OF MIRNA-122, CONSUMPTION OF PROCESSED MEAT AND SUGAR-SWEETENED BEVERAGES, AND METABOLIC SYNDROME IN OLDER ADULTS FROM A POPULATION-BASED STUDY

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Background: Diet is associated with epigenetic alterations in non-communicable diseases (NCDs) since food groups can modulate microRNA (miRNA) expression. Considering that the consumption of processed meat and sugar-sweetened beverages has been linked to NCDs, it is essential to evaluate the joint common occurrence of these factors. Objective: To evaluate the associations among plasma expression of miRNA-122, consumption of processed meat and sugar-sweetened beverages, and metabolic syndrome (MetS) in older adults participating in ISA-Nutrition 2015. Methods: This cross-sectional study used data from 193 older adults participating in ISA-Nutrition 2015. qRT-PCR quantified miRNA-122. Fasting plasma glucose and insulin were determined by enzymatic colorimetric assay and multiplex immunoassay, respectively. HOMA-IR was calculated from fasting glucose and insulin concentrations. The consumption of processed meats and sugar-sweetened beverages was evaluated according to the individual's usual consumption. The adjusted Wald test was used to compare the plasma expression of miRNA-122 according to MetS presence. Weighted Pearson correlation was used to estimate the association between plasma miRNA expression and variables of interest. Analyses were performed using Stata/SE software, version 17.0, with a significance level of 0.05. Results: Individuals had a mean age of 69.1 (0.5) years old, and most of them were women (50.4%). We observed that 45.1% of individuals had overweight/obesity, and MetS was diagnosed in 64.7% of them. The plasma expression of miRNA-122 was higher in individuals with MetS than in those without MetS (p=0.029). Moreover, we observed positive correlations between the plasma expression of miRNA-122 and fasting glucose (r=0,167; p=0.020), fasting insulin (r=0,280; p<0.001), and HOMA1-IR (r=0,288; p<0.001). Finally, the plasma expression of miRNA-122 was positively correlated with the consumption of sugar-sweetened beverages (r=0,157; p=0.030), and processed meat (r=0,163; p=0.024). Conclusions: Plasma expression of miRNA-122 varied according to the presence of MetS, and its expression was correlated with glycemic biomarkers, indicating that the worse the glycemic control, the greater the plasma expression of this miRNA. Lastly, the plasma miRNA-122 was also correlated with the consumption of unhealthy food groups, showing that the worse the diet, the greater the plasma expression of miRNA-122.

Keywords: older adults; microRNA; metabolic syndrome.

O61 ASSOCIATION BETWEEN FOOD PROCESSING KNOWLEDGE AND THE USUAL INTAKE OF ULTRA-PROCESSED FOODS IN A SUB-SAMPLE OF THE COHORT NUTRINET-BRASIL

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Background and objective: Ultra-processed foods intake has been pointed out as a relevant driver of poor diet quality worldwide. Increasing populations' knowledge on food processing might contribute to promote healthier food choices. This study aimed to analyse the association between food processing knowledge and usual ultra-processed food intake among a subsample of the NutriNet-Brasil cohort. Methods: A random quote-based subsample was obtained from the universe of participants of the NutriNet-Brasil Cohort Study (n=1,245). Participants were asked to rate on a scale from 1 to 10 the healthiness of 12 food items from four categories (fruit, meat, dairy, and grains), including three food groups from Nova classification system: fresh and minimally processed foods, processed foods and ultra-processed foods. Food Processing Knowledge Score (FPK-S) was calculated based on ratings correctness according to Nova within each food category, with less processed foods representing higher healthiness (range: 0 to 8). Average ultra-processed foods healthiness perception was calculated by taking the mean of the healthiness ratings of all the four UPF items. The usual percentage of the daily energy intake from ultra-processed foods (%UPF) was measured using up to three 24h-recall per person completed through the NOVA24, a web-based 24-recall tool developed and validated for the NutriNet-Brasil study. Linear regression models were used to test the association between FNK-S and %UPF. Models were adjusted for age, sex, ethnicity, and level of education. Results: The average FPK-S was 5.7 (SD = 1.3). The average usual intake of ultra-processed foods was 21.6 (SD = 9.1). According to the adjusted model, to each 1 point of increasing in the FPK-S, the usual %UPF decreases in 0.87% in average (p-value <0.0001). On the other hand, to each 1 point of increasing in the perceived healthiness of UPF items, the usual %UPF increases in 1.4% in average (p-value <0.0001). Conclusions: Higher knowledge to recognize ultra-processed foods unhealthiness and making healthier choices is associated with a lower intake of this food group. Food and nutrition guidance on food processing, including in national dietary guidelines, should be reinforced.

Keywords: dietary Intake; eating behavior; dietary guidelines; health literacy.