tionnaire was used to assess total water intake (TWI): drinking water, liquids (soft drinks, juices, milk, beer, wine and spirits) and solid foods, along with alcohol intake (grams). Mann-Whitney U test was performed to analyze sex differences and correlations were performed by the Spearman test adjusted by sex.

Results: No significant differences were found for TWI in men (2.19 L/d) and women (2.21 L/d). Men consumed insufficient TWI according to EFSA recommendations (men=2.5 L/d). Osmolality and liquids intake were significantly higher in men (P<0.05), as well as the general intake of alcoholic beverages (P<0.05). A positive correlation between osmolality and alcohol consumption was found in men (P<0.05), but not in women.

Conclusion: A shift in the liquid intake pattern in men, by decreasing alcohol intake and promoting water drinking might be advisable in order to lower osmolality levels and achieve a better hydration status.

Key words: hydration, alcohol, gender, healthy adults.

Beverages consumption and energy contribution from the ANIBES study

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Introduction: The purpose of this ANIBES study was to contribute to updating data of dietary energy intake and its main sources from food and beverages.

Objective: To evaluate alcoholic and non-alcoholic beverages intake and percentage of energy input by beverages in The ANIBES study.

Method: The sample was representative and composed of residents in Spain between 9 and 75 years old. Study participants were provided with a tablet device and trained in how to record information by taking photos of all food and drinks consumed during three days. Food records were returned from the field in real time by coders. VD-FEN2.1 software was used to calculate energy intake and food consumption records.

Results: In The ANIBES study, the average consumption of non-alcoholic beverage was 851 g/person/day and alcohol beverage consumption was 99 g/person/day. Within the group of non-alcoholic beverages water is the most consumed beverage (570 g/d) followed by sugared soft drinks (88 g/d). For alcoholic beverages the low alcohol content drinks are largely the most consumed beverages (97 g/d). Energy contribution from non-alcoholic beverages was 3.9% and from alcoholic beverages 2.6% of the total energy intake. Juices and nectars provide 2.9% of the total energy intake in children. Sugared soft drinks represent 3.4% of total energy intake in adolescents. Low alcohol content beverages represent 2.6% and 3.3% of the total energy intake in adults and elderly respectively.

Conclusion: The most consumed beverage group was the non-alcoholic beverages, representing 3.9% of the total energy intake.

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Key words: energy intake, ANIBES study.

Weights, measures and portion sizes for foods and beverages: findings from the ANIBES-study in Spain

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Introduction: The purpose of the ANIBES Study was to contribute to updating data of dietary energy intake and its main sources from food and beverages.

Objective: Establish a consensus about consumer food serving from the portions that had been used in The ANIBES Study.

Method: The data used were obtained from photos taken by The ANIBES Study participants through their tablet devices. Subsequently, codified, analyzed, and collected by experts.


Conclusion: This study will allow the creation of a new consensus document of consumer food serving, in order to suggest recommendations regarding the Spanish population.

Acknowledgements: The study was financially supported by a grant from Coca-Cola Iberia through an agreement with the Spanish Nutrition Foundation (FEN).

Key words: portion-size, serving-size, ANIBES study.

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Hydration status and water sources in 9-10 year soccer players

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Introduction: Physical activity leads to an increased water loss via sweating, which may increase the risk of dehydration.

Objective: To evaluate the hydration status and its relation to food intake in a group of children that play football.

Method: 36 male 9-10 years children were invited to participate in this study, and 30 completed a 24 h urine collection. The Free Water Reserve (FWR) was used to assess the hydration status; additionally, a food record corresponding to the day of urine collection and a lifestyle, and socio-demographic questionnaire was filled with parents help. Anthropometric data were obtained. Food and beverage groups were created and models of unconditional logistic regression were fitted in order to estimate the magnitude of the association between the contribution of food’s water content and the hydration status.

Results: 43.3% of children were classified as at risk of hypohydration. Compared to children who reported low fruit and vegetable intake (at or below the median), those with higher intake (above median) were at decreased risk of hypohydration (OR = 0.19, 95% CI 0.04 - 0.94, p = 0.041).

Conclusions: Almost half of this sample of 9-10 years soccer players was at risk of hypohydration. Fruit and vegetables intake was significantly associated with a better hydration status.

Key words: children, hydration status, sport.

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Hydration level and mood status in adolescents. The Up & Down Study

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Introduction: Optimum hydration is essential for a proper functioning of the organism. Adolescence is a period in which there is adoption of eating habits and also psychological changes, where mood status is a very important health factor.

Objective: To assess possible interactions between hydration and mood status in a group of adolescents from Madrid.

Method: This is a cross sectional substudy from the Up & Down Study. Multifrequency bioimpedance was used to assess the hydration status (Extracellular Water Volume, ECW). The PANASN questionnaire was used to create a factor which was stablished in four levels: very low, low, high and very high, in order to assess mood status.

Sample: 101 healthy adolescents (both sexes) between 13 and 16 years old.

Results: 42.90% of the adolescents who were below the optimal ECW range reported a low mood status. 51.70 % of adolescents within the optimal ECW range reported a high mood status. 29.60% of subjects above the optimal ECW range showed very low mood, meanwhile 18.50 % of them showed a very high mood status.

Conclusions: In view of these results, adolescents should be advised about the most beneficial range of the hydration status they have to show in order to achieve the best mood rate. Further research studies are needed in order to find out possible associations.

Key words: hydration, mood status, adolescence.

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