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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.

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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.

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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.

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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