Conclusions: Targeted nutritional intervention was essential in promoting healthy eating habits.
Disclosure of interest: None declared.

SUN-P309
LIFESTYLE CHANGES AND DROPOUT RATE AFTER THE FIRST CONSULTATION IN A CHILD AND YOUTH OBESITY OUTPATIENT CLINIC

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Rationale: Changes in lifestyle and acquisition of healthy habits are the basis for the management of child and youth obesity. However, introducing and sustaining these attitudes remain challenging.
Methods: Retrospective cohort. Data from the outpatient visits of children and adolescents to a clinic obesity, in the period from January of 2008 to november of 2011, were analyzed. They are free of genetic disease or use of controlled medication. Data were directly collected from the standardized forms used in the visits, conducted by a multidisciplinary team, which is coordinated by a Nutrologist. In C1, goals related to lifestyle, dietary and physical activity were proposed. When patient reported, at the C2, that achieved fully or partly agreed goal, it was considered "adherence". Data were analyzed using SPSS v.18.0 software. The project was approved by the Research Ethics Committee of the institution.
Results: 305 subjects, age 10 ± 3.8 years, 51.1% female and 71.5% Caucasian were evaluated. Attended the C1 and C2 261 patients (85.6%) and the median time interval between C1 and C2 was 35 (28–42) days. For children who attended the C1 and C2, 401 challenges of change in eating habits (adherence 86.8%), 264 physical activity (adherence 70.2%) and 218 of changing lifestyles (adherence 72.4%) were agreed. Statistical difference occurred in the recommendation of some agreements related to changes in eating and living habits when compared by sex and age group, and the adherence of these recommendations was higher in younger than 12 years.
Conclusions: Changes in eating habits were the most recommended and which had greater adherence in the interval between C1 and C2. Recommendations with greater difficulty and the time interval between visits might justify the presented dropout rate.
Disclosure of interest: None declared.

SUN-P310
THE CONSUMPTION OF ULTRAPROCESSED FOODS AND FOOD ADDICTION IN OVERWEIGHT CHILDREN

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Rationale: Intake of ultraprocessed foods among overweight children was analyzed to determine their possible relationship with the development of food addiction.
Methods: Food intake was estimated by food frequency questionnaire and food addiction was performed using the Yale Food Addiction Scale for Children. The cross-sectional study included all children (n=139) who were overweight (BMI for age≥1z score) from 9-11 years old for both sexes from two schools, chosen for convenience.
Results: Among the children, 24% presented food addiction. Logistic regression analysis showed that the consumption of 3-4 sausage slices with an energy value of approximately 210Kj was associated with an increase in the chance of developing food addiction by 39%, the consumption of a 200ml glass of soft drinks with value energy of 335Kj increased the chance by 85% and a portion of cookies (~3units) with an energy value of approximately 712Kj increased by 99% the chance of these children developing addiction. In multivariate analysis the consumption of cookies remained significantly associated with addiction (odds ratio:1.95, 95% CI:1.21-3.14,p=0.006)
Conclusions: The high, progressive and repeated consumption of ultra-processed foods seems carry a fundamental role in the development of food addiction. The diagnosis of the food addiction and the detection of foods that increase the chance to addiction are fundamental for correct treatment and the prevention of childhood obesity, which continues to be the greatest health problem in the world.
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SUN-P311
MANAGEMENT OF ENDOTHELIAL AND INFLAMMATORY DYSFUNCTIONS BY CHITIN–GLUCAN FIBRE AND POMEGRANATE POLYPHENOLS IN A MOUSE MODEL OF CARDIOVASCULAR DISEASES: POTENTIAL IMPLICATION OF THE GUT MICROBIOTA

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Rationale: Chitin-glucan (CG) is an insoluble fibre with prebiotic properties whereas pomegranate peel extracts (PPE) is rich in polyphenols prone to modulate inflammation. We tested the impact of CG and the combination of CG+PPE on gut microbiota and endothelial and inflammatory disorders in a mouse model of cardiovascular disease.
Methods: Male Apoe knock-out (KO) mice were fed a control (CT) or a high fat (HF) diet supplemented with or without 5% CG (Kitozyme, Belgium) and a combination of 5% CG and 0.5% PPE (Oxylent, Belgium) for 8 weeks.
Results: HF-fed KO mice presented endothelial dysfunction as attested by increasing abundance of caveolin-1 and decreasing ser1177-phosphorylated eNOS form in thoracic aorta whereas vasodilation to cumulative doses of acetylcholine was reduced in preconstricted carotid and mesenteric arteries. GC and CG+PPE reduced inflammatory markers in the liver and in the adipose tissues without changing caveolin-1 and eNOS phosphorylation. Furthermore, the combination CG+PPE improved the prostacyclin-dependent relaxation of carotid arteries. Among specific changes of gut microbiota composition, a significant increase in Lachnospiraceae family (*Blautia* genus) and a significant decrease in Rikenellaceae family (*Alistipes* genus) were observed in CG+PPE-treated mice.
Conclusions: Food supplementation with CG and PPE exerted systemic anti-inflammatory effects and restored endothelial dysfunction in carotid arteries from HF-fed KO mice. This study allows to point out gut bacteria, namely *Blautia* and *Alistipes*, that could be implicated in the management of endothelial and inflammatory dysfunctions associated with cardiovascular diseases, and unravel the role of nutrition in the modulation of those bacteria.
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