affected age group. Retrospective studies confirm the occurrence of pressure ulcers (UPP) in stage II institutionalized within six months patients.

**Objective:** To evaluate the efficacy of an adequate nutritional and fluid intake on progress in healing pressure ulcers.

**Method:** Descriptive study of 12 institutionalized elderly with pressure ulcers varying degrees according to the National Group for the Study and Consultancy pressure ulcers (GNEAUP). Anthropometric and biochemical data were collected to assess nutritional status. A water supply (1 cc. water x kcal day) (30 cc water / day x weight kg) is recommended.

**Results:** Of the 12 elders participating on the study, a quarter has UPP grade I, 25% Grade II, Grade III Grade IV 16.7% and 33.3%. The favorable healing evolution of pressure ulcers in hyperproteica residents receiving oral supplementation and adequate water intake is faster than those who only eat diet cooking, getting the first at the end of this study better PUSH scores on the scale.

**Conclusions:** The (UPP) in institutionalized elderly patients contribute to increased morbidity and mortality and nursing workload. At least 95% of injuries are preventable with proper nutrition and a good water supply to keep the skin moisturized and more elastic, and the use of other preventive measures.

**Key words:** hydration, nutrition, pressure, ulcers.

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**Water compartmentalization and hydration state of patients attending to a cardiac rehabilitation program**


**Introduction:** Alterations in cardiovascular functions can change body water distribution. Therefore it would be interesting to include the control of this parameter in programs of cardiac rehabilitation (PCR) so as to keep body water in a healthy range.

**Objective:** To evaluate the effects of PCR on patients’ hydration.

**Method:** Study was performed in two groups of patients suffering from a cardiovascular event: 1) PCR: 135 patients attending to a PCR (105 men, 30 women); 2) NOPCR: 70 patients not attending to a PCR (50 men, 20 women). Body water and phase angle were measured by bioelectrical impedance (TANITA MC-980MA multifrequency).

**Results:** In PCR group, total water in men was higher (43.77±0.63 vs. 40.44±0.72 kg) (p<0.05) than NOPCR group, and as for women, total water (37.13±1.49 vs. 32.54±1.52 Kg) and intracellular water also increased with regard to NOPCR group (20.39±0.94 vs. 17.02±0.81 kg) (p<0.001 and p<0.01 respectively). In addition, a major phase angle exists in left body (4.98±0.23 vs. 6.11±0.18 kg in men and 3.87±0.17 vs. 5.15±0.33 kg in women) and both legs in the PCR group (4.89±0.21 vs. 6.05±0.19 kg in men and 4.02±0.29 vs. 5.21±0.31 kg) (p<0.05).

**Conclusions:** Subjects attending PCR showed a higher amount of total and intracellular water and higher phase angle, revealing a better state of hydration, and also a better integrity of the cell membrane and distribution of water between compartments.

**Key words:** cardiac rehabilitation, hydration, body water; phase angle.

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**Hydration status and associated dietary factors in children**

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**Introduction:** An appropriate hydration is essential for normal body function and water may be obtained from beverages and foods.

**Objective:** To evaluate the hydration status and its relation to beverages and food intake in children.

**Method:** 172 (50% male), 7-11 years-old children completed a 24h urine collection. The Free Water Reserve was used to assess the hydration status. A 24 hours food recall corresponding to the day of urine collection was collected and a lifestyle and socio-demographic questionnaire was filled by parents. Anthropometric data were obtained. Food and beverage groups were created and unconditional logistic regression models were fitted in order to estimate the magnitude of the association between the contribution of beverages/food’s water content and the hydration status.

**Results:** 57.6% of children were classified as at risk of hypohydration. A significant higher consumption of water (276.2 (± 208.4) vs. 188.2 (± 187.4) g/day) and fruit juices (77.6 (± 139.4) vs. 14.4 (± 57.2 g/day) was reported by euhydrated boys and girls, respectively,
compared to hypohydrated ones. A lower consumption of water and juices 100% was associated with a higher risk of hypohydration (OR = 2.16, 95% CI: 1.02 – 4.58, p = 0.045), adjusting for confounders.

Conclusions: Almost 60% of children were at risk of hypohydration. Water and fruit juices were significantly associated with a better hydration status.

Key words: children, dietary Intake, hydration status.

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Beverage consumption habits amongst the Spanish population: association with total water and energy intake. Findings of the ANIBES study

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Introduction: Inadequate hydration is a public health issue that imposes a significant economic burden. In Spain, data on hydration status are scarce. There is a clear need for a national study that quantifies total water and beverage intake and explores associations between types of beverages consumed and energy intake.

Method: The ANIBES study is a national survey of diet and nutrition conducted in a representative sample of 2,285 healthy subjects aged 9 to 75 years in Spain. Food and beverage intakes were assessed using weighed food and beverages records by age and gender. Time and day of beverage consumption were also recorded.

Results: On average, total water intake (TWI) was 1.66 L (SD 673.03) for men and 1.58 L (SD 596.24) for women, below the EFSA recommended adequate intake. Mean total energy intake (EI) was 1810 Kcal / day (SD 504.4). The contribution to the total EI from beverages was 12%. Water was the beverage most consumed, followed by milk. Out of 8 different types of beverages, the variety score was positively correlated with TWI (r = 0.39); and with EI (r = 0.23), suggesting that beverage variety is an indicator of higher consumption of food and drinks. Multiple regression models showed that replacing 100 g of caloric beverages with 100 g non-caloric drinks was associated with a reduction in EI of 50 kcal, or 40 kcal if EI from food was unchanged. Using within-person data, each 100 g change in caloric beverages was associated with 43 kcal change in EI or 34 kcal if EI from food was constant.

Conclusions: The present study demonstrates that well-conducted national surveys such as the ANIBES study have the potential to yield rich contextual data that can be linked to health and nutrition policies. Although neither men nor women consumed sufficient amount of TWI when compared to the EFSA reference value, further work must be warranted to explore correlations with biological markers of hydration status by population sub-groups.

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Key words: total water intake, energy intake, beverages, Spain.

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Drinking habits in a sample of university students. Relationship between the adherence to the Mediterranean Diet and BMI


Introduction: The university period is marked by changes in food consumption patterns. Hydration habits affect students’ physical and cognitive performance.

Objective: analyze beverage consumption, calculate the total water intake and compare it with the recommendations of the EFSA and analyze its relationship with the adherence to the Mediterranean Diet and BMI in a sample of university students.

Method: This is a descriptive cross-sectional study on a sample of 1978 students from the Rey Juan Carlos University of Madrid (2010/2011 academic year). The frequency and amount of beverage consumption was determined by Hendrick 2010. To assess the adherence to the Mediterranean Diet the TestkidMed was used.

Results: The average consumption of water from all drinks was 1673.6 ml/day in women and 1701.8 ml/ day in men. The most consumed beverages were water (886.22 ml / day), dairy (341.38 ml / day), juices (202.17 ml / day), coffee and tea (171, 86 ml / day) and soft drinks (155, 10 ml / day). The average value in the test Kidmed was 6.18(± 2.61), 32.5% of cases reported high adherence, and 53.2% medium adherence. Only the 14.3% was classified as low adherence, showing a significant association between low adherence and younger subjects (≤ 20 years). This age group showed a higher proportion of underweight and greater total water consumption was observed.