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Board #3

Hydration Status and Fluid Intake Habits of Fitness Enthusiasts

Pedro R. Garcia¹, Luis F. Aragon-Vargas, FACSM², Ricardo M. Javornik³. ¹Universidad Central de Venezuela, Caracas, Venezuela.

²Gatorade Sports Science Institute, San José, Costa Rica. ³Valle Arriba Athletic Club, Caracas, Venezuela.

Email: preinal@telcel.net.ve

It is well known that euhydration before exercise is an important factor to enjoy physical activity, but the relation between fluid intake, training habits and hydration status is not well understood.

PURPOSE: To determine the hydration status (HS) and its relation with fluid intake habits (FIH), and exercise variables of fitness enthusiasts before one exercise session on different times of the day, at three different gyms located in Caracas, Venezuela.

METHODS: 295 subjects (148 male, 147 females; age: 37.7 ± 10.1 years old) filled a questionnaire related with hydration and training habits. Thirst sensation was measured with a subjective scale ranging from 1 (not thirsty) to 5 (very thirsty). A urine sample was collected before the exercise session to determine the urine specific gravity (USG) trough a hand held refractometer. To the extent that USG is a valid indicator of hydration status the value of $USG \geq 1.020$ was used as the cut-off point for dehydration. The urine samples were taken and questionnaire filled once per subject, at different times of the day (6:00-9:00 h or 17:00-20:00 h). Non parametric statistics and ANOVA were used.

RESULTS: 122 subjects (41.4 %) appeared to be inadequately hydrated before exercise. Females were better hydrated compared with males (67.3 % vs. 50.0 %, $p=.002$), and these females used fluid bottles more frequently than do males (74.1 % vs. 44.6 %, $p<.005$). People who trained in the late afternoon were better hydrated that people who trained in the morning (69.4% vs. 30.6 %, $p=.001$). There was no relation between the HS, thirst sensation, age, occupation, years of training experience, days of training a week, kind of exercise practiced or duration of the training schedule, and the hydration state.

CONCLUSIONS: A significant percentage of fitness enthusiasts are showing up to train already hypohydrated. Females were better hydrated than males, perhaps due to better FIH (fluid availability or "carrying their own fluids"). People who trained in the afternoon were better hydrated before exercise than people who trained in the morning.

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