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Abstracts

Guest Editors
Heiner Boeing, Nuthetal
Helmut Oberritter, Bonn
Hannelore Daniel, Freising-Weihenstephan
on behalf of the German Nutrition Society

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the third most consumed beverage groups were water and carbonated soft drink + fruit-drink, while fruit juice (100%) was the least consumed beverage. Approximately 22% reported no SSB consumption on either study day and about 78% of toddlers were SSB consumers. Out of 96 participants, 45% of participants reported SSB consumption in each of the three food records. There was statistically significant difference in sweetened beverages consumption between younger (12-24 months) and older (24-36 months) toddlers ($p < 0.001$).

Conclusions: SSB contributed a substantial amount of energy to the diet of participants in our study. For that reason, interventions such as education and setting national guidelines about beverages consumption are necessary since current Croatian dietary recommendation doesn't include any recommendation about beverages intake pattern.

Keywords: (maximum 5): obesity, toddlers, sugar-sweetened beverages, energy intake

149/1049. A dietary pattern score and risk of developing type 2 diabetes in the sun project

Author(s): (1) Maira Bes-Rastrollo; (2) Ligia J Dominguez; (3) F. Javier Basterra-Gortari; (4) Alfredo Gea; (5) Mario Barbagallo; (6) Aurora Perez-Cornago; (7) Miguel Ángel Martínez-González.

Affiliation: *(1) Epidemiologist. Preventive Medicine and Public Health Dept. University of Navarra. Spain / CIBERobn, Instituto de Salud Carlos III. Spain / IDISNA. Spain.; (2) Endocrinologist. Geriatric UEndocrinologist. Geriatric Unit, Dept. Internal Medicine and Geriatrics. University of Palermo. Palermo Italy.; (3) Endocrinologist. Preventive Medicine and Public Health Dept. University of Navarra. Pamplona. Spain / Hospital Reina Sofia. Tudela. Spain; (4) Epidemiologist. Preventive Medicine and Public Health Dept. University of Navarra. Pamplona. Spain / Dept. Epidemiology. Harvard School of Public Health. Boston. USA; (5) Geritrician. Geriatric Unit, Dept. of Internal Medicine and Geriatrics. University of Palermo. Palermo. Italy.; (6) Nutritionist. Preventive Medicine and Public Health Dept. University of Navarra. Pamplona. Spain; (7) Epidemiologist. Preventive Medicine and Public Health Dept. University of Navarra. Pamplona. Spain / CIBERobn, Instituto de Salud Carlos III. Madrid. Spain / IDISNA. Pamplona. Spain.*

Introduction: Numerous diabetes risk models and scores have been developed, but most are rarely used or are not focused on diet or do not fully capture the overall dietary pattern.

Objectives: To develop a friendly, plausible, self-administered, and complete diabetes dietary score (DDS), emphasizing the powerful role of optimal food patterns to decrease the risk of developing type 2 diabetes (T2DM).

Method / Design: We assessed 17,292 participants of the prospective SUN cohort initially free of diabetes. They were followed-up for a mean of 9.2 years. A validated 136-item FFQ was administered at baseline. Vegetables, fruit, whole cereals, nuts, coffee, low-fat dairy, fiber, PUFA, and alcohol in moderate amounts were positively weighted (assumed to be beneficial to decrease the incidence of T2DM). Red meat, processed meat and sugar-sweetened beverages were negatively weighted (assumed to be detrimental). Energy-adjusted quintiles of each of the 11 items (except moderate alcohol) were used to build the score. For alcohol consumption a point was given to those participants with moderate amounts (score range: 11–56 points). Incident T2DM was confirmed by an endocrinologist using blind revision of clinical records and an additional detailed questionnaire.

Results: We observed 143 cases of incident T2DM during follow-up. Better baseline conformity with the DDS was associated with lower incidence of T2DM (multivariable-adjusted HR for intermediate (26-40 points) vs. low (<26) category 0.45 [95%CI: 0.22-0.93]; and for high (>40) vs. low category 0.34 [0.15-0.75]; p for linear trend: 0.032).

Conclusions: A simple score exclusively based on dietary components, may be applicable in clinical practice and/or be self-administered. It may well be an educational tool for laypeople while self-assessing their risk of diabetes.

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Keywords: (maximum 5): diabetes, diet, cohort, prospective

149/1054. Impact of a sugary beverage on body weight goes up with initial BMI in children

Author(s): (1) Margreet Olthof; (1) Janne de Ruyter; (2) Lothar Kuijper; (3) Carson Chow; (3) Kevin Hall; (1) Martijn Katan.

Affiliation: *(1) Nutritionist. VU university. Amsterdam. The Netherlands; (2) Statistician. VU university. Amsterdam. The Netherlands; (3) Senior Investigator. Laboratory of Biological Modeling. Bethesda. USA.*

Introduction: Substituting sugar free for sugar-sweetened beverages reduces weight gain. It has been speculated that this effect is more pronounced in children with a high body mass index (BMI) because their sensing of calories is compromised.

Objectives: We investigated the impact of sugar-free versus sugary drinks separately in children with a higher and a lower initial BMI z score, and calculated the degree of caloric compensation in the two groups.

Method / Design: We conducted an 18-month double-blind trial involving 641 children aged 4 to 11. Participants were randomly assigned to receive 250 ml per day of a sugar-free beverage (sugar-free treatment) or a sugar-containing beverage (sugar treatment). We designated children with an initial BMI z-score (standard deviations of the BMI distribution per age and sex group) below the median as 'lower BMI' and above the median as 'higher BMI'. We used mathematical modelling of growth and energy metabolism to calculate the degree of caloric compensation.

Results: The sugar-free treatment reduced the BMI z-score by 0.05 SDunits within the lower BMI group and by 0.21 SD within the higher BMI group, both relative to the sugar treatment. Thus the