

A15**ACUTE EFFECTS OF A HALLUCINATORY MEAL ON SUBJECTIVE APPETITE AND FOOD INTAKE: A RANDOMIZED CROSS-OVER PILOT TRIAL**

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Introduction: Food intake is highly regulated by complex interactions between homeostatic and non-homeostatic mechanisms in different brain areas. Hypnosis has long been recognized as an effective tool for producing behavioral change, but his efficacy on weight reduction has received little attention. The aim of this pilot study is to assess subjective appetite and hormones involved in appetite regulation after both a hallucinatory and real meal.

Methods: Eight healthy women in menopause and able to develop hallucinations during the hypnotic sessions, were recruited. The hallucinatory breakfast meal (HaM) and the real one (RM) were randomly tested in a crossover design. On test days, the breakfast meal (white bread with ham and cheese plus 250 ml of water) was served or hallucinated. Subjective appetite by visual analogue scale (VAS) was assessed at baseline and then each 30 min for 4 hours and half. Blood samples were taken at baseline and at 20', 60', 90' and 180' min for measurement of plasma glucose, insulin, ghrelin, GLP-1, PYY, NPY and orexin A (OX-A) concentrations.

Results: Participants were normal weight with a mean age of 60 ± 9 years. HaM resulted in lowered postprandial sensation of hunger (HaM: 23 ± 3 vs. RM: 32 ± 3 mm; p = 0.005), and increase ratings of satiety (HaM: 74 ± 4 vs. RM: 67 ± 4 mm; p = 0.02) compared to RM. As expected, the RM increased both glycemia and insulin concentration (HaM: 97 ± 4 vs. RM: 115 ± 4 mg/dl; p < 0.001; HaM: 7 ± 3 vs. RM: 36 ± 3 µU/mL; p < 0.001) as well as GLP-1 and PYY postprandially (HaM: 3 ± 0.2 vs. RM: 4 ± 0.2 pmol/L, p < 0.001; HaM: 47 ± 4 vs. RM: 81 ± 4 pg/mL; p < 0.001). While ghrelin decreased for the RM only. Finally, NPY increased after RM (HaM: 32 ± 2 vs. RM: 46 ± 2 pg/mL; p = 0.001) whereas OX-A did not change.

Conclusions: Hormones involved in appetite regulation increased for the RM, but not for the hallucinatory meal that improved appetite sensation. Further research is required to figure out the role of hypnosis on appetite regulation.

A16**VALEROLACTONES AND HEALTHY AGEING: LINKING DIETARY FACTORS, NUTRIENT BIOMARKERS, METABOLIC STATUS AND INFLAMMATION WITH COGNITION IN OLDER ADULTS – THE VALID PROJECT**

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Introduction: Several studies identified nuts, berries, cocoa, red wine and tea as preventive toward cognitive decline. These foods are rich in flavan-3-ols (F3O), among which (epi)catechin and procyanidins. However, these compounds are poorly absorbed in the upper gastrointestinal tract and are metabolized by colonic bacteria to phenyl-γ-valerolactones (PVL), which showed biological activities and might represent better dietary exposure biomarkers compared to (epi)catechin conjugates, as they reach higher plasma Cmax and tmax.

Objectives: The aim of the study is to identify and quantify PVL and their phase II conjugates in plasma samples of the Irish TUDA cohort, comprising 5,186 adults aged 60–102 years, affected by mild cognitive decline, and to evaluate if PVL might be potential biomarker of F3O rich food consumption. A subset of 410 subjects was asked to answer to a semi-quantitative Food Frequency Questionnaire (FFQ) to assess their

habitual F3O consumption. The F3O amount was calculated based on the reported food intake and through the Phenol Explorer Database. PVL metabolites were identified and quantified in plasma of TUDA cohort subjects, by means of UHPLC-MS/MS.

Results: In the subset of 410 subjects, the total F3O intake resulted 655 mg/day, mainly monomers and proanthocyanidins from coffee, tea, fruit and chocolate products. A significant positive correlation was found among the two most representative plasma PVL and F3O intake as measured through the FFQ. Nine PVL metabolites were identified and quantified in plasma of TUDA cohort subjects, up to ~1 µM.

Conclusions: In conclusion, PVL may represent a potential biomarker of F3O rich food intake and are constantly present in baseline plasma samples taken from the general population. Next steps will regard the association of plasma PVL with cognitive performance and newly measured inflammation markers, as well as with socio-economic and environmental factors within the TUDA cohort.

A17**CHILI PEPPER CONSUMPTION AND RISK OF TOTAL AND CAUSE-SPECIFIC MORTALITY IN A MEDITERRANEAN POPULATION: PROSPECTIVE FINDINGS FROM THE MOLI-SANI STUDY**

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Introduction: Chili pepper and its active component capsaicin have been reported to have a range of health benefits including reducing the risk of developing hypertension and obesity and also mortality risk.

Objectives: To evaluate the association between chili pepper consumption and risk of total and cause-specific mortality in a general Mediterranean population, recruited in the Moli-sani study. The study sample consisted of 22,811 men and women (mean age 55 ± 12).

Results: Overall, 66.3% of the sample reported a regular consumption of chili pepper. Chili pepper intake was more prevalent in women, in non-manual workers and in subjects with higher educational level. Higher chili pepper intake was also associated with closer adherence to Mediterranean diet (P < .001). During 8.3 years of follow-up, a total of 1236 deaths were ascertained: 444 cardiovascular, 482 cancer and 310 other causes. After adjustment for a large panel of covariates, regular chili pepper intake (>4 times per week) was associated with 23% lower risk of all-cause death (hazard ratio [HR] 0.77; 95% CI, 0.65–0.91), 35% reduced risk of cardiovascular mortality (HR = 0.65; 95% CI, 0.49–0.86), 50% lower risk of CHD death and 60% for stroke, as compared with non consumers. Similarly, chili pepper intake >2 ≤4 times/week was associated with 29% lower risk for other causes death (HR = 0.71; 95% CI, 0.51–0.97). Chili pepper consumption was not associated with cancer mortality.

Conclusions: Chili pepper intake is associated with lower risk of total, cardiovascular and other causes mortality in a large sample of the Italian population. No significant association between chili pepper consumption and total cancer mortality was found. The mechanisms possibly underlying the association of chili pepper with health outcomes remain largely unknown.

A18**FOOD GROUPS AND RISK OF AGE-RELATED MACULAR DEGENERATION: A SYSTEMATIC REVIEW WITH META-ANALYSIS**

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Background: Age-related macular degeneration (AMD), a disease that causes irreversible reduction of visual function, is the leading cause of blindness in developed countries. Epidemiological studies have suggested that dietary patterns impact on AMD development and progression. Our aim was to systematically review all the prospective cohort studies available that have evaluated the consumption of

different food groups and alcohol in relation to the development and progression of AMD.

Methods: We conducted an electronic literature search through MedLine, Embase, Google Scholar, Web of Science, and bibliographies of retrieved articles up to January, 2018. Studies were included if they analysed prospectively the association between consumption of food groups and AMD. We did not limit our search to any language restrictions.

Results: At the end of the selection process, 26 articles were included in the meta-analysis, for a total of 211,676 subjects. The follow-up period ranged from 4 to 27 years. By comparing the highest vs. the lowest consumption, pooled analyses showed a significant ($p < 0.05$) reduction of AMD risk for the highest consumption of fish (RR 0.82 95% CI 0.75–0.90), and a significant increased risk for the highest consumption of alcohol (RR 1.20 95% CI 1.04–1.39). Moreover, high meat consumption was associated with a significant ($p = 0.003$) increased risk of early (RR 1.17 95% CI 1.02–1.34) but not late AMD. No significant association with AMD were found for vegetables, fruit, nuts, grains, dairy products, as well as dietary fats such as oils, butter and margarine.

Conclusions: The results of the present meta-analysis show a significant 18%-reduced risk for fish and a 20%-increased risk for alcohol consumption. In addition, an increased risk was observed for meat, but only in the subgroup of early AMD.

A19 RELATIONSHIP BETWEEN NUTRITIONAL RISK SCREENING 2002 AND SUBJECTIVE GLOBAL ASSESSMENT AND BIOCHEMICAL PARAMETERS IN HOSPITALIZED PATIENTS

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Introduction: Nutritional risk and malnutrition are highly prevalent among hospitalized patients. This study aims to evaluate how the biochemical and nutritional parameters vary according to the NRS 2002 and SGA score.

Methods: This prospective study was conducted since September 2016 to December 2017 and included 240 patients admitted in to Medicine and Surgery wards of the Federico II University Hospital coming from the Emergency Unit. All patients were evaluated for routine biochemical analyses, and the SGA and NRS 2002 test were consecutively administered within 72 h of admission.

Results: Hematologic data showed that hemoglobin concentration is changed in severely malnourished patients according to SGA (score a vs b,c; $p < 0.05$) and NRS (score <3 vs ≥ 3 ; <0.05). Most of the commonly used indexes of malnutrition (prealbumin, transferrin, and cholesterol) were normal; but serum albumin changed in severely malnourished patients according to score ($p < 0.05$). Blood cholinesterase was significantly lower in patients with NRS score ≥ 3 (8071 vs 3807 U/l; $p < 0.05$). **Conclusions:** Our study describe changes of biochemical data in a large sample of hospitalized patients. The abnormal results were strictly related to protein energy malnutrition, and often masked by hemoconcentration of dehydration. Moreover, our results suggest that SGA and NRS scores are useful to identify the patients, at first hospital admission, at high risk for malnutrition.

A20 EVALUATION OF IODINE INTAKE COMPARED TO SALT CONSUMPTION IN AN ITALIAN POPULATION OF CHILDREN AND ADOLESCENTS

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Introduction: Prevention of iodine deficiency disorders is based on the use of food salt enriched with iodine. WHO recommends reducing salt

consumption to less than 5 grams per day. This study analyzed the relationship between iodine intake and salt consumption in a sample of 1270 Italian children and adolescents.

Methods and Results: The estimate of iodine intake and salt consumption was made by measuring daily iodine and sodium urinary excretions. Mean \pm SD of age and daily salt consumption in the studied population were 10.3 ± 2.9 years and 7.3 ± 3.6 g, respectively. Median (\pm IQR) for the daily iodine intake was $100.4 (\pm 96.1)$ mcg. 72% of the population in exam had a daily intake of salt higher than levels recommended by the WHO (>5 g/24h) while 50% had an insufficient iodine intake (<100 mcg/24h). Iodine intake was positively but weakly correlated with salt consumption ($r = 0.333$, $p < 0.001$). When the population was stratified by WHO iodine status, the daily salt intake did not vary significantly between the different classes of iodine status. As 1 g of iodized salt furnishes 30 mcg of iodine, we'd expect to find iodine levels at least corresponding to real consumed salt. Considering this, we found that 86% of the population that we examined did not consume exclusively iodized salt, consumed more salt (7.7 g vs 4.9 g) and had a less iodine level (100 mcg vs 205 mcg), compared to the remaining 14 % of the population.

Conclusions: Although it is claimed that in our country iodized salt represents more than 60% of the cooking salt sold, results of this study instead show that in this young population examined only a little percentage was virtuous consuming small amounts of salt and it was probably iodized.

A21 CHANGING EATING HABITS AND EVALUATION OF THE KNOWLEDGE OF T2DM AFTER MEETING C-MAPS™

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Introduction: To date, the Mediterranean diet is the first therapeutic approach for patients with type 2 diabetes mellitus (T2DM). Conversation Maps™ (C-Maps™) are interactive educational tools on diabetes, with a strong visual impact. The “Healthy Eating and Keeping Active” provides for a healthy eating style and physical activity in order to better handle diabetes. The aim of the study has been to evaluate the impact on changing eating habits and increasing the knowledge of the disease with the group therapeutic education through the use of C-Maps™ tool.

Objectives: The meeting involved 31 individuals (13/18 F/M) of an average age of 68.2 ± 7.7 yrs with T2DM (75.3% on oral hypoglycaemic therapy, 16.1% without any therapy). The average disease duration was 9.7 ± 8 y. At baseline first, after 1 month and 6 months, subjects were asked to complete the INRAN questionnaire on eating habits and lifestyle, a food diary and the GISED questionnaire on food and glycaemia. **Results:** Preliminary analysis of data and food diaries, the 6-month follow-up shows an increase in consumption of vegetables ($p = 0.004$), with an increase of fiber before treatment (13.1 ± 3.2 g/1000 kcal vs 15.4 ± 3.6 g/1000 kcal, $p = 0.09$) and fish intake, reaching a rate of 1-2 times/week vs <3 times/month, $p = 0.001$. Analyzing the nutrition GISED questionnaires, it is shown increase in correct answers given, even if not significant (60.4% vs 70.2%).

Conclusion: Attendance in educational meetings on diabetes and nutrition through the use of C-Maps™ seems to be effective in improving compliance of patients with T2DM to the Mediterranean diet. Increased fiber intake may lead to better glyco-metabolic control over the long term period. Finally, C-maps™ encourages a greater understanding of the disease and the healthy lifestyle in T2DM.

A22 DECENTRALIZED AND MOBILE MONITORING OF ASSISTED LIVINGS' LIFESTYLE “USE CASE PILOT WITHIN” INTEROPERABILITY OF HETEROGENEOUS IOT PLATFORMS INTER-IOT

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