**Objective:** The main objective of this study is to know the relationship between water intake/hydration of a group of University students and their cognitive function.

**Method:** This information was collected from personal data (age, sex, and tobacco use), anthropometric measurements (weight, height, BMI -body mass index-), fluid intake, physical activity, and a measurement of intelligence test to fifty students (WAIS test with a total of thirty-six variables for each of the subjects).

**Results:** It was observed a statistically significant relationship between water consumption of youths and their visual acuity/memory, as well as better scores in the intellectual quotient.

**Conclusions:** A higher level of hydration can cause a beneficial effect on the information systems of memory and visual acuity, contributing to the improvement of the intellectual quotient.

Key words: hydration, cognition, memory, intellectual quotient.

**Study on risk creatine and dehydration in athletes training in a gym**


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**Introduction:** Creatine is a supplement widely used by force athletes or whose goal is to gain muscle mass storing water in the intracellular space. Creatine has the ability to remove plasma water from the bloodstream into skeletal muscle in a process called muscle myofibrillar hydration or hydration. Although this benefits the skeletal muscles, less water is available to other tissues since most cell physiological and chemical reactions in the body need water.

**Objective:** To present the use of creatine as an ergogenic supplement, and possible adverse effects related to hydration.

**Method:** Cross-sectional study in adult males between 18 and 35 years. You are advised to use 0.3 grams of creatine per kilogram for several weeks. The administration form is the most commonly used initial charge and maintenance; when supplementation before and after training; and consumption takes place largely with the addition of carbohydrates.

**Results:** 34.5% of people who use creatine have or have had side effects, mainly weight gain, but do not manifest signs of dehydration at the indicated dose.

**Conclusions:** Although at lower doses of 3 grams there is no scientific evidence that risk of dehydration occurs, the recommendation is to maintain a high fluid intake (200-250 ml of water per 2.5 grams of creatine) since this water needs to be stored and if the availability is low, it decreases absorption and retention within the cell. There is no evidence that taking creatine in normal doses increases heat stress or adversely affects the performance of the athlete in warm environments.

Key words: supplementation, creatine, dehydration.

**Efficiency of the hydration and nutrition institutionalized elderly with pressure ulcers**

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**Introduction:** It is estimated that the incidence of pressure ulcers in the general population is 3.3% between 70 and 75 years. It is estimated that 60% of pressure ulcers develop in the hospital and more than 70% occur in people over 70 years. The elderly are the most
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 16.7% and 33.3%. The favorable healing evolution of pressure ulcers in hiperproteica 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 status of patients attending to a cardiac rehabilitation program**

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**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,