

## CO1. ASSOCIATION BETWEEN ULTRA-PROCESSED FOOD CONSUMPTION AND SUSTAINABLE HEALTHY DIETS USING NOVA CLASSIFICATION AND SHED INDEX

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**INTRODUCTION:** High ultra-processed food (UPF) consumption is linked with negative impacts for both human and planet health. However, evidence on the relationship between UPF consumption and Sustainable Healthy Diets adherence is limited.

**OBJECTIVES:** To assess the association between UPF consumption and Sustainable and Healthy Diet (SHED) Index among Portuguese adults (aged 18-65 years).

**METHODOLOGY:** This cross-sectional study was a secondary analysis of data from a validation study carried out between October and December 2022 using a self-reported questionnaire administered by interview. Dietary intake was recorded using a semi-quantitative food frequency questionnaire validated for the Portuguese adult population and UPF were identified according to the NOVA classification. Sustainable Healthy Diets adherence were assessed using the SHED Index, a tool for measuring healthy dietary patterns and pro-sustainability behaviours, developed by Tepper *et al.* (2021). It was calculated the UPF proportion (%) in the diet by the ratio between the amount of food consumed from fourth NOVA group and the total weight of food and beverages consumed (g/d). The association between UPF proportion and SHED Index was evaluated through linear regression models, adjusted for sex, age, education level, urbanization degree and physical activity.

**RESULTS:** A total of 296 participants were included (36±16 years old; 31.4% men). Mean UPF proportion was 7.9% corresponding to 155 g/day. After adjustments, we found a negative association between UPF proportion and total SHED index score (B=-0.858, confidence interval (CI) 95%: -1.136, -0.580). Higher UPF proportion was also associated with lower Healthy Eating (B=-0.308, CI 95%: -0.390, -0.225), Sustainable Eating (B=-0.075, CI 95%: -0.140, -0.010), Ready-Meals (B=-0.176, CI 95%: -0.272, -0.080) and Soda (B=-0.266, CI 95%: -0.318, -0.214) sub-scores.

**CONCLUSIONS:** These findings suggest that a higher UPF proportion is inversely associated with SHED index score and sub-scores, highlighting the significant role of UPF consumption on diets sustainability and healthiness.

## CO2. TRENDS IN ULTRA-PROCESSED FOOD CONSUMPTION IN PORTUGAL

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**INTRODUCTION:** Broad changes in dietary and physical activity patterns are part of the concept of nutritional transition. A fourth nutritional transition has as main characteristic the change of consumption of processed foods for ultra-processed foods (UPF).

**OBJECTIVES:** This study aims to evaluate trends of UPF availability in the Portuguese population.

**METHODOLOGY:** Data from the Household Budget Surveys (HBS) conducted by the National Statistics Institute (INE) each 5 years within a national representative sample of households was obtained from DAFNE-Anemos Software. All the existing data sets were used: years 1990, 1995, 2000 and 2005. The food processing classification system used was NOVA. The percentage of UPF was calculated based on the total household daily amount of food and beverages available per capita (in grams).

**RESULTS:** As shown in table 1, between 1990 and 2005, the UPF availability increased from 3.9% to 13.8%. Over the years, with the exception of vegetables and added lipids, all other food and beverages categories increased its UPF availability contribution, mainly noticeable for milk products, sugar products, cereal products and meat products.

**CONCLUSIONS:** Increasing trends in UPF availability in Portugal were observed. At the same time, there is a trend towards a decrease in unprocessed availability and home-prepared foods. The Portuguese population should be made aware of the health risks resulting from excessive consumption of UPF.

**TABLE 1**

Trends in food availability in Portugal, using HBS data and NOVA classification System

| YEAR | UNPROCESSED OR MINIMALLY PROCESSED FOOD (%) | PROCESSED CULINARY INGREDIENTS (%) | PROCESSED FOOD (%) | ULTRA-PROCESSED FOOD (%) |
|------|---|------------------------------------|--------------------|--------------------------|
| 1990 | 68.0  | 4.1                                | 24.0               | 3.9                      |
| 1995 | 67.8  | 5.2                                | 20.5               | 6.4                      |
| 2000 | 66.0  | 4.7                                | 19.1               | 10.2                     |
| 2005 | 65.4  | 4.0                                | 16.8               | 13.8                     |

Note: Percentages calculated from total *per capita* household daily amounts of food and beverages availability (1990 - 1799 g, 1995 - 1659 g, 2000 - 1620 g and 2015 - 1518 g)

## CO3. CONSUMPTION OF ULTRA-PROCESSED FOODS THROUGHOUT CHILDHOOD AND ADIPOSITY TRAJECTORIES: DATA FROM THE GENERATION XXI BIRTH-COHORT

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