Body water percentage and its relationship with fat percentage, BMI, physical activity and fitness level


Introduction: A proper corporal hydration, physical activity and physical fitness level are three factors closely related to people’s health.

Objective: This study aims to determine the relationship among body water percentage, assessed with anthropometric parameters and the amount of physical activity and also fitness level of a group of university women students.

Method: 57 women aged 21.02 ± 2.45 years were measured and weighed by Tanita Segmental BC-418MA with the purpose of obtaining results of body water, BMI and body fat percentage. Ipaq-Short Form was used to quantify physical activity. As for the fitness level, the test was conducted by Forest Service, and thus determine VO2Max (n = 36) by using the Polar Team program. For the Pearson correlation (r), SPSS 22.0 for Windows was used.

Results: The results indicate significant correlations (p <0.001) between both body fat percentage and BMI, and between the VO2Max (p <0.05) and body water percentage.

Conclusions: Body water percentage decreases as body fat percentage does, and BMI increase when increasing VO2max. The body fatty tissue composition and the fitness level modified the body water percentage of the analyzed group.

Key words: body water percentage, body fat percentage, VO2Max.

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Water intake and body water percentage, role of physical activity in university women students

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Introduction: Physical activity and proper hydration status have a direct impact on health.

Objective: This work aims to analyze the water intake and hydration status in university women students who present different levels of physical activity.

Method: 57 university women students, age of 21.02 ± 2.45 years were classified according to Ipaq-Short Form in sedentary (n = 10), medium physical activity (n = 37) and high physical activity (n = 10). Water intake was analyzed in each group by a food and beverage intake record during a period of seven days, they were transformed into energy and nutrient intake by Nutriber (version 1.1.1.3r); and water percentage of the total body weight by bioimpedance (Segmental Tanita BF-418). Nonparametric Kruskal-Wallis test was used (SPSS 22.0 for Windows).

Results: Results showed significant differences between sedentary and medium physical activity groups (p <0.05) and between sedentary and high physical activity groups (p <0.05). In both cases the sedentary group shows the higher body water percentage. According to the levels of physical activity, water intake has not shown significant differences among groups.

Conclusions: None of the groups drink the amount of water recommended for their age. Despite this, hydration is compatible with a normal intake and it is higher in the sedentary group than in those doing some physical activity.

Key words: percentage body water, water intake, physical activity.

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Influence of alcohol consumption on hydration status in healthy adults

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Introduction: Both osmolality and water intake are considered key biomarkers of the hydration status, which is necessary for adequate cellular homeostasis and wellbeing. However, alcohol intake has been shown to affect the hydration status due to an elevated diuresis effect.

Objective: To evaluate the influence of alcohol consumption on the hydration status of healthy adults.

Method: This study was performed in 123 adults (25-45 y, 69% women). Blood samples were collected to analyze osmolality levels and a 72 h-recall food ques-
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.

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

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Introduction: The purpose of 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.